



GREENBRIAR RESIDENTIAL DEVELOPMENT PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

VOLUME I

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GREENBRIAR RESIDENTIAL DEVELOPMENT PROJECT

for City of Brea

Volume I - Draft EIR

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Abbreviations and Acronyms

ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program

Abbreviations and Acronyms

CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dba	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	day-night noise level
L _{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds
M _w	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable

Abbreviations and Acronyms

mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO _x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O ₃	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO _x	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

Abbreviations and Acronyms

TAC	toxic air contaminants
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WSA	water supply assessment

Abbreviations and Acronyms

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1. Executive Summary

1.1 INTRODUCTION

This Draft Environmental Impact Report (DEIR or Draft EIR) addresses the environmental effects associated with the implementation of the Greenbriar Residential Development Project (proposed Project). The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This DEIR has been prepared pursuant to the requirements of CEQA and the City of Brea's CEQA procedures. The City of Brea, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (air quality, cultural and paleontological resources, geological resources, hazards and hazardous materials, hydrology and water quality, noise, transportation, and utilities and service systems).

1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed Project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the

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environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

1.2.1 EIR Format

Chapter 1. Executive Summary: Summarizes the background and description of the proposed Project, the format of this EIR, Project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the proposed Project.

Chapter 2. Introduction: Describes the purpose of this EIR, background on the proposed Project, the Notice of Preparation, the use of incorporation by reference, and Final EIR certification.

Chapter 3. Project Description: A detailed description of the proposed Project, including its objectives, its area and location, approvals anticipated to be required as part of the proposed Project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 4. Environmental Setting: A description of the physical environmental conditions in the vicinity of the proposed Project as they existed at the time the Notice of Preparation was published, from local and regional perspectives. This Chapter and the environmental setting described in Chapter 5 topical sections provide the baseline physical conditions from which the lead agency determines the significance of the proposed Project's environmental impacts.

Chapter 5. Environmental Analysis: Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed Project; the existing environmental setting; the potential adverse and beneficial effects of the proposed Project; the level of impact significance before mitigation; the mitigation measures for the proposed Project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed Project and other existing, approved, and proposed development in the area.

Chapter 6. Significant Unavoidable Adverse Impacts: Describes the significant unavoidable adverse impacts of the proposed Project.

Chapter 7. Alternatives to the Proposed Project: Describes the alternatives and compares their impacts to the impacts of the proposed Project. Alternatives include the No Project (Office Land Use) Alternative and an Alternate Residential Design Alternative.

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Chapter 8. Impacts Found Not to Be Significant: Describes the potential impacts of the proposed Project that were determined not to be significant and were therefore not discussed in detail in this EIR.

Chapter 9. Significant Irreversible Changes Due to the Proposed Project: Describes the significant irreversible environmental changes associated with the proposed Project.

Chapter 10. Growth-Inducing Impacts of the Project: Describes the ways in which the proposed Project would cause increases in employment or population that could result in new physical or environmental impacts.

Chapter 11. Organizations and Persons Consulted: Lists the people and organizations that were contacted during the preparation of this EIR.

Chapter 12. Qualifications of Persons Preparing EIR: Lists the people who prepared this EIR for the proposed Project.

Chapter 13. Bibliography: The technical reports and other sources used to prepare this EIR.

Appendices: The appendices for this document comprise these supporting documents:

- Appendix A1: NOP
- Appendix A2: NOP Comments
- Appendix B1: Air Quality, Energy, and GHG Modeling
- Appendix B2: Construction HRA
- Appendix C1: Cultural and Paleontological Resources Report
- Appendix C2: Tribal Consultation Responses
- Appendix D: Noise Modeling
- Appendix E: Public Service Responses
- Appendix F1: VMT Screening Analysis
- Appendix F2: Traffic Impact Study
- Appendix G1: Preliminary Sewer Report
- Appendix G2: Hydrology Report
- Appendix G3: Preliminary WQMP
- Appendix G4: Water Efficient Landscape Worksheet
- Appendix H: Geotechnical Evaluation
- Appendix I1: Phase I ESA
- Appendix I2: Limited Phase II ESA
- Appendix J: Hydraulic Analysis
- Appendix K: Mitigation Monitoring and Reporting Program
- Appendix L: Arborist Report

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1.2.2 Type and Purpose of This DEIR

This DEIR has been prepared as a “Project EIR,” defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

1.3 PROJECT LOCATION

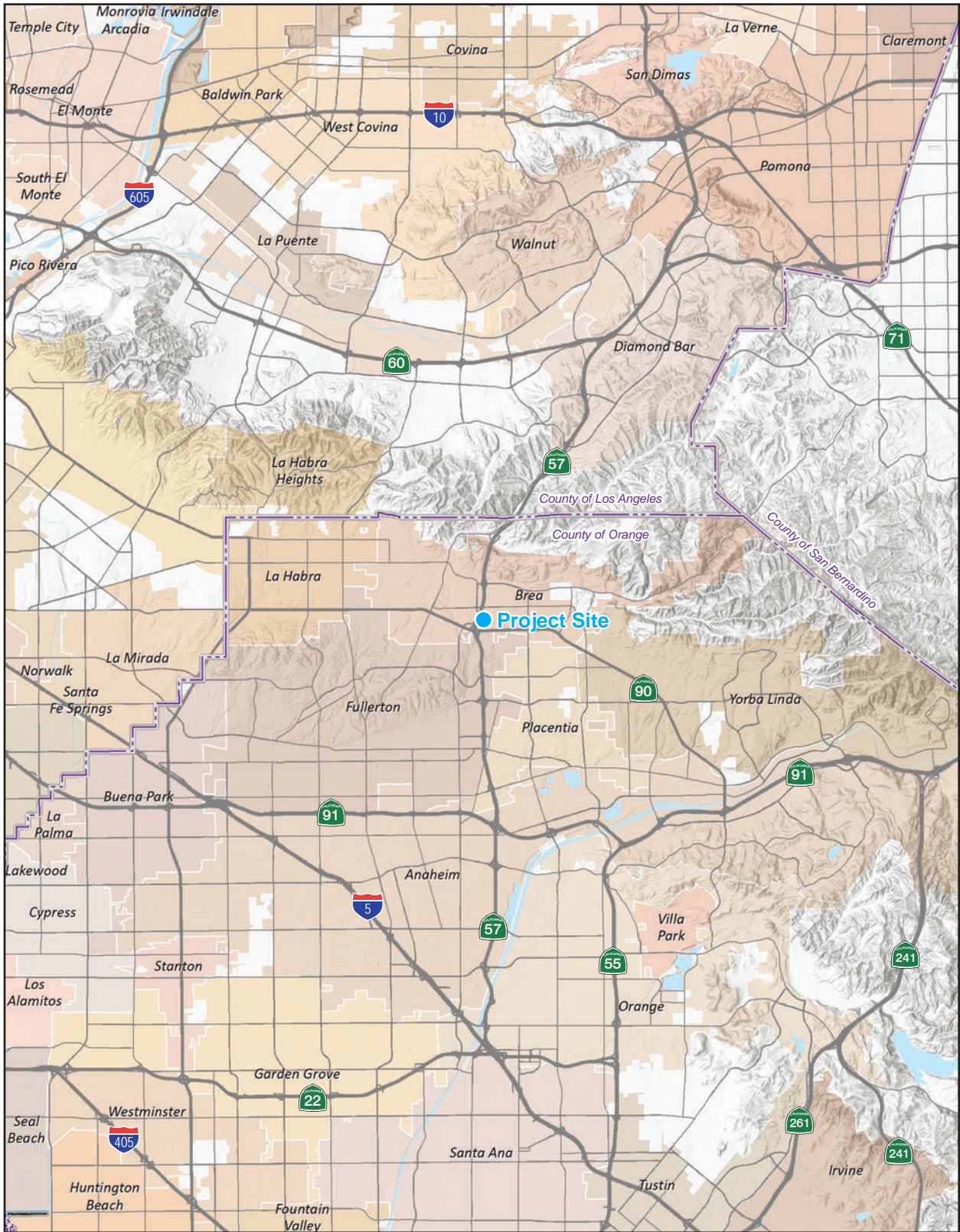
The City of Brea is bordered by the cities of La Habra to the northwest; Fullerton to the southwest and south; Placentia to the south; Yorba Linda to the southeast and east; unincorporated Orange County to the east, northeast, and north; Chino Hills (San Bernardino County) to the northeast; and unincorporated Los Angeles County to the northwest (see Figure ES-1, *Regional Location*).

The 9.7-acre site (Assessor’s Parcel Number [APN] 319-102-34) is located at 1698 through 1700 Greenbriar Lane in the City of Brea. The Project site is bounded by State Route 57 (SR-57) to the west, residential uses along Greenbriar Lane to the north, residential uses separated by Fullerton Creek drainage channel and South Associated Road to the east, and the Brea Plaza Shopping Center to the south. Figure ES-1, *Regional Location*, and Figure ES-2, *Local Vicinity*, show the Project site within the regional and local contexts of Orange County and the City of Brea, respectively.

1.4 EXISTING LAND USE

The Project site is shown on Figure ES-3, *Aerial Photograph*. The existing 164,908-square-foot office building onsite was constructed in 1976, and based on a review of historical aerial photographs, the three-story parking structure was constructed between 2006 to 2007. The Mercury Insurance building is equipped with two emergency generators, each supplied by its own diesel underground storage tank (UST), which were installed in 2001.

Figure ES-1 - Regional Location

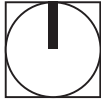


--- County Boundary

Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2024.

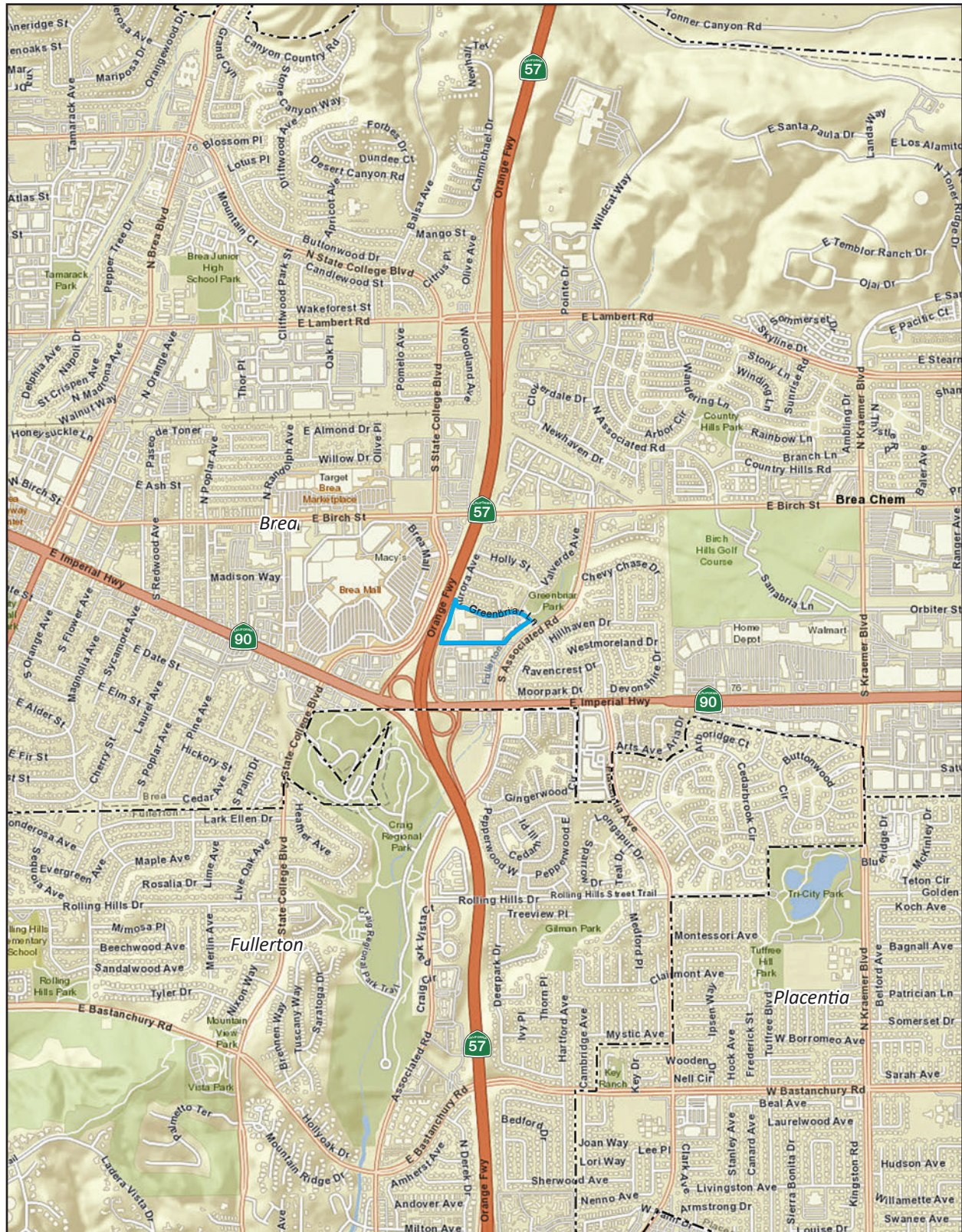
0 3
Scale (Miles)



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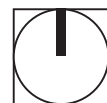
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Figure ES-2 - Local Vicinity



- Project Boundary
- City Boundary

0 2,000
Scale (Feet)



Source: Generated using ArcMap 2024.

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Figure ES-3 - Aerial Photograph



Project Boundary

0 300
Scale (Feet)



Source: Nearmap 2024.

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1.5 PROJECT SUMMARY

1.5.1 Greenbriar Residential Development Project

Figure ES-4, *Conceptual Site Plan*, shows the overall conceptual site plan for the proposed Project. The proposed Project would require the demolition of the existing office building, parking structure, and parking lot prior to construction and operation of the residential community. The proposed Project would provide for up to 179 residential units, including landscaping and common open space areas, on 6.87 acres of the approximately 9.7-acre site, and would result in approximately 505 new residents.¹ The remainder of the site (2.82 acres) would include internal access roads and public utilities. The proposed Project would include 67 buildings consisting of three different architectural styles. Table ES-1, *Greenbriar Residential Development Project Land Use Summary*, provides a breakdown of the product summary and mix.

Table ES-1 Greenbriar Residential Development Project Land Use Summary

Product Summary and Mix	Number of Buildings	Number of Units
The Courts	16	80
The Villas	37	73
The Yards	14	26
Residential Subtotal	67	179

1.5.2 Construction Phase

Construction of the proposed Project would commence in April of 2026. Construction activities for the residential community would take approximately 31 months, with completion anticipated in late 2028.

- Demolition and Abatement for the UST: 80 days (approximately 2.5 months)
- Rough Grading: 40 days (approximately 1.5 months), requires up to 8,291 cubic yards of import
- Infrastructure and Offsite Improvements: 132 days (6 months)
- Residential Building Construction: 310 days (14 months)²

1.5.3 General Plan and Zoning

The City of Brea General Plan Land Use designation for the Project site is General Commercial, and the site is zoned General Commercial (C-G) with a P-D Precise Development overlay. The General Commercial designation creates areas where a broad range of retail, office, and service-oriented business activities can locate. The proposed Project would require a General Plan Amendment (GPA) and a zone change from General Commercial (C-G) to Mixed-Use II (MU-II). The Mixed-Use II designation provides opportunities for

¹ Assuming an average of 2.82 residents per unit, consistent with the household size reported in the City's 2021-2029 housing element, construction of 179 units would result in an increase of 505 residents.

² The residential units would be released in phases as the market demands.

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coordinated development of urban villages that offer a diverse range of complementary land uses in close proximity to one another. This designation permits either horizontal or vertical integration of uses.

1.6 STATEMENT OF OBJECTIVES

Objectives for the Greenbriar Residential Development Project will aid decision makers in their review of the project and associated environmental impacts:

1. Revitalize the site by developing housing near other residential and commercial uses, thereby introducing new, high-quality residential uses in the City.
2. Redevelop the underutilized Project site by providing additional opportunities for residential growth on an infill parcel.
3. Improve the jobs-housing balance in the City by providing new housing within close proximity to jobs and services.
4. Provide additional housing opportunities in the City to meet its Regional Housing Needs Allocation.
5. Create a high-quality residential product that provides connectivity between the commercial uses at Brea Plaza and a transitional buffer for the existing residential neighborhood to foster a vibrant and interactive mixed-use environment.

1.7 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (Section 15126.6[a]) state that an EIR must address “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.” The alternatives in this DEIR were based, in part, on their potential to reduce or eliminate the impacts determined to be potentially significant for implementation of the proposed Project (see Table ES-2, *Summary of Environmental Impacts, Mitigation, and Levels of Significance After Mitigation*). The Project alternatives were not reviewed for financial feasibility. Project alternatives are assessed in further detail in Chapter 7, *Alternatives to the Proposed Project*.

Figure ES-4 - Conceptual Site Plan



— Project Boundary

— Proposed Park

0 120
Scale (Feet)



Source: AO 2018.

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1.7.1 No Project (Office Land Use) Alternative

The No Project (Office Land Use) alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed Project is not approved (CEQA Guidelines, Section 15126.6(e)). Pursuant to CEQA, this alternative is based on current plans and consistent with available infrastructure and community services. Therefore, the No Project (Office Land Use) alternative assumes that the proposed Project would not be adopted, and no development would occur onsite. The Project site would remain as is—no demolition would occur, no residential development, and no increase in associated residents—and the existing 164,908-square-foot office building would be reused for office uses. This alternative would result in an increase in employment and weekday vehicle trips compared to the Proposed Project.

The No Project (Office Land Use) Alternative would avoid or lessen the proposed Project's impacts to cultural and paleontological resources, hazards and hazardous materials, land use and planning, public services, recreation, and tribal cultural resources. This alternative would result in greater impacts to aesthetics, air quality, energy, GHG emissions, population and housing, and transportation. Noise and utilities and service systems impacts would be similar to that of the proposed Project.

The No Project (Office Land Use) Alternative would retain the site in its current state, and it would be reused for office uses. Therefore, none of the Project objectives would be achieved under this alternative. This alternative would not provide any of the benefits that would accompany the implementation of the proposed Project, including revitalizing the site by developing housing near other residential and commercial uses, redeveloping an underutilized infill parcel by providing additional residential uses, improving the jobs-housing balance in the City, providing additional housing (including affordable housing) to meet the City's Regional Housing Needs Allocation, and providing residential uses within proximity to commercial uses.

1.7.2 Alternate Residential Design Alternative

The Alternate Residential Design Alternative would entail up to 179 units in apartment buildings, which would be smaller in size than the units of the proposed Project. The multifamily residential buildings would be three to four stories walk-up structures with a density of approximately 40 units per acre. The site would include surface parking. The residential buildings would be positioned throughout the 9.7-acre site, with recreational amenities located in the center of the site. Access to the site would be similar to the proposed Project at Greenbriar Lane and Associated Road. As with the proposed Project, the existing 164,908-square-foot office building, parking structure, and parking lot would be demolished, and the general plan amendment, zone change, development agreement, and precise development would be required. A conditional use permit would also be required for this alternative to accommodate the multifamily units, per Chapter 20.11, Permitted Land Uses, of the Brea Municipal Code.

The Alternate Residential Design Alternative would lessen the proposed Project's air quality, energy, GHG emissions, recreation, and transportation impacts. This alternative would result in similar construction impacts to air quality, energy, and noise, and would result in similar impacts to aesthetics, cultural and paleontological

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resources, hazards and hazardous materials, land use and planning, noise, population and housing, public services, tribal cultural resources, and utilities and service systems.

The Alternative Residential Design Alternative would develop 179 apartment units as opposed to 179 attached single-family units, and would place the apartment building adjacent to the Brea Plaza Shopping Center site so the remainder of the Project site could be used for open space with recreational uses. Therefore, this alternative would meet all of the Project objectives. This alternative has been identified as “environmentally superior” to the proposed Project, as it would meet all of the Project objectives while lessening the proposed Project’s impacts.

1.8 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed Project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.9 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public. Prior to preparation of the DEIR, a Notice of Preparation (NOP) was published on July 31, 2024 (see Appendix A1). In addition, the City held a public scoping meeting on August 21, 2024, at the City of Brea City Hall Conference Center. Comments received during the NOP public review period, from August 1 to September 3, 2024, and written comments submitted during the scoping meeting are in Appendix A2. A total of four agencies and two individuals responded. NOP and scoping meeting comment letters received during the review period are summarized in Chapter 2, *Introduction* (see Table 2-1, *NOP and Scoping Meeting Comment Summary*), and identify potential environmental issues associated with transportation, aesthetics, schools, noise, recreation, housing, sewer, and cultural resources.

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1.10 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table ES-2 summarizes the conclusions of the environmental analysis contained in this Draft EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
Impact 5.1-1: The proposed Project would not impact scenic vistas, or conflict with applicable zoning governing scenic quality.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.1-2: The proposed Project would not alter scenic resources within a state scenic highway.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.1-3: The proposed Project would generate additional light and glare.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.2 AIR QUALITY			
Impact 5.2-1: The proposed Project is consistent with the applicable air quality management plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-2: Construction activities associated with the proposed Project would generate short-term emissions that exceed South Coast AQMD's threshold criteria.	Potentially Significant	AQ-1 During construction, the construction contractor shall only use interior and exterior paints with a low VOC (volatile organic compound) content with a maximum concentration of 10 grams per liter (g/L) for building architectural coating to reduce VOC emissions. Prior to building permit issuance, all building and site plans shall note use of paints with a maximum VOC concentration of 10 g/L, and the construction contractor(s) shall ensure that all construction plans submitted to the City of Brea Community Development Department clearly show this requirement.	Less Than Significant With Mitigation
Impact 5.2-3: Long-term operation of the proposed Project would not generate additional vehicle trips and associated emissions in exceedance of South Coast AQMD's threshold criteria.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-4: Construction activities associated with the proposed Project could expose sensitive receptors to substantial pollutant concentrations.	Potentially Significant	AQ-2 During construction, the construction contractor shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 (Final) emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, except for the Telebelts anticipated for use. Any emissions control device used by the	Less Than Significant With Mitigation

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to issuance of building permit, the Project engineer shall ensure that all plans clearly show the requirement for EPA Tier 4 Final emissions standards for construction equipment over 50 horsepower except for the Telebelts used for Project construction, Tier 4 Final models of which could not be verified as commercially available for purposes of this measure. During construction, the construction contractor shall maintain a list of all operating equipment associated with building demolition in use on the site for verification by the City. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.	
Impact 5.2-5: Operation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.2-6: The proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.3 CULTURAL AND PALEONTOLOGICAL RESOURCES			
Impact 5.3-1: Development of the Project would not impact an identified historic resource.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.3-2: Development of the Project could impact archaeological resources.	Potentially Significant	CUL-1 If cultural resources are encountered during ground disturbing activities, work in the immediate area shall cease and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service) [NPS] 1983 shall be contacted immediately to evaluate the find(s). If the discovery proves to be significant as determined by the site archeologist, additional work such as data recovery excavation may be warranted and will be reported to the City.	Less Than Significant With Mitigation

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.3-3: Grading activities could potentially disturb human remains, but compliance with existing regulations would ensure that impacts are less than significant.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.3-4: Development of the Project could impact paleontological resources or unique geologic features.	Potentially Significant	CUL-2 During ground-disturbing activities, a qualified paleontologist shall monitor all excavations below five feet. If unique paleontological resources are discovered during excavation and/or construction activities, construction shall stop within 50 feet of the find, and the qualified paleontologist shall be consulted to determine whether the resource requires further study. The paleontologist shall make recommendations to the City of Brea to protect the discovered resources. Any paleontological resources recovered shall be provided for curation at a local curation facility such as the Los Angeles County Natural History Museum, the John D. Cooper Center in Fullerton, or any other local museum or repository willing and able to accept and house the resource to preserve for future scientific study.	Less Than Significant With Mitigation
5.4 ENERGY			
Impact 5.4-1: Project construction and operation would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.4-2: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.5 GREENHOUSE GAS EMISSIONS			
Impact 5.5-1: Implementation of the proposed Project would not generate a net increase in GHG emissions, either directly or indirectly, that would have a significant impact on the environment.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.5-2: Implementation of the proposed Project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.	Potentially Significant	GHG-1 The project Applicant shall design and build all residential homes to be electric, meaning that electricity is the primary permanent source of energy for water heating; mechanical; heating, ventilation, and air conditioning (HVAC) (i.e., space-heating and space cooling); cooking; and clothes-drying. All major appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, and water heaters) provided/installed shall be electric-powered EnergyStar-certified or of equivalent energy efficiency, where applicable. Prior to the issuance of building permits for new development projects within the Project site, the Project Applicant shall show provide documentation (e.g., building plans) to the City of Brea Building Division official or his/her designee, to verify implementation of this requirement. Prior to the issuance of the certificate of occupancy, the City of Brea shall verify implementation of the building electrification design requirement.	Less Than Significant With Mitigation
5.6 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.6.1: Construction and operation of the proposed Project could involve use of hazardous materials; however, compliance with existing regulations would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes would be minimized. [Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.6.2: Project construction and operations would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.6-3: The Project site is on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and existing buildings may contain lead-based paint and asbestos-containing materials.	Potentially Significant	<p>HAZ-1 Lead-Based Paint and Asbestos-Containing Materials. Prior to issuance of demolition permits, the Project applicant shall conduct asbestos-containing material (ACM) and Lead Based Paint (LBP) surveys. The ACM and LBP surveys shall be conducted in accordance with EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) and South Coast Air Quality Management District (South Coast AQMD) rules. The results of the survey shall be submitted to the City prior to issuance of a demolition permit. If ACMs or LBPs are identified during the field surveys, an Operations and Maintenance (O&M) plan shall be implemented during the construction phase.</p> <ul style="list-style-type: none"> The ACM O&M plan shall be prepared by the Project applicant in line with the California Code of Regulations Title 8, Section 1529. The LPB O&M plan shall be prepared by the Project applicant in line with the California Code of Regulations Title 8, Section 1532.1. 	Less Than Significant With Mitigation
Impact 5.6-4: The Project site is not in the vicinity of an airport or within the jurisdiction of an airport land use plan	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.6-5: Project construction and operation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.6-6: Project construction and operations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.7 LAND USE AND PLANNING			
Impact 5.7-1: Project implementation would not divide an established community.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.7-2: Project Implementation would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.8 NOISE			
Impact 5.8-1: Construction activities would result in temporary noise increases in the vicinity of the proposed Project.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.8-2: Project implementation would result in long-term operation-related noise that would not exceed applicable standards.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.8-3: The Project would not create groundborne vibration and groundborne noise short-term or long-term.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.8-4: The proximity of the Project site to an airport would not result in exposure of future resident and/or workers to airport-related noise.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.9 POPULATION AND HOUSING			
Impact 5.9-1: The proposed Project would not induce unplanned substantial population in Brea.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.9-2: The proposed Project would not displace substantial housing units or people.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.10 PUBLIC SERVICES			
FIRE PROTECTION AND EMERGENCY SERVICES			
Impact 5.10-1: The proposed Project would introduce 179 new housing and 505 residents into the Brea Fire Department's service area,	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
thereby increasing demand for fire protection and emergency services.			
POLICE PROTECTION			
Impact 5.10-2: The proposed Project would introduce 179 new housing and 505 residents into the Brea Police Department service boundaries, thereby increasing demand for police protection facilities and personnel.	Less Than Significant	No mitigation measures are required.	Less Than Significant
SCHOOL SERVICES			
Impact 5.10-3: The proposed Project would generate 45 new students but would not significantly impact the school enrollment capacities of Brea Olinda Unified School District's schools.	Less Than Significant	No mitigation measures are required.	Less Than Significant
LIBRARY SERVICES			
Impact 5.10-4: The proposed Project would not result in substantial impacts to library services.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.11 RECREATION			
Impact 5.11-1: The proposed Project would generate additional residents resulting in an increase in demand for parks and recreational services in the City; however, the proposed Project would not adversely affect the City's existing park and recreational facilities.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.11-2: Project implementation would not result in environmental impacts to provide new and/or expanded recreational facilities.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.12 TRANSPORTATION			
Impact 5.12-1: The proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.12-2: The proposed Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), regarding policies to reduce vehicle miles traveled.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.12-3: Project circulation improvements have been incorporated to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.13 TRIBAL CULTURAL RESOURCES			
Impact 5.13-1: The proposed Project would not cause a substantial adverse change in the significance of a historic tribal cultural resource.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.13-2: The proposed Project could impact undiscovered tribal cultural resources.	Potentially Significant	<p>TCR-1 Prior to the commencement of any ground disturbing activity at the Project site, the Project Applicant shall retain a total of two Native American Monitors, each approved by the tribes that consulted on this Project pursuant to Assembly Bill AB52 (the "Tribe" or the "Consulting Tribe"), and in concurrence with the City of Brea as the CEQA lead agency. The Applicant shall coordinate with each of the Consulting Tribes to develop an executed contract to pay for tribal monitors to be present during ground-disturbing activities. Prior to the issuance of any permit necessary to commence a ground-disturbing activity, a copy of the executed contract shall be submitted to the City of Brea Community Development Department.</p> <ul style="list-style-type: none"> The Tribal monitors will only be present during on-site and off-site portions of the area included as part of the Project grading or 	Less Than Significant With Mitigation

1. Executive Summary

Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>improvement permits during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribes as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Project area. The Tribal Monitors will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitors have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources.</p> <ul style="list-style-type: none"> • Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by Project activities shall be evaluated by the qualified archaeologist and Tribal monitors approved by the Consulting Tribes. If the resources are Native American in origin, the Consulting Tribes will retain it/them in the form and/or manner the Tribes deems appropriate, for educational, cultural and/or historic purposes. • If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease within 100 feet of discovery, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). • Work may continue on other parts of the Project Site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). 	

1. Executive Summary

Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any qualifying historic archaeological resource deemed significant by a qualified archaeologist as a "historical resource" or "unique archaeological resource", shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes. 	
5.14 UTILITIES AND SERVICE SYSTEMS			
WASTEWATER TREATMENT AND COLLECTION			
Impact 5.14-1: Project-generated wastewater could be adequately treated by the wastewater service provider for the Project.	Less Than Significant	No mitigation measures are required.	Less Than Significant
WATER SUPPLY AND DISTRIBUTION SYSTEMS			
Impact 5.14-2: Water supply and delivery systems are adequate to meet Project requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

Table ES-2 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<i>STORM DRAINAGE SYSTEMS</i>			
Impact 5.14-3: Existing and proposed storm drainage systems are adequate to serve the drainage requirements of the proposed Project.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<i>SOLID WASTE</i>			
Impact 5.14-4: Existing and/or proposed facilities would be able to accommodate Project-generated solid waste and comply with related solid waste regulations.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<i>ENERGY INFRASTRUCTURE</i>			
Impact 5.14-5: Existing energy infrastructure is adequate to meet Project requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

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2. Introduction

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed Project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment” (CEQA Section 21067). The City of Brea has the principal responsibility for approval of the Greenbriar Residential Development Project. For this reason, the City of Brea is the CEQA lead agency for this Project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed Greenbriar Residential Development to allow the City of Brea to make an informed decision regarding approval of the Project. Specific discretionary actions to be reviewed by the City are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, Section 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, Section 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed Greenbriar Residential Development Project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the Project; and identifies mitigation measures to reduce or avoid adverse effects.

2. Introduction

2.2 NOTICE OF PREPARATION

The City of Brea determined that an EIR would be required for this Project and issued a Notice of Preparation (NOP) on July 31, 2024 (see Appendix A1). In addition, the City held a public scoping meeting on August 21, 2024, at the City of Brea City Hall Conference Center. Comments received during the NOP public review period, from August 1 to September 3, 2024, and written comments submitted during the scoping meeting are in Appendix A2.

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in this DEIR, but issues identified as Less Than Significant or No Impact are not. Table 2-1, *NOP and Scoping Meeting Comment Summary*, provides a list of the comments received during the NOP public review period and during the scoping meeting.

Table 2-1 NOP and Scoping Meeting Comment Summary

Commenting Agency/Person	Date	Comment Topic	Comment Summary	Issue Addressed in Chapter/Section:
Agencies				
Native American Heritage Commission	8/1/24	Cultural Resources, Tribal Cultural Resources	<ul style="list-style-type: none"> • Protocol for evaluation of cultural and historic resources. • Tribal consultation requirements under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18). 	Section 5.12, <i>Tribal Cultural Resources</i>
Orange County Sanitation District	8/14/24	Utilities and Service Systems	<ul style="list-style-type: none"> • Requests a sewer study report be submitted for review to obtain a sewer capacity verification. 	Section 5.13, <i>Utilities and Service Systems</i>
Caltrans	9/3/24	Transportation	<ul style="list-style-type: none"> • Requests a discussion of existing transit routes. • Requests a discussion of the City's multimodal mobility strategies. • Asks that the use of transit be encouraged among future residents, visitors, and workers of the development. • States that adequate wayfinding signage and related amenities for transit stops should be provided where needed within the Project vicinity. • States that emergency plans should be created that include routes and paths. This can alleviate congestion in the event of an emergency and allow EMS to easily access the site. • States that the Project site should provide posted speed signs. • Asks that pick-up point services or automated parcel systems be provided so that deliveries can be made with one truck stop instead of multiple stops to individual residences. 	

2. Introduction

Table 2-1 NOP and Scoping Meeting Comment Summary

Commenting Agency/Person	Date	Comment Topic	Comment Summary	Issue Addressed in Chapter/Section:
			<ul style="list-style-type: none"> States that bicycle parking design may need to accommodate cargo bikes, such as for food delivery services. States that during construction, appropriate detours and safety measures should be in place to prioritize the mobility, access, and safety of bicyclists, pedestrians, and transit users. Asks that electric charging stations be provided for personal vehicle use. Asks that discussion be added about addressing equity and housing affordability. States that a Vehicle Miles Traveled (VMT) Traffic Impact Study (TIS) should be completed and submitted per Caltrans guidelines relating to all Caltrans facilities. States that a VMT analysis should be completed per Caltrans guidelines in the Transportation Impact Study Guide. Additionally, an LOS and queuing analysis should be completed per the City of Brea's General Plan. States that analysis should be completed for the storage length of all turn pockets in order to ensure adequacy of the intersections below. Additionally, the analysis should use the OC Congestion Management Program (CMP) and OC Transportation Analysis Model (OCTAM) projected volumes. <ul style="list-style-type: none"> SR-90 and SR 57 Southbound off ramp SR-90 and SR 57 Northbound off ramp SR-90 and Associated Rd SR-90 and Castlegate Ln/Placentia Ave States that if an impact analysis leads to findings that the queuing and delay of the SR-57 on/off ramps and SR-90 Imperial Highway are significant, then coordination should be done for Caltrans District 12 Local Development for the development of a Traffic Mitigation Agreement. Recommends a discussion of any potential impacts to SR-57 on-ramp and off-ramp intersections and SR-90 Imperial Highway. Recommends a queue analysis of the on and off ramps at SR-57 and SR-90 Imperial Highway. Recommends the merging and diverging on and off ramps at SR-90 Imperial Highway to and from mainline SR-57. Recommends an operational and safety analysis at South Associated Road and SR- 	Section 5.11, <i>Transportation</i>

2. Introduction

Table 2-1 NOP and Scoping Meeting Comment Summary

Commenting Agency/Person	Date	Comment Topic	Comment Summary	Issue Addressed in Chapter/Section:
			<p>90 Imperial Highway.</p> <ul style="list-style-type: none"> • Recommends considering the additional AM and PM peak traffic volumes and the impact on the delay of the surrounding intersections, including the on/off ramps. • States that any work in the Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans, and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. • States that Project plans and traffic control plans must be stamped and signed by a licensed engineer. • States that all applications and associated documents/plans via email to D12.Permits@dot.ca.gov until further notice. 	
City of Yorba Linda	9/3/24	Noticing	<ul style="list-style-type: none"> • Defers comments on the transportation analysis until the Draft EIR is released. 	N/A
Public				
Carolyn Dail	9/3/24	Aesthetics, Noise, Recreation, Housing	<ul style="list-style-type: none"> • Concerned about the mature trees along Greenbriar and within the property and if they will be removed as part of the proposed Project. These trees facilitate noise levels being lowered. • Concerned about the taller units being located across from current residents due to privacy being invaded along with sight lines and noise concerns. • Interested in a wall being maintained along Greenbriar to provide privacy and help with aesthetics. • Concerned about the number of units and the parking that is being offered. • Interested in increasing the amount of park space in the proposed Project. • Concerned about the American Disability Act (ADA) compliance of the units. 	<p>Section 5.1, <i>Aesthetics</i> Section 5.7, <i>Noise</i> Section 5.8, <i>Population and Housing</i> Section 5.10, <i>Recreation</i></p>
Scoping Meeting				
Ted Gribble	8/24/24	Transportation, Schools	<ul style="list-style-type: none"> • Parking on Greenbriar Lane and Aurora Street may limit sightlines. Suggests that no-parking zones are added at this intersection to create a clear zone (daylighting). • Concerned about the increased traffic on Aurora Avenue to Eucalyptus Street to Redbay Avenue. Suggests adding a traffic light at Redbay Avenue and Birch Street. • Recommends coordinating the Brea Olinda Unified School District (BOUSD) to change Brea Junior High School to a middle school. 	<p>Section 5.9, Public Services Section 5.11, <i>Transportation</i></p>

2. Introduction

2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on comments received in response to the NOP, and comments received at the scoping meeting conducted by the City. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

2.3.1 Impacts Considered Less Than Significant

The City of Brea determined that seven environmental impact categories were not significantly affected by or did not affect the proposed Greenbriar Residential Development Project. These categories are evaluated in Chapter 8, *Impacts Found Not to Be Significant*.

- Agriculture and Forest Resources
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Mineral Resources
- Wildfire

The following environmental impact categories were determined to have less than significant or no impacts in Chapter 5, *Environmental Impacts*.

- Aesthetics
- Energy
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities And Service Systems

2.3.2 Potentially Significant Adverse Impacts

The City of Brea determined that five environmental factors have potentially significant impacts if the proposed Project is implemented.

- Air Quality
- Cultural and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials

2. Introduction

- Tribal Cultural Resources

As discussed in Chapter 5, Environmental Impacts, all impacts were found to be less than significant except for Air Quality, Cultural and Paleontological Resources, Hazards and Hazardous Materials, and Tribal Cultural Resources which require mitigation measures to reduce impacts to a less than significant level.

2.3.3 Unavoidable Significant Adverse Impacts

This DEIR did not identify any significant and unavoidable impacts.

2.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference into this DEIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at the City of Brea.

- **City of Brea General Plan (2003).** The City of Brea General Plan serves as the major tool for directing growth in Brea and presents a comprehensive plan to accommodate the City's growing needs. The General Plan analyzes existing conditions in the City, including physical, social, cultural, and environmental resources and opportunities. The General Plan also looks at trends, issues, and concerns that affect the region; includes City goals and objectives; and provides policies to guide development and change. Where applicable, chapters and figures of the General Plan are referenced throughout this DEIR.
- **City of Brea Municipal Code (Updated 2024).** The Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the General Plan and proposed development projects. Where applicable, chapters and sections of the Municipal Code are referenced and explained throughout this DEIR.

2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the City address shown on the title page of this document. Upon completion of the 45-day review period, the City of Brea will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the City of Brea for potential certification as the environmental document for the proposed Project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the City.

The DEIR is available to the general public for review at:

- City of Brea Planning Division, 1 Civic Center Circle, Level 3, Brea, CA 92821
- Brea Library, 1 Civic Center Circle, Level 1, Brea, CA 92821

2. Introduction

- Brea Community Center, 695 Madison Way, Brea, CA 92821
- City of Brea website: <https://www.ci.brea.ca.us/166/Projects-in-Process>

2.6 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The draft Mitigation Monitoring and Report Program (MMRP) for the Greenbriar Residential Development Project is included as Appendix K to this DEIR and will be updated, prior to consideration of the proposed Project by the City of Brea City Council.

2. Introduction

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3. Project Description

The Project Proponent (Lennar Homes of California, Inc.) is proposing a residential community on the former 9.7-acre Mercury Insurance site in the City of Brea. The Project site is developed with a 164,908-square-foot office building that has sat vacant since the COVID-19 pandemic (estimated second quarter of 2020) but had previously been in operation since 1976. Other structures on the Project site include a three-story parking structure serving both the office building and the adjacent Brea Plaza Shopping Center. The proposed Project would involve demolition of the existing office building, parking structure, and parking lot and subsequent construction and operation of 179 attached residential units on the Project site.

3.1 PROJECT LOCATION

The City of Brea is bordered by the cities of La Habra to the northwest; Fullerton to the southwest and south; Placentia to the south; Yorba Linda to the southeast and east; unincorporated Orange County to the east, northeast, and north; Chino Hills (San Bernardino County) to the northeast; and unincorporated Los Angeles County to the northwest (see Figure 3-1, *Regional Location*).

The 9.7-acre site (Assessor's Parcel Number [APN] 319-102-34) is located at 1698 through 1700 Greenbriar Lane in the City of Brea. The Project site is bounded by State Route 57 (SR-57) to the west, residential uses along Greenbriar Lane to the north, residential uses separated by Fullerton Creek drainage channel and South Associated Road to the east, and the Brea Plaza Shopping Center to the south. Figure 3-1, *Regional Location*, and Figure 3-2, *Local Vicinity*, show the Project site within the regional and local contexts of Orange County and the City of Brea, respectively.

3.2 ENVIRONMENTAL SETTING

3.2.1 Existing Land Use

The Project site is shown on Figure 3-3, *Aerial Photograph*. The existing 164,908-square-foot office building onsite was constructed in 1976, and based on a review of historical aerial photographs, the three-story parking structure was constructed between 2006 to 2007. The Mercury Insurance building is equipped with two emergency generators, each supplied by its own diesel underground storage tank (UST), which were installed in 2001.

The Greenbriar Residential Development Project applicant and owner of the Brea Plaza Shopping Center have an existing memorandum of understanding (MOU) that allows customers of the Brea Plaza Shopping Center to use approximately 180 parking spaces on the Project site during business hours, and all of the surface parking spaces (approximately 500 spaces) after 5:00 p.m. and on weekends. However, the MOU will expire in April 2026, unless voluntarily terminated by both parties sooner.

3. Project Description

The Project site is currently accessible via a driveway on Greenbriar Lane that provides access into the eastern parking lot. There is another access point to the Project site on South Associated Road that provides access to the southern parking lot and parking structure via the Brea Plaza Shopping Center. Historically, office workers at the Mercury Insurance building were also able to access the Project site via Imperial Highway by cutting through the Brea Plaza site; however, access to the site from this direction is limited due to construction at the northwestern portion of the Brea Plaza site. With implementation of the proposed Project, the only vehicle access points to the Project site would be via Greenbriar Lane.

3.2.2 Surrounding Land Use

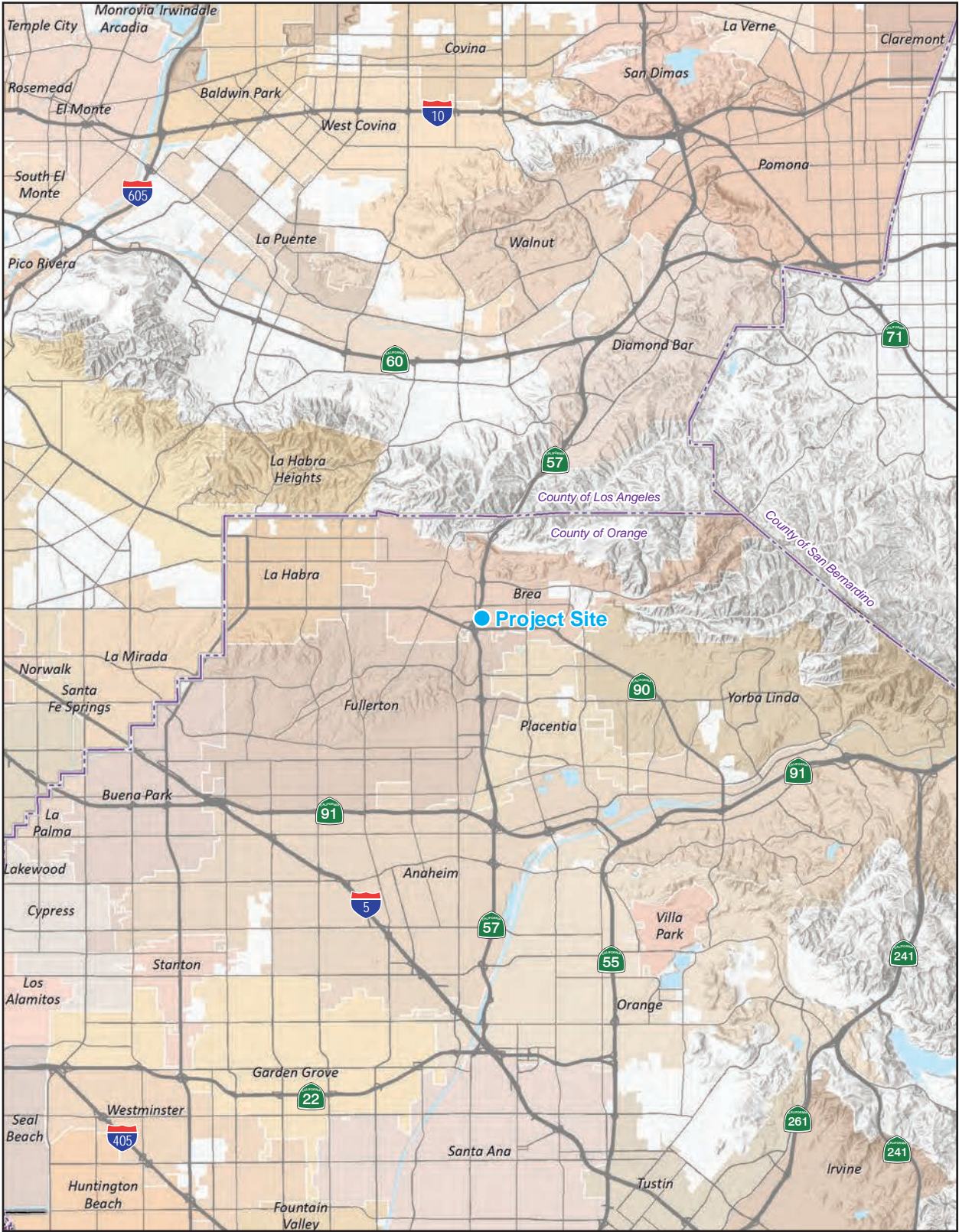
The Project site is southwest of the Greenbriar Lane and South Associated Road intersection. SR-57 divides the Project site from the land uses further west of the Project site, including Brea Mall and other commercial uses. The southern portion of the Project site is bounded by the Brea Plaza Shopping Center; commercial and retail uses exist further south along Imperial Highway. The northern portion of the Project site is bounded by residential uses and the Brea Glenbrook Club and Greenbriar Park along Greenbriar Lane. To the east of the Project site, across the Fullerton Creek drainage channel and South Associated Road, is a single-family neighborhood. Residential uses also exist at the southeast corner of the Imperial Highway and South Associated Road intersection. Figure 3-4a through Figure 3-4f, *Site Photographs*, show the existing conditions of the site and surrounding areas.

3.3 STATEMENT OF OBJECTIVES

Objectives for the Greenbriar Residential Development Project will aid decision makers in their review of the project and associated environmental impacts:

1. Revitalize the site by developing housing near other residential and commercial uses, thereby introducing new, high-quality residential uses in the City.
2. Redevelop the underutilized Project site by providing additional opportunities for residential growth on an infill parcel.
3. Improve the jobs-housing balance in the City by providing new housing within close proximity to jobs and services.
4. Provide additional housing opportunities in the City to meet its Regional Housing Needs Allocation.
5. Create a high-quality residential product that provides connectivity between the commercial uses at Brea Plaza and a transitional buffer for the existing residential neighborhood to foster a vibrant and interactive mixed-use environment.

Figure 3-1 - Regional Location



--- County Boundary

Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2024.

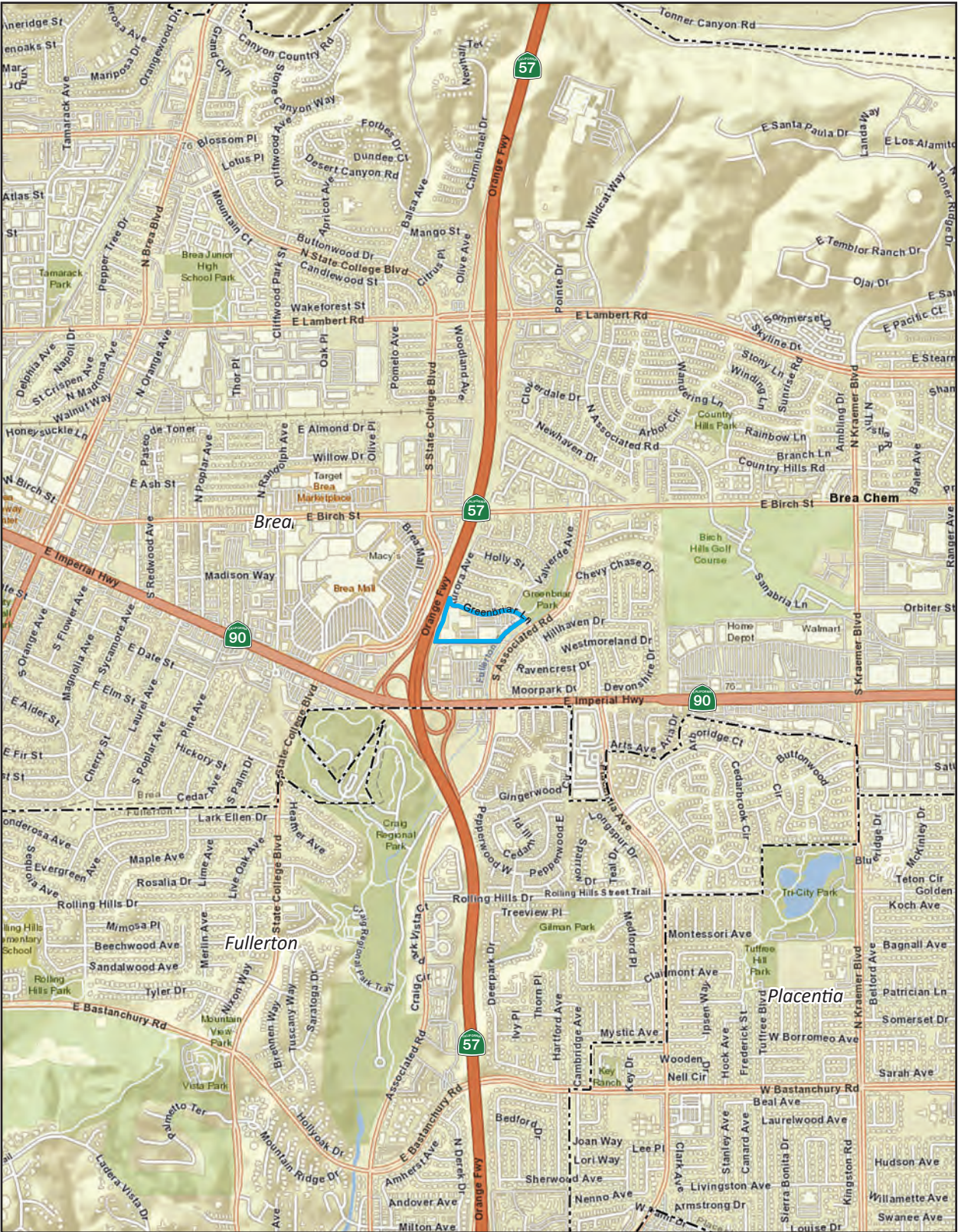
0 3
Scale (Miles)



3. Project Description

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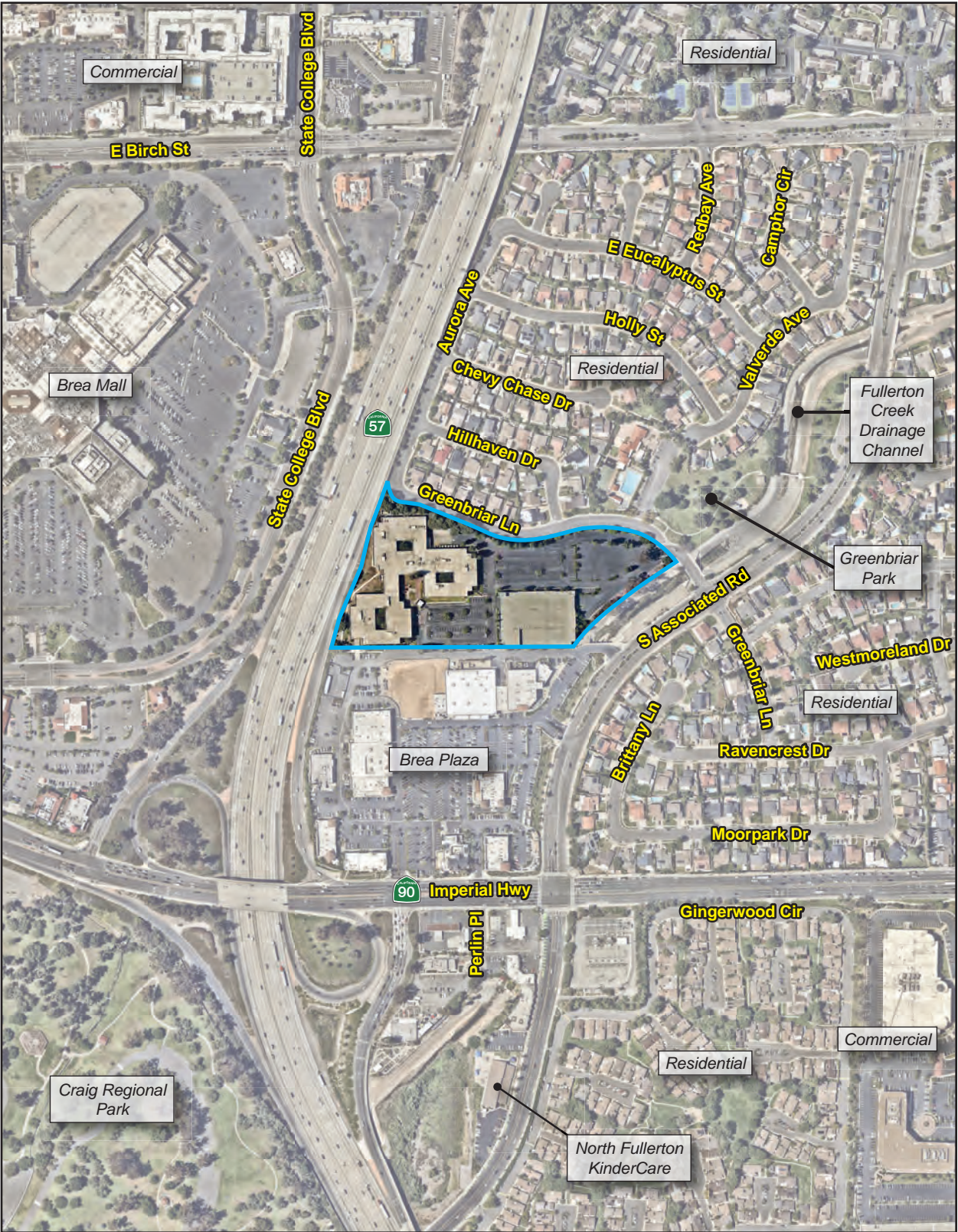
Figure 3-2 - Local Vicinity



3. Project Description

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Figure 3-3 - Aerial Photograph



Project Boundary

0 300
Scale (Feet)



Source: Nearmap 2024.

3. Project Description

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Figure 3-4a - Site Photographs



View of Existing Building.



View of Existing Parking Structure.

3. Project Description

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Figure 3-4b - Site Photographs



View of Fullerton Creek Drainage Channel.



View of Greenbriar Lane (Entrance to Project Site).

3. Project Description

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Figure 3-4c - Site Photographs



View of Residential Community to the North.



View of Brea Plaza Shopping Center.

3. Project Description

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Figure 3-4d - Site Photographs



View of Greenbriar Lane.



View of site from South Associated Road.

3. Project Description

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Figure 3-4e - Site Photographs



View of site from Greenbriar Lane.



View of existing surface parking lot.

3. Project Description

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Figure 3-4f - Site Photographs



View of SR-57 from Project Site.

3. Project Description

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3. Project Description

3.4 PROJECT DESCRIPTION

3.4.1 Greenbriar Residential Development

Figure 3-5, *Conceptual Site Plan*, shows the overall conceptual site plan for the proposed Project. The proposed Project would require the demolition of the existing office building, parking structure, and parking lot prior to construction and operation of the residential community. The proposed Project would provide for up to 179 residential units, including landscaping and common open space areas, on 6.87 acres of the approximately 9.7-acre site, and would result in approximately 505 new residents.¹ The remainder of the site (2.82 acres) would include internal access roads and public utilities. The proposed Project would include 67 buildings consisting of three different architectural styles. Table 3-1, *Greenbriar Residential Development Project Land Use Summary*, provides a breakdown of the product summary and mix.

Table 3-1 Greenbriar Residential Development Project Land Use Summary

Product Summary and Mix	Number of Buildings	Number of Units
The Courts	16	80
The Villas	37	73
The Yards	14	26
Residential Subtotal	67	179

3.4.1.1 THE COURTS

The Courts would consist of a total of 16 buildings (80 units) that would be three stories tall (36 feet and 11 inches for the 5-unit buildings and 36 feet and 9 inches for the 10-unit buildings). The Courts would be oriented in a “U” shape to provide an internal garden courtyard for residents. The exterior would consist of dark beige paint, black trim, wood planks, dark gray roofing, and stone facades. Figure 3-6a, *The Courts (5-Unit Building) Conceptual Elevations*, and Figure 3-6b, *The Courts (10-Unit Building) Conceptual Elevations*, show the conceptual elevations for the Courts.

3.4.1.2 THE VILLAS

The Villas would consist of 37 buildings (73 units); three exterior options would be available. These residential buildings would be three stories tall with a rooftop terrace. The first exterior option would include light gray paint, black trim, board and batten siding, stone facades, and dark gray roofing; the building would be 48 feet and 11 inches tall. The second exterior option would include dark beige paint, brown trim, stone facades, and dark gray roofing; the building would be 44 feet and 2 inches tall. The third exterior option would include white paint, black trim, stone facades, and dark gray roofing; the building would be 48 feet and 11 inches tall. Figure 3-7a, *The Villas (Exterior Option 1) Conceptual Elevations*, Figure 3-7b, *The Villas (Exterior Option 2) Conceptual*

¹ Assuming an average of 2.82 residents per unit, consistent with the household size reported in the City’s 2021-2029 housing element, construction of 179 units would result in an increase of 505 residents.

3. Project Description

Elevations, and Figure 3-7c, *The Villas (Exterior Option 3) Conceptual Elevations*, show the conceptual elevations for the Villas.

3.4.1.3 THE YARDS

The Yards would consist of 14 buildings (26 units), and two options would be available—a farmhouse exterior and a contemporary exterior. These residential uses would be three stories tall. The farmhouse option would include light gray paint, board and batten siding, stone facades, and dark gray roofing; the building would be 41 feet and 5 inches tall. The contemporary option would include light gray paint, stone facades, black trim, and dark gray roofing; the building would be 35 feet and 7 inches tall. Figure 3-8, *The Yards (Farmhouse Option) Conceptual Elevations*, shows the conceptual elevations for the Yards.

3.4.2 Landscaping and Open Space

The proposed Project would include ornamental landscaping throughout the site, as shown on Figure 3-5. The proposed landscaping includes 104,785 square feet of common landscape area (planting improvements) and 7,569 square feet of private open space landscape area. The Project also includes 35,423 square feet of common hardscape area.

In addition, a passive park would be provided on the interior of the site. A conceptual park plan is shown on Figure 3-9, *Conceptual Park Plan*.

3.4.3 Fencing and Walls

Figure 3-10, *Fencing and Walls*, identifies the proposed barriers that would be constructed on the Project site. To reduce freeway noise, the proposed Project includes installation of a 10-foot-tall, 12-inch-wide masonry wall along the entire western boundary adjacent to SR-57. Additionally, the proposed Project includes an 8-foot tall, 8 inch wide, masonry wall between the Brea Plaza Commercial area to provide a barrier from the Brea Plaza docking doors and commercial equipment. The proposed Project also includes interior accent walls, interior privacy walls, and a patio wall along Greenbriar Lane.

3.4.4 Site Access and Parking

The Project site would be accessed via two new road connections to Greenbriar Lane (one at the eastern side and one at the western side of the Project site). The existing internal access road that connects the Project site and the Brea Plaza Shopping Center would be closed. Per the City's roadway standards, Greenbriar Lane would be reconfigured and the two new internal access roads would connect at "t-intersections" to accommodate the proposed Project. Figure 3-11, *Pedestrian Connectivity*, shows the pedestrian paths and crossings within the Project site.

A total of 413 parking spaces would be provided for the Project site, in which 342 spaces are provided as garage spaces and 51 spaces are provided as exterior parking stalls. Electric vehicle parking would be provided at 6 exterior parking stalls onsite.

Figure 3-5 - Conceptual Site Plan



— Project Boundary

— Proposed Park

0 120
Scale (Feet)



Source: AO 2018.

3. Project Description

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Figure 3-6a - The Courts (5-Unit Building) Conceptual Elevations



Courtyard Elevation



Courtyard Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-6b - The Courts (10-Unit Building) Conceptual Elevations



Courtyard Elevation



Courtyard Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-7a - The Villas (Exterior Option 1) Conceptual Elevations



Front Elevation



Front Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-7b - The Villas (Exterior Option 2) Conceptual Elevations



Front Elevation



Front Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-7c - The Villas (Exterior Option 3) Conceptual Elevations



Front Elevation



Front Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-8 - The Yards (Farmhouse Option) Conceptual Elevations



Front Elevation



Front Elevation



Side Elevation



Side Elevation

3. Project Description

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Figure 3-9 - Conceptual Park Plan



Note: Barbeques are not proposed.

Source: Lennar 2024.

3. Project Description

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Figure 3-10 - Fencing and Walls



LEGEND	
SYMBOL	DESCRIPTION
	PATIO WALLS - 42" H. X 6" PRECISION BLOCK W/ STUCCO FINISH
	PRIVACY WALL - 6' H. X 8" PRECISION BLOCK W/ STUCCO FINISH
	ACCENT WALLS - 8" PRECISION BLOCK W/ STACKED STONE VENEER
	PERIMETER WALL - 8' H. X 8" W. MASONRY BLOCK
	SOUND WALL - 10' H X 12" MASONRY WALL

Source: Lennar 2024.



3. Project Description

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Figure 3-11 - Pedestrian Connectivity



- Project Boundary
- Primary Pedestrian Path (5' Min.)
- Pedestrian Crossing

0 120
Scale (Feet)



Source: AO 2024.

3. Project Description

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3. Project Description

3.4.5 Infrastructure

The proposed Project would require the extension of and connection to utilities (sewer, water, storm drain, electricity, and gas) to accommodate the uses onsite. Utility improvements would include trenching and exposing existing lines for connections; trenching, installing, and undergrounding new lines; and break-in connections to existing main lines. The proposed Project would include approximately 3,513 linear feet of water lines, 4,295 linear feet of sewer lines, and 2,898 linear feet of storm drain lines within the Project site boundaries. Off-site utility connections would occur within Greenbriar Lane and the Brea Plaza Shopping Center site, which are located within existing streets and previously developed areas. Approximately 2.82 acres of the Project site would be designated for internal access roads and public utilities. All new utilities would be underground.

3.4.6 Affordable Housing

The Applicant is considering three options for affordable housing to ensure consistency with the City's Affordable Housing ordinance. The options currently being considered by the Project Applicant include 1) offsite affordable housing, 2) conveyance of off-site property to the City, and 3) on-site affordable housing. For Options 1 and 2, the Applicant has identified the Mercury Lane Residential project site at the southeast corner of Berry Street and Mercury Lane as a potential offsite location to fund affordable housing. An Environmental Impact Report for the Mercury Lane Residential project was Certified May 2020 (State Clearinghouse No. 2018121032) and evaluated development of a 114-unit residential development on the 1.01-acre site. Consequently, environmental impacts from a residential development on this site were previously evaluated. Should additional discretionary review be determined to be necessary, it would be subject to environmental review at the time an application is submitted. Option 3 for onsite affordable housing would be covered by the analysis in this EIR.

3.4.7 Construction Phase

Construction of the proposed Project would commence in April of 2026. Construction activities for the residential community would take approximately 31 months, with completion anticipated in late 2028.

- Demolition and Abatement for the UST: 80 days (approximately 2.5 months)
- Rough Grading: 40 days (approximately 1.5 months), requires 8,291 cubic yards of import
- Infrastructure and Offsite Improvements: 132 days (6 months)
- Residential Building Construction: 310 days (14 months)²

3.5 GENERAL PLAN AND ZONING

The City of Brea General Plan Land Use designation for the Project site is General Commercial, and the site is zoned General Commercial (C-G) with a P-D Precise Development overlay. The General Commercial designation creates areas where a broad range of retail, office, and service-oriented business activities can locate. The proposed Project would require a General Plan Amendment (GPA) and a zone change from General

² The residential units would be released in phases as the market demands.

3. Project Description

Commercial (C-G) to Mixed-Use II (MU-II). The Mixed-Use II designation provides opportunities for coordinated development of urban villages that offer a diverse range of complementary land uses in close proximity to one another. This designation permits either horizontal or vertical integration of uses.

3.6 CITY ACTION REQUESTED

This draft environmental impact report (DEIR) examines the environmental impacts of the Proposed Greenbriar Residential Development Project. This DEIR is also being prepared to address various actions by the City to adopt and implement the proposed Project. It is the intent of this DEIR to enable the City, other responsible agencies, and interested parties to evaluate the environmental impacts of the proposed Project and make informed decisions with respect to the requested entitlements. The discretionary actions required by the City of Brea and other agencies are shown in Table 3-2, *Actions Required*.

Table 3-2 Actions Required

Lead Agency	Action
City of Brea	Approval of a General Plan Amendment Approval of a Zone Change Approval of Development Agreement Approval of Vesting Tentative Tract Map Approval of Precise Development Other discretionary and ministerial permits and approvals that may be deemed necessary, including, but not limited to, temporary street closure permits, grading permits, excavation permits, foundation permits, building permits, sign permits, and tree removal permits
Responsible Agencies	Action
Santa Ana Regional Water Quality Control Board	Issuance of National Pollution Discharge Elimination System (NPDES) Permit Issuance of Construction Permit

4. Environmental Setting

4.1 INTRODUCTION

This chapter provides a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective” (California Environmental Quality Act [CEQA] Guidelines Section 15125[a]), pursuant to provisions of CEQA and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed Project.

4.2 REGIONAL ENVIRONMENTAL SETTING

4.2.1 Regional Location

The City of Brea is in the northeast portion of Orange County, California, and bordered by La Habra to the northwest; Fullerton to the southwest and south; Placentia to the south; Yorba Linda to the southeast and east; unincorporated Orange County to the east, northeast, and north; Chino Hills in San Bernardino County to the northeast; and unincorporated Los Angeles County to the northwest (see Figure 3-1, *Regional Location*, in Chapter 3, *Project Description*). The Project site is bound to the west by State Route 57 (SR-57), which runs north to south, and to the east by the Fullerton Creek drainage channel and South Associated Road, which runs north to south.

4.2.2 Regional Planning Considerations

4.2.2.1 SCAG REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a federally recognized metropolitan planning organization for this region, which encompasses over 380,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and State laws. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs.

The 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal) was adopted on April 4, 2024. The major themes in the 2024 RTP/SCS include building and maintaining an integrated multimodal transportation network; developing, connecting, and sustaining communities that are livable and thriving; creating a healthy region for existing and future populations; and supporting a sustainable,

4. Environmental Setting

efficient, and productive regional economic environment that provides opportunities for all residents (SCAG 2024).

The RTP/SCS outlines the challenges facing the region, shared goals and policies, and transportation investments and land use strategies needed for the future. The RTP/SCS provides guidance for public agencies who are implementing transportation projects to do so in a coordinated manner while supporting economic growth; achieving environmental goals; promoting public health, quality of life, and social equity; and ensuring continued access to federal and State transportation funding. The proposed Project's consistency with the applicable Connect SoCal goals is analyzed in detail in Section 5.6, *Land Use and Planning*.

4.2.2.2 SOUTH COAST AIR BASIN AIR QUALITY MANAGEMENT PLAN

The Project site is in the South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD). Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State laws and are detailed in the SoCAB Air Quality Management Plan (AQMP). Air pollutants for which ambient air quality standards (AAQS) have been developed are known as criteria air pollutant—ozone (O₃), carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide, coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead. VOC and NO_x are criteria pollutant precursors and go on to form secondary criteria pollutants, such as O₃, through chemical and photochemical reactions in the atmosphere. Air basins are classified as attainment/nonattainment areas for particular pollutants depending on whether they meet AAQS for that pollutant. The SoCAB is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS, nonattainment for PM₁₀ under the California AAQS, attainment for lead under the California AAQS, and nonattainment for PM₁₀ and lead (Los Angeles County only) under the National AAQS (CARB 2024). The proposed Project's consistency with the applicable AAQS is discussed in Section 5.2, *Air Quality*.

4.2.2.3 GREENHOUSE GAS EMISSIONS REDUCTION LEGISLATION

Current State of California guidance and goals for reduction in greenhouse gas (GHG) emissions are generally embodied under the following:

- **Executive Order S-03-05**, signed June 1, 2005, set the following GHG reduction goals for the State of California:
 - 2000 levels by 2010
 - 1990 levels by 2020
 - 80 percent below 1990 levels by 2050
- **Assembly Bill (AB) 32** was passed by the State legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 established a legislative target for the year 2020 goal outlined in Executive Order S-03-05. CARB prepared its first Scoping Plan in 2008 outlining the State's plan for achieving the 2020 targets of AB 32 (CARB 2008).
- **Senate Bill (SB) 375** was adopted in 2008 to connect passenger vehicle GHG emissions reductions targets for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce

4. Environmental Setting

GHG emissions from light-duty trucks and automobiles by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips.

- **SB 32** made the Executive Order B-15-30 goal for year 2030 of a 40-percent reduction below 1990 levels by 2030 into a statewide-mandated legislative target. CARB issued an update to its Scoping Plan in 2017 that lays out programs for meeting the SB 32 reduction target (CARB 2017).
- **Executive Order B-55-18** sets a goal for the state to achieve carbon neutrality no later than 2045 and to achieve and maintain net negative emissions thereafter.
- **Assembly Bill 1279** codifies the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State's anthropogenic GHG emissions (CARB 2022).

The proposed Project's ability to meet these regional GHG emissions reduction target goals is analyzed in Section 5.5, *Greenhouse Gas Emissions*.

4.2.2.4 SENATE BILL 743

On September 27, 2013, SB 743 was signed into law and started a process that fundamentally changed transportation impact analysis as part of CEQA compliance. SB 743 eliminates auto delay, level of service, and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. Pursuant to the CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099[b](1)).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. The revised CEQA Guidelines establish new criteria for determining the significance of transportation impacts. Under the new guidelines, VMT-related metric(s) are required beginning on July 1, 2020, to evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of level of service, but these metrics can no longer constitute the sole basis for determining transportation impacts under CEQA.

4. Environmental Setting

4.3 LOCAL ENVIRONMENTAL SETTING

4.3.1 Location and Land Use

4.3.1.1 PROJECT LOCATION

As shown in Figure 3-1, *Regional Location*, Figure 3-2, *Local Vicinity*, and Figure 3-3, *Aerial Photograph*, the 9.7-acre Project site is in the City of Brea, at 1698 through 1700 Greenbriar Lane (Assessor's Parcel Number [APN] 319-102-34). The Project site is generally bounded by Greenbriar Lane to the north, Fullerton Creek drainage channel and South Associated Road to the east, SR-57 to the west, and Brea Plaza Shopping Center to the south.

4.3.1.2 EXISTING LAND USE

An aerial of the Project site is shown on Figure 3-3, *Aerial Photograph*. The existing 164,908-square-foot office building on-site was constructed in 1976, and based on a review of historical aerial photographs, the three-story parking structure was constructed between 2006 and 2007. The Mercury Insurance building is equipped with two emergency generators, each supplied by its own diesel underground storage tank (UST), which were installed in 2001.

The Project site is currently accessible via a driveway on Greenbriar Lane that provides access to the eastern parking lot. There is another access point to the Project site on South Associated Road that provides access to the southern parking lot and parking structure via the Brea Plaza Shopping Center. Historically, office workers at the former Mercury Insurance building were also able to access the Project site via Imperial Highway by cutting through the Brea Plaza site; however, access to the site from this direction is limited due to construction at the northwestern portion of the Brea Plaza site. With implementation of the proposed Project, the only vehicle access points to the Project site would be via Greenbriar Lane.

Figure 3-4a through Figure 3-4f, *Site Photographs*, show the existing conditions of the site and surrounding areas.

4.3.1.3 SURROUNDING LAND USE

The Project site is southwest of the Greenbriar Lane and South Associated Road intersection. SR-57 separates the Project site from the land uses farther west of the Project site, including Brea Mall and other commercial uses. The southern portion of the Project site is bounded by the Brea Plaza Shopping Center; commercial and retail uses exist farther south along Imperial Highway. The northern portion of the Project site is bounded by residential uses, the Brea Glenbrook Club, and Greenbriar Park along Greenbriar Lane. To the east of the Project site, across the Fullerton Creek drainage channel and South Associated Road, is a single-family residential neighborhood.

4. Environmental Setting

4.3.2 Environmental Resources and Infrastructure

4.3.2.1 AESTHETICS

The Project site is currently developed with the former Mercury Insurance building and associated parking structure. Refer to Section 5.1, *Aesthetics*, of this Draft Environmental Impact Report (DEIR) for more information on the existing visual quality of the site.

4.3.2.2 AIR QUALITY

The SoCAB, which is managed by South Coast AQMD, is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS, nonattainment for PM₁₀ under the California AAQS, attainment for lead under the California AAQS, and nonattainment for PM₁₀ and lead (Los Angeles County only) under the National AAQS (CARB 2024). A discussion of regional air quality considerations is described in Section 4.2.2. Existing air quality conditions in the City are analyzed in Section 5.2, *Air Quality*, of this DEIR.

4.3.2.3 CULTURAL RESOURCES

The Project site is currently developed and is not listed as a state or national historic resource (OHP 2024; NPS 2020). Refer to Section 5.3, *Cultural and Paleontological Resources*, for more information on historical, archaeological, and paleontological resources.

4.3.2.4 ENERGY

The Project site is currently developed. While Mercury Insurance is no longer operational, the site currently uses various forms of energy to maintain the building (electricity and natural gas). Refer to Section 5.4, *Energy*, for a discussion of energy use and requirements in California.

4.3.2.5 GREENHOUSE GAS EMISSIONS

Global climate change is not confirmed to a particular project site, and even a very large project does not generate enough GHGs on its own to influence global climate change significantly. Regional GHG considerations are described in Section 4.2.2. Refer to Section 5.5, *Greenhouse Gas Emissions*, of the DEIR, for a discussion of GHG emissions in California.

4.3.2.6 LAND USE AND PLANNING

The Project site is in an urbanized area, surrounded by residential and commercial uses. The Project site is currently zoned General Commercial (C-G) with a P-D Precise Development overlay and designated General Commercial. Section 5.6, *Land Use and Planning*, provides further analysis of regional and local land use plans applicable to the proposed Project.

4.3.2.7 NOISE

The Project site is currently developed, and the noise environment surrounding the Project site is influenced by minimal on-site operations and activities (maintaining the building, landscaping, security, etc.); surrounding

4. Environmental Setting

roadways; and nearby residential and commercial uses. Refer to Section 5.7, *Noise*, for additional information concerning the existing noise environment.

4.3.2.8 POPULATION AND HOUSING

The existing site is developed with a 164,908-square-foot office building that has been vacant since the COVID-19 pandemic (estimated second quarter of 2020) but had previously been in operation since 1976. Refer to Section 5.8, *Population and Housing*, for further information on population and housing.

4.3.2.9 PUBLIC SERVICES

The City of Brea Fire Department provides fire protection services, the City of Brea Police Department provides police protection services, and the Project site is within the Brea-Olinda Unified School District boundaries. The Brea Branch Library, which is part of the Orange County Public Library community library network, provides library services in Brea. Refer to Section 5.9, *Public Services*, for additional information on public services.

4.3.2.10 RECREATION

The existing Project site does not include recreational facilities; Greenbriar Park is north of the Project site along Greenbriar Lane, and Craig Regional Park is approximately 0.23-mile southwest of the site. Refer to Section 5.10, *Recreation*, for information on recreational facilities.

4.3.2.11 TRANSPORTATION

Regional access to the Project site is provided by SR-57, which runs north-south and bounds the western portion of the site, and South Associated Road, which runs north-south, is to the east of the Project site. Vehicular access to the site is via Greenbriar Lane. Refer to Section 5.11, *Transportation*, for additional information concerning existing transportation and traffic conditions.

4.3.2.12 TRIBAL CULTURAL RESOURCES

The Project site is currently developed with an office building and parking structure, and is surrounded by developed uses. The City initiated AB 52 and SB 18 outreach. Refer to Section 5.12, *Tribal Cultural Resources*, for additional information on tribal cultural resources.

4.3.2.13 UTILITIES AND SERVICE SYSTEMS

The Project site is currently developed and has utility connections and tie-ins on-site. Water and wastewater are treated by the Orange County Sanitation District, water is supplied by the California Domestic Water Company and the Municipal Water District of Orange County through the City Water Division, and solid waste is transported to the Olinda Alpha landfill. Refer to Section 5.13, *Utilities and Service Systems*, of this DEIR for additional information.

4. Environmental Setting

4.3.3 Local Planning Considerations

The City of Brea General Plan Land Use designation for the Project site is General Commercial, and the site is zoned General Commercial (C-G) with a P-D Precise Development overlay. Figure 4-1, *Existing General Plan Land Use*, and Figure 4-2, *Existing Zoning Designation*, show the existing land use and zoning designations for the site.

4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the CEQA Guidelines defines cumulative impacts to be "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines (Section 15130 [b][1]) state that the information used in an analysis of cumulative impacts should come from one of two sources:

- A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- B. A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analyses in this EIR use a combination of methods A and B. Generally, the growth projections that are identified in the Brea General Plan have been used for the general plan forecast year conditions. Table 4-1, *Cumulative Projects in the City of Brea*, provides a list of cumulative projects in the Project area.

Table 4-1 Cumulative Projects in the City of Brea

Project Name	Project Description	Project Location
The Phoenix Club	8,350-square-foot sit-down restaurant	385 West Central Avenue
New Industrial Building	147,500-square-foot warehouse	424 Berry Way
Mercury Lane Apartments	--	Southeast corner of Mercury Lane and Berry Street
Transwestern	126,797-square-foot warehouse	285 North Berry Street; 711 West Imperial Highway
Brea Gaslight Square Redevelopment	--	255 East Imperial Highway
South Brea Townhomes	32-unit multifamily housing	685 South Brea Boulevard
Smart Parke Pet Daycare	6,715-square-foot pet daycare	835 East Birch Street
Brea Mall Mixed Use Project	--	100 Brea Mall Road
Brea Plaza Remodel (Buildings E-G)	--	1639 East Imperial Highway

4. Environmental Setting

Table 4-1 Cumulative Projects in the City of Brea

Project Name	Project Description	Project Location
Brea 265 Specific Plan ⁶	--	Valencia Avenue, Lambert Road, Carbon Canyon Road, Rose Drive
Amazon Parcel Delivery Facility	181,500-square-foot high-cube parcel hub warehouse	275 Valencia Avenue
Light Industrial Building	56,000-square-foot light industrial	3200 Nasa Street
Industrial Building	113,700-square-foot warehousing	2727 East Imperial Highway
Brea Regional Animal Hospital	5,925-square-foot animal hospital	East Imperial Highway
Brea Plaza Living	125-unit multifamily housing	1639 East Imperial Highway

Source: RK Engineering Group, Inc. 2024 (Appendix F2) and City of Brea.

Depending on the environmental category, the impact analysis may use either source A or B. Some impacts are site-specific, such as cultural resources, and others may have impacts outside the City boundaries, such as regional air quality. Please refer to Chapter 5, *Environmental Analysis*, for a discussion of the cumulative impacts associated with development and growth in the City and region for each environmental resource area.

Cumulative impact analyses for several topical sections are also based on the most appropriate geographic boundary for the respective impact. Several potential cumulative impacts that encompass regional boundaries (e.g., air quality and traffic) have been addressed in the context of various regional plans and defined significance thresholds. Climate change is a global issue, and the cumulative impacts analysis has been addressed in the context of State regulations and regional plans designed to address the global cumulative impact.

The following is a summary of the approach and extent of cumulative impacts, which are further detailed in each environmental topical section:

- **Aesthetics.** The geographic context for the analysis of cumulative aesthetics and visual resources impacts includes developments in Brea. The proposed Project's physical impacts are localized and would take place within the Project site footprint.
- **Air Quality.** Air quality impacts include regional (cumulative) impacts and localized impacts. For cumulative impacts, the analysis is based on the regional boundaries of the SoCAB.
- **Cultural and Paleontological Resources.** Cumulative impacts consider the potential for the proposed Project in conjunction with nearby existing and reasonably foreseeable development projects to result in impacts on cultural resources on the Project site and within the vicinity of the Project site for historical, archaeological, and paleontological resources.
- **Energy.** Energy impacts can contribute to the consumption and demand for energy in the region (e.g., Southern California Edison and the Southern California Gas Company).

Figure 4-1 - Existing General Plan Land Use



0 450
Scale (Feet)

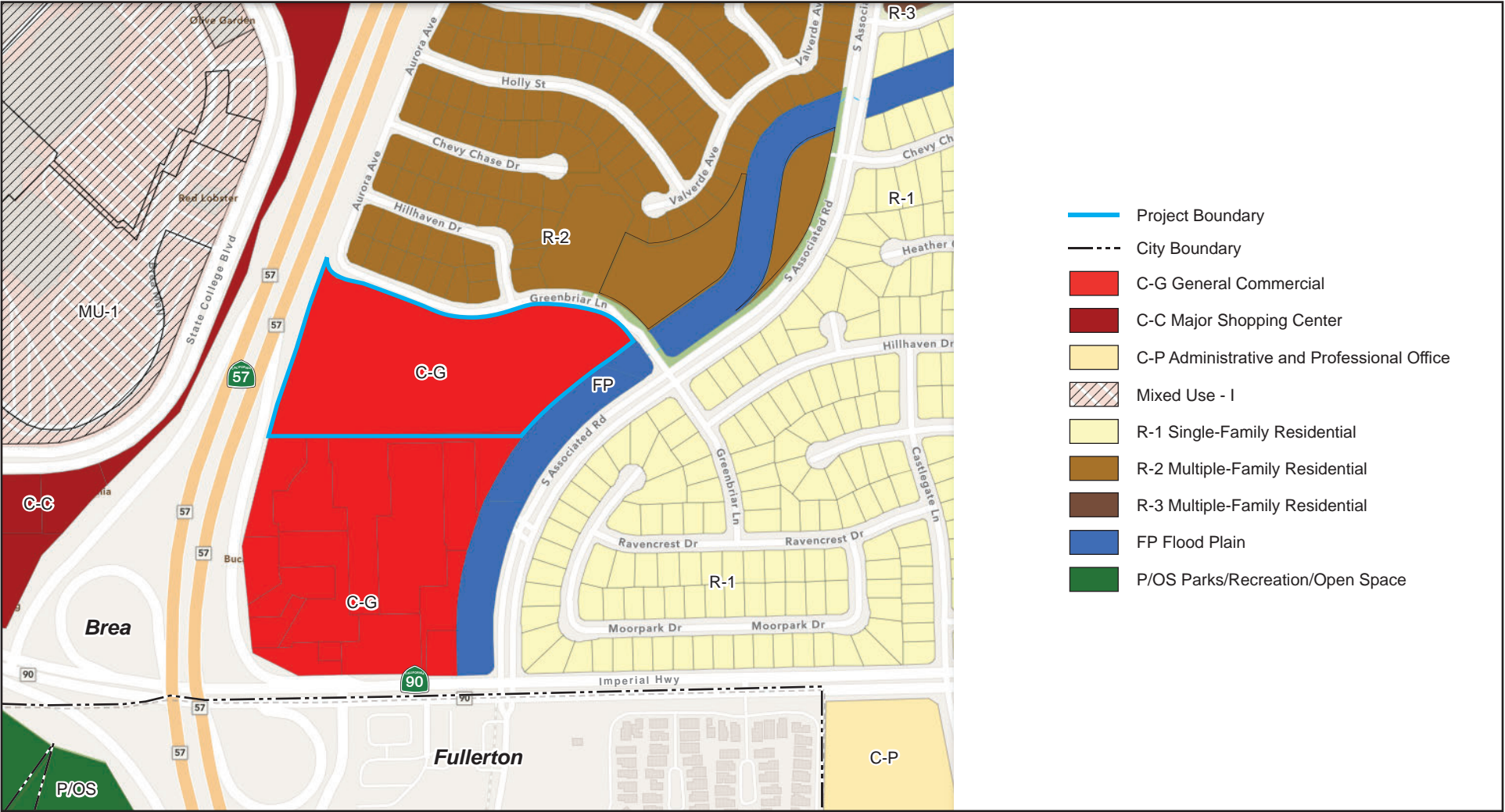


Source: City of Brea 2024.

4. Environmental Setting

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Figure 4-2 - Existing Zoning Designations



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Scale (Feet)



Source: City of Brea 2024.

4. Environmental Setting

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4. Environmental Setting

- **Hazards and Hazardous Materials.** Cumulative impacts are based on existing development combined with the Project and reasonably foreseeable future development.
- **Greenhouse Gas Emissions.** GHG emissions are not site-specific impacts but are cumulative worldwide. Therefore, the Project-level analysis in Section 5.5, *Greenhouse Gas Emissions*, also provides the analysis to determine whether the Project would make a cumulatively considerable contribution to significant cumulative GHG emissions.
- **Land Use and Planning.** Cumulative impacts are based on applicable jurisdictional boundaries and related plans, including the City of Brea General Plan and regional land use plans (e.g., SCAG's RTP/SCS).
- **Noise.** Cumulative traffic noise impacts are based on the traffic study, which considers the regional growth based on Citywide and regional projections. Cumulative construction impacts are based on nearby projects that may have concurrent construction schedules. Cumulative operational impacts are based on existing development combined with the Project and reasonably foreseeable future development.
- **Population and Housing.** Cumulative impacts are based on regional demographics projections in regional plans (e.g., SCAG's RTP/SCS).
- **Public Services.** Cumulative impacts are based on potential related development within each service provider's boundaries—Brea Fire Department, Brea Police Department, Brea-Olinda Unified School District, and Brea Public Library.
- **Recreation.** Cumulative impacts are based on the potential related development proximate to existing recreational facilities.
- **Transportation.** The traffic study considers the Project's cumulative contribution to traffic and transportation issues in the Project vicinity. The cumulative analysis of transit, bicycle, and pedestrian transportation impacts is based on City plans and policies. For the Project's opening-year conditions, the traffic analysis includes two years of annual growth on top of the existing traffic volumes at 1 percent per year (i.e., 2 percent total growth).
- **Tribal Cultural Resources.** Impacts related to tribal cultural resources are based on the local Native American tribes' culturally significant areas and include, but are not limited to, cultural landscapes and regions, specific heritage sites, and other tribal cultural places.
- **Utilities and Service Systems.** Cumulative impacts related to utilities are based on the utility companies' service boundaries.

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5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed Project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined in the Notice of Preparation (NOP), which was published August 1, 2024 (see Appendix A1), and through public and agency comments received during the NOP comment period from August 1 to September 3, 2024 (see Appendix A2). Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Cultural and Paleontological Resources
- 5.4 Energy
- 5.5 Greenhouse Gas Emissions
- 5.6 Hazards and Hazardous Materials
- 5.7 Land Use and Planning
- 5.8 Noise
- 5.9 Population and Housing
- 5.10 Public Services
- 5.11 Recreation
- 5.12 Transportation
- 5.13 Tribal Cultural Resources
- 5.14 Utilities and Service Systems

The following topical areas are discussed in Chapter 8, *Impacts Found Not to Be Significant*.

- Agriculture and Forestry Resources
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Mineral Resources
- Wildfire

Sections 5.1 through 5.14 provide detailed discussions of the environmental setting, impacts associated with the proposed Project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

5. Environmental Analysis

Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under nine major headings:

- Environmental Setting
- Thresholds of Significance
- Plans, Programs, and Policies
- Environmental Impacts
- Cumulative Impacts
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary*, has a table that summarizes all impacts by environmental issue.

Terminology Used in This Draft EIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The Project would not change the environment.
- **Less than significant.** The Project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The Project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

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5.1 AESTHETICS

This section of the Draft Environmental Impact Report (DEIR) discusses the potential impacts to the visual character of the Project site and its surrounding from development of the proposed Project. This section includes a discussion of the qualitative aesthetic characteristics of the environment that could be potentially degraded by the Project's implementation. The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refer to the identification of visual resources, the quality of what can be seen, and an overall visual perception of the environment. This analysis attempts to identify and objectively examine factors that contribute to the perception of aesthetic impacts. Potential aesthetic impacts can be evaluated by considering proposed grade separations, landform alteration, building setbacks, scale, massing, and landscaping features associated with the design of the proposed Project.

5.1.1 Environmental Setting

5.1.1.1 REGULATORY BACKGROUND

Local

City of Brea Municipal Code

Chapter 20.08, Development Standards, of the Municipal Code provides Citywide development standards for lighting, off-street parking and loading, transportation demand management requirements, and other development standards.

Chapter 20.236.040, Property Development Standards, provides development standards for landscaping, walls, and fences in the General Commercial (C-G) zone. Chapter 20.408, Administrative Procedures, lists the plan review procedure process in order to enable responsible City departments to review development proposals for conformity with applicable provisions of the Municipal Code and all requirements of law.

Additionally, Chapter 20.258, Mixed-Use Zoning Districts, provides general development standards for mixed-use zoning districts, which include development standards for parcel size and dimensions, allowable density ranges for residential uses, setbacks, and building heights.

City of Brea General Plan

The Community Resources Element of the Brea General Plan provides the following policies pertaining to the preservation and protection of scenic resources:

- **Policy CR-10.1.** Create and enforce special standards for development occurring within potential scenic highway corridors.
- **Policy CR-10.2.** Identify streets with unique man-made or natural characteristics for special consideration as scenic routes.

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- **Policy CR-10.3.** Manage standards of mature trees, particularly native species, as unique and visual resources.
- **Policy CR-10.4.** Preserve major rock outcroppings as unique landmarks and visual resources to the maximum extent possible.
- **Policy CR-10.5.** Preserve stream courses in their natural state, as they represent a recreation resource, provide community identify, and serve as unifying corridors in the planning area.
- **Policy CR-10.6.** Work aggressively with Orange County, Los Angeles County, State and other appropriate agencies, private entities, and landowners to conserve, protect, and enhance natural resources, particularly within the sphere of influence.

The Urban Design section of the Community Development Element includes the following goals pertaining to the aesthetic qualities and design of development in Brea:

- **Goal CD-17:** Promote and maintain a distinct community identity and sense of place that include the presence of identifiable districts and neighborhoods.
- **Goal CD-18:** Emphasize the use of public spaces and pedestrian and transit use throughout the community.
- **Goal CD-19:** Encourage active and inviting street environments that include a variety of uses within the Commercial and Mixed-Use areas.
- **Goal CD-20:** Encourage site planning within Commercial and Mixed-Use districts that functionally and visually integrates onsite facilities and uses, including buildings, services, access, and parking.
- **Goal CD-21:** Integrate residential development with its built and natural surroundings, and in particular, encourage a strong relationship between dwellings and the street.
- **Goal CD-22:** Encourage the use of native plant palettes in the creation of landscaping plans used to establish a sense of place in neighborhood identification efforts.

Policies for Providing a Balance of Housing

The following policies provide a balance of land uses to meet the present and future needs of all residents.

- **Policy CD-1.1.** Create neighborhoods that effectively integrate single-family and multi-family housing with convenience and neighborhood shopping centers, park and recreation areas, and other uses appropriate for the neighborhoods.
- **Policy CD-1.2.** Maintain a land use structure that balances the provision of jobs and housing with available infrastructure and public and human services.

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- **Policy CD-1.4.** Ensure that the City maintains a balance among residential, commercial, and industrial land uses.
- **Policy CD-1.5.** Provide opportunities for development of housing that responds to diverse community needs in terms of density, size, location, design, and cost.

5.1.1.2 EXISTING CONDITIONS

An aerial photograph of the Project site is shown on Figure 3-3, *Aerial Photograph*, which shows the 164,908-square-foot office building onsite as well as the three-story parking structure. The Mercury Insurance building is equipped with two emergency generators, each supplied by its own diesel UST. The Greenbriar Residential Development Project applicant and owner of the Brea Plaza Shopping Center have an existing MOU that allows customers of the Brea Plaza Shopping Center to use approximately 180 parking spaces on the Project site during business hours, and all of the surface parking spaces (approximately 500 spaces) after 5:00 p.m. and on weekends. However, the MOU will expire in April 2026, unless voluntarily terminated by both parties sooner. The Project site is currently accessible via a driveway on Greenbriar Lane that provides access into the eastern parking lot. There is another access point to the Project site on South Associated Road that provides access to the southern parking lot and parking structure via the Brea Plaza Shopping Center.

Visual Resources

The Project site is in an urbanized area in the western portion of the City and is southwest of the Greenbriar Lane and South Associated Road intersection. SR-57 separates the Project site from the land uses farther west of the Project site, including Brea Mall and other commercial uses. The southern portion of the Project site is bounded by the Brea Plaza Shopping Center; commercial and retail uses exist further south along Imperial Highway. The northern portion of the Project site is bounded by residential uses and Greenbriar Park along Greenbriar Lane. To the east of the Project site, across the Fullerton Creek drainage channel and South Associated Road, is a single-family neighborhood.

Figure 3-4a through Figure 3-4f, *Site Photographs*, show the existing conditions of the site and surrounding areas. The existing building and parking structure on the Project site are painted white and red; the residential neighborhood to the north of the Project site and the Brea Plaza Shopping Center to the south of the Project site generally have white-, beige-, blue-, and orange-painted exteriors, and terracotta, and brown and gray shingle roofing.

The vegetation on the Project site consists of ornamental trees, ground cover, and shrubs scattered throughout the surface parking lot and entrance to the building. The Project site is fully developed and contains no areas of natural or substantial open space. The nearest natural or open space areas from the Project site are Greenbriar Park, to the north of the Project site along Greenbriar Lane, and Craig Regional Park, approximately 0.23 mile southwest of the site.

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Visual Resources

The Project site is fully developed with the former Mercury Insurance building, parking structure, and parking lot. There are no visual resources present on the Project site.

Landform

The Project site is nearly flat, and gradually slopes from west to east. Elevations range from approximately 325 feet on the eastern portion to 340 feet on the western portion of the Project site. As shown in Figure 3-4f, *Site Photographs*, the western portion of the Project site is at a lower elevation than SR-57.

Scenic Vistas and Corridors

According to Figure CR-4, Scenic Resources, of the Community Resources Element of the Brea General Plan, SR-57, which bounds the western portion of the site, is eligible for California State Scenic Highway Status (Brea 2003).

5.1.2 Thresholds of Significance

Appendix G of the CEQA Guidelines states that, “except as provided in Public Resources Code Section 21099,” a project would normally have a significant effect on the environment if the project would:

- AE-1 Have a substantial adverse effect on a scenic vista.
- AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- AE-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
- AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

5.1.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP) include applicable regulatory requirements and conditions of approval for aesthetic impacts.

- PPP AE-1 The proposed Project is required to provide a minimum landscaped coverage of 15 percent of the net site area in accordance with Brea City Code Section 20.258.020, General Development Standards for the Mixed-Use Zoning Districts.
- PPP AE-2 All lighting, interior and exterior, shall be designed and located so as to confine all direct rays to the premises, per Brea City Code Section 20.220.040(L), Property Development Standards.

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- PPP AE-3 In accordance with Section 20.258.030(D)(2), Specific Development Standards for all Mixed-Use Projects, of the Brea City Code, the architectural style and use of quality materials shall be consistent throughout the entire Project site.
- PPP AE-4 In accordance with Section 20.258.030(D)(3.g), Specific Development Standards for all Mixed-Use Projects, of the Brea City Code, multiple structures on a single site shall be designed to create a strong visual relationship between and among the structures, and architectural treatments of structures shall be consistent on all sides.
- PPP AE-5 *Art in Public Places Sculpture*. Pursuant to the City of Brea Art in Public Places Policy Manual, the applicant must submit a letter to City staff explaining efforts to be taken during construction to protect the existing art piece.

5.1.4 Environmental Impacts

Senate Bill 731 (SB 731), also known as the CEQA Modernization Act of 2013, changed CEQA by stating that aesthetic impacts are not significant for certain projects (residential projects, mixed-use residential projects, employment center projects) in transit priority areas (TPAs). However, SB 731 does not prevent local jurisdictions from considering aesthetic impacts using local ordinances or other discretionary powers. CEQA defines a TPA as an area within a half mile of a major transit stop that is existing or planned, where service intervals are no longer than 15 minutes during peak commute hours. Although the Project site is within a TPA as defined by CEQA (see Section 5.12, *Transportation*), the City has chosen to conservatively analyze aesthetics impacts in this DEIR.

Impact 5.1-1: The proposed Project would not impact scenic vistas, or conflict with applicable zoning governing scenic quality. [Thresholds AE-1 and AE-3]

The proposed Project would result in the construction of a residential community on the former 9.7-acre Mercury Insurance site in the City of Brea.

Scenic Vistas

Vistas provide access or panoramic views to a large geographic area. The Community Resources Element of the General Plan states that “scenic resources enhance the visual character of the community and provide distinguishing characteristics, an invaluable asset that benefits a community” (Brea 2003). The Project site is fully developed and located in a highly urbanized portion of the City that is generally flat. The General Plan states that “vista points can be found throughout Brea both from urban areas towards the hills and from wilderness areas looking back into Brea” (Brea 2003).

Chino Hills State Park offers views throughout the park, such as views of Telegraph Canyon, Sonome Canyon, Soquel Canyon, and Lions Canyon; however, Gilman Peak is called out as a “viewpoint of particular interest” and is denoted as a scenic viewpoint in Figure CR-4, Scenic Resources, of the Community Resources Element of the Brea General Plan (Brea 2003). Gilman Peak is approximately six miles east of the Project site. Due to

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the distance, varying topography, and highly urbanized nature of the City, views of and from Chino Hills State Park, particularly Gilman Peak, would not be impacted.

Level of Significance Before Mitigation: Less Than Significant.

Brea Zoning Standards for Visual Character

The proposed Project would involve demolition of the existing office building, parking structure, and parking lot, and subsequent construction and operation of the residential community on the Project site (see Figure 3-5, *Conceptual Site Plan*). The residential units would be located along Greenbriar Lane, South Associated Road, and along the southern boundary of the site as well as the central portion of the site. An onsite park would be at the eastern portion of the site.

Figure 3-6a through Figure 3-8b show the conceptual elevations of the three different residential building types on the site—The Courts, the Villas, and the Yards. All the residential buildings would be three stories tall, and the Villas would include a rooftop terrace. The Courts would be along on the western and southern boundaries of the site, and buildings would be up to 36 feet and 11 inches tall; the Yards would be in the central portion of the site and would be up to 41 feet and 5 inches tall; and the Villas would be along the northern, eastern, and central portions of the site and would be up to 48 feet and 11 inches tall. The building exteriors would consist of dark beige, light gray, and white paint; black and brown trim; wood planks; stone facades; board and batten siding; and dark gray roofing.

The Mixed Use II Zone allows for a maximum building height of 60 feet. The tallest structures on the Project site would be the Villas, which would be up to 48 feet and 11 inches; therefore, the proposed Project would not exceed the maximum height allowed in the MU II Zone. Varying building materials and colors, variations in building rooflines, building pop-outs, and landscaping would be added and modulated to offset the buildings' massing, provide human scale, promote visual interest and articulation, and provide relief to and variation in the building form and style. Such design features would provide visual relief and enhancement for residents on- and off-site. Additionally, the proposed Project would also enhance the existing art sculpture at the northeastern corner of the Project site along Greenbriar Lane, as shown on Figure 5.1-1, *Existing Art Sculpture Enhancement*.

Discussion

The proposed Project would replace the vacant Mercury Insurance office building, parking lot, and three-story parking structure with a high-quality residential neighborhood. Thus, the proposed Project would change the visual character of the Project site from the deteriorating office use that it has become to a vibrant residential community.

Figure 5.1-1 - Existing Art Sculpture Enhancement



- Project Boundary
- Proposed Park

Source: Architects Orange 2024.

0 100
Scale (Feet)



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Single-family residential uses can be found to the north and east of the Project site, and commercial uses are to the south of the Project site on the Brea Plaza Shopping Center site. The Brea Glenbrook Club and the Greenbriar Park are also to the north of the Project site. The existing commercial uses to the south range from one- to two-stories; to the west of SR-57 is Brea Mall, City Hall, and Embassy Suites, which range in height up to seven stories. The three-story parking structure on the Project site is approximately 35 feet and 9 inches high. Though the proposed Project would introduce taller structures to the Project area, other higher-density projects exist in the City.

The residential neighborhoods to the east and north of the Project site are predominantly one- to two-story structures. Therefore, the proposed three-story buildings onsite would be taller than the structures in the adjacent single-family residential neighborhoods and taller than the three-story parking structure that is onsite. The Villas along Greenbriar Lane facing the established single-family residential neighborhood would be 48 feet and 11 inches in height. To soften the height difference and to ensure that the proposed Project would enhance the character and streetscape along Greenbriar Lane, the proposed Project would include several design elements, including hardscape and landscape features. For example, the architecture of the homes would be forward-facing with front doors and patios facing Greenbriar Lane, no perimeter block walls would be proposed along Greenbriar Lane, street trees would be incorporated to soften massing and provide shade, the proposed driveways would be at either end of Greenbriar Lane to avoid headlights pointing at the existing residences along Greenbriar Lane, the new homes at the west end of Greenbriar Lane would be approximately 4.5 feet below street elevation and would be the same elevation of Greenbriar Lane just west of South Plum Avenue, and a new sidewalk would be constructed along Greenbriar Lane to improve pedestrian access in the area. Further as identified above, the proposed Project would not exceed the maximum height allowed in the MU II Zone. As shown on Figure 3-10, *Fencing and Walls*, the proposed Project would include landscaping along the perimeter of the Project site as well as a 3.5-foot-tall block wall with stucco finishing along the northern perimeter of the site. These features would promote physical continuity and connections with the neighboring community.

The proposed Project would adhere to the development standards and design guidelines of the City of Brea Municipal Code (see PPP AES-1 through PPP AES-4) and General Plan policies. The building design and materials would be subject to approval by the City. As a result, the appearance and character of the proposed structures would be aesthetically compatible with adjacent land uses as well as land uses in the surrounding vicinity.

Overall, aesthetic impacts would not be adverse, as there are no scenic vistas or resources on the Project site, and the proposed Project would not block views of other scenic vistas or resources from public locations. The proposed Project is in an urbanized location and is not incompatible with surrounding land uses and would not conflict with the City's Zoning standards. Therefore, impacts relating to aesthetics would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

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Impact 5.1-2: The proposed Project would not alter scenic resources within a state scenic highway. [Threshold AE-2]

As shown in Figure CR-4, Scenic Resources, of the Community Resources Element of the Brea General Plan, SR-57, which bounds the Project site's western boundary, is eligible for California State Scenic Highway status, but is not officially designated as a State Scenic Highway (Brea 2003). The Brea General Plan identifies the hillsides above Brea as the scenic resource that is visible traveling northbound on SB-57. Development of the proposed Project would occur within the boundaries of the Project site and would not obstruct views of the ridgelines and hillsides on SR-57. Project implementation would not damage scenic resources, including trees, rock outcropping, and historic buildings, within a State Scenic Highway. Therefore, no impact would occur.

Level of Significance Before Mitigation: No Impact.

Impact 5.1-3: The proposed Project would generate additional light and glare. [Threshold AE-4]

The two major causes of light pollution are glare and spill light. Spill light is caused by misdirected light that illuminates outside the intended area. Glare occurs when a bright object is against a dark background, such as oncoming vehicle headlights or an unshielded light bulb. Spill light and glare impacts are the effects of a project's exterior lighting upon adjoining uses and areas.

The Project site contains parking lot and security lighting associated with the former office use, and additional onsite light and glare is caused by surrounding land uses and roadways, including SR-57 to the west, Greenbriar Lane to the north, and South Associated Road to the east.

Nighttime Light and Glare

The proposed Project would include new residential uses onsite and their related lighting sources. The new structures would likely also result in more exterior glazing (e.g., windows and doors) that could result in new sources of glare. Despite new and expanded sources of nighttime illumination and glare, the proposed Project is not expected to generate a substantial increase in light and glare. Lighting would be directed so as not to spill outside the Project site. The proposed Project would include garages, and therefore lights from vehicles would be limited. Additionally, the proposed perimeter landscaping, fences and walls, and proposed structures would block glare from parked cars, traffic on surrounding roadways, and surrounding land uses. The proposed Project would adhere to the development standards and design guidelines of the Brea Municipal Code (see PPP AES-2) to minimize light and glare impacts from onsite lighting. Therefore, new sources of lighting associated with the proposed Project are considered less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Daytime Glare

The proposed Project includes building materials and architectural treatments that could cause daytime glare, but not to such an extent that they would result in a significant impact. The development of the proposed Project would produce glare sources that are typical of residential uses, such as building material (glass and

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light-colored materials), fences, and vehicles parked and traveling along neighboring streets. However, glare from these sources is typical of the surrounding area and would not increase glare beyond what is expected for residential uses. Therefore, daytime glare impacts from the proposed Project would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.1.5 Cumulative Impacts

Aesthetic impacts are localized to the Project site and its immediate surroundings. As with the proposed Project, cumulative projects within the Project vicinity would not substantially alter the visual character of the Project site due to the highly urbanized and developed nature of the surrounding area, which includes predominantly residential and commercial uses. Because of the highly developed nature of the Project site and vicinity, the proposed Project would not negatively impact the visual character on- or off-site. Similarly, due to the existence of light and glare from the former Mercury Insurance building on the Project site and the commercial and residential uses surrounding the Project site, the proposed Project is not anticipated to add significantly to the creation of nighttime light and glare in the Project vicinity. The proposed buildings onsite would also create new sources of light and glare in the Project vicinity, but such buildings would be surrounded by perimeter landscaping and fences and walls, which would reduce the impacts of light and glare. Those impacts would therefore not combine with those of cumulative projects to adversely impact existing or planned sensitive receptors, such as residential uses. Therefore, the proposed Project's contribution to cumulative aesthetic impacts is less than considerable, and therefore, less than cumulatively significant.

5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.1.7 Mitigation Measures

No mitigation measures are required.

5.1.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.1.9 References

Brea, City of. 2003, August 19. Brea General Plan. <https://www.ci.brea.ca.us/179/General-Plan>.

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5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Greenbriar Residential Development Project (proposed Project) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the proposed Project is included in Appendix B1 of this DEIR. The modeling materials for the Project construction health risk assessment (HRA) are in Appendix B2 of this DEIR. Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

5.2.1 Environmental Setting

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, nitrogen dioxide (NO₂), PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and NO₂ are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects are described below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB, the highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005, 2022; US EPA 2024a). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance)¹ under the National AAQS (CARB 2024a).
- **Volatile Organic Compounds (VOC)** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to

¹ A maintenance area refers to a previously nonattainment area that has been redesignated to “maintenance” after it meets the standards and additional redesignation requirements in the Clean Air Act (Section 107(d)(3)(E)).

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the formation of O₃, South Coast AQMD has established a significance threshold (South Coast AQMD 2023a). The health effects for ozone are described later in this section.

- **Nitrogen Oxides (NO_x)** are a by-product of fuel combustion and contribute to the formation of ground-level O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_x produced by combustion is NO, but NO reacts quickly with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO₂ is only potentially irritating. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO₂ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005, 2022; US EPA 2024a). The SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2024a).
- **Sulfur Dioxide (SO₂)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations, and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005, 2022; US EPA 2024a). The SoCAB is designated as attainment under the California and National AAQS (CARB 2024a).
- **Suspended Particulate Matter (PM₁₀ and PM_{2.5})** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤0.01 millimeter). Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤0.0025 millimeter). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The US Environmental Protection Agency's (EPA) scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than PM₁₀ to contribute to health effects and at far lower

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concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (South Coast AQMD 2005, 2022). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤ 0.0001 millimeter) have human health implications because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2022). However, the EPA and the California Air Resources Board (CARB) have not adopted AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1999, 2023d). Particulate matter can also cause environmental effects such as visibility impairment,² environmental damage,³ and aesthetic damage⁴ (South Coast AQMD 2005, 2022; US EPA 2023a). The SoCAB is a nonattainment area for PM_{2.5} under California and National AAQS and a nonattainment area for PM₁₀ under the California AAQS (CARB 2024a).⁵

- **Ozone (O₃)** is a key ingredient of “smog” and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O₃ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O₃ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O₃ also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O₃ harms sensitive vegetation during the growing season (South Coast AQMD 2005, 2022; US EPA 2024a). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2024a).
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may

² PM_{2.5} is the main cause of reduced visibility (haze) in parts of the United States.

³ Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

⁴ Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

⁵ CARB approved the South Coast AQMD’s request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM₁₀ standards from 2004 to 2007. The EPA approved the State of California’s request to redesignate the South Coast PM₁₀ nonattainment area to attainment of the PM₁₀ National AAQS, effective on July 26, 2013.

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contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005, 2022; US EPA 2024a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.⁶ As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2024a). However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the Project.

Table 5.2-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 5.2-1 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	<ul style="list-style-type: none"> Chest pain in heart patients Headaches, nausea Reduced mental alertness Death at very high levels 	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O ₃)	<ul style="list-style-type: none"> Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation 	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> Increased response to allergens Aggravation of respiratory illness 	Same as carbon monoxide sources
Particulate Matter (PM ₁₀ and PM _{2.5})	<ul style="list-style-type: none"> Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death 	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> Aggravation of respiratory disease (e.g., asthma and emphysema) Reduced lung function 	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	<ul style="list-style-type: none"> Behavioral and learning disabilities in children Nervous system impairment 	Contaminated soil

Source: CARB 2024b.

⁶ Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

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Toxic Air Contaminants

CARB has identified other air pollutants as TACs, which are pollutants that may cause serious, long-term effects. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems (US EPA 2024b). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the Project being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory systems and may exacerbate existing allergies and asthma systems (US EPA 2002).

Ambient air quality standards have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The proposed Project is in the SoCAB and is subject to the rules and regulations imposed by the South Coast AQMD, the California AAQS adopted by CARB, and National AAQS adopted by the EPA. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed Project are summarized in this section.

5.2.1.1 REGULATORY BACKGROUND

Federal and State

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS as well as the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

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The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-2, *Ambient Air Quality Standards for Criteria Air Pollutants*. These pollutants are O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and Pb. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Ozone (O ₃) ³	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m ³	150 µg/m ³	
Respirable Fine Particulate Matter (PM _{2.5}) ⁴	Annual Arithmetic Mean	12 µg/m ³	9 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	

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Table 5.2-2 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄) ⁵	24 hours	25 µg/m ³	*	Industrial processes.
Visibility-Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H ₂ S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

¹ California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

² National standards (other than O₃, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

³ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

⁴ On February 7, 2024, the national annual PM_{2.5} primary standard was lowered from 12.0 µg/m³ to 9.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

⁵ On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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California has also adopted a host of other regulations that reduce criteria pollutant emissions:

- **Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces greenhouse gas emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- **Title 20 of California Code of Regulations (CCR): Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.
- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and nonresidential buildings adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977.
- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.⁷

California Air Resources Board

CARB is a part of the California Environmental Protection Agency and responsible for the coordination and administration of both federal and state air pollution control programs in California. In this capacity, CARB conducts research, sets the California AAQS (see Table 5.2-2), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California’s State Implementation Plan (SIP), working closely with the federal government and the local air districts. The SIP is required for the state to take over implementation of the federal CAA from the EPA.

Nuisance Regulations

Health and Safety Code Section 41700 states,

... a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

This section also applies to objectionable odors.

⁷ The green building standards became mandatory in the 2010 edition of the code.

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Tanner Air Toxics Act and Air Toxics Hot Spot Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (17 CCR Section 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate “toxics best available control technology” to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10 Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.** Regulation generally restricting on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR Section 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.** Regulations established to control emissions associated with diesel-powered TRUs.

Regional

Air Quality Management Planning

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). The AQMP is a regional strategy plan to achieve air quality

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standards by examining emissions, looking at regional growth projections, and the impact of existing and proposed control measures to provide healthful air in the long-term. Since 1979, a number of AQMPs have been prepared.

The Clean Air Act requires CARB to develop a SIP that describes how an area will attain National AAQS. The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the SIP. Areas are classified as attainment or nonattainment areas for a particular pollutant depending on whether they meet the AAQSSs.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, as an update to the 2016 AQMP. On October 1, 2015, the EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb) (2015 Ozone National AAQS). The SoCAB is currently classified as an “extreme” nonattainment for the 2015 Ozone National AAQS. Meeting the 2015 federal ozone standard requires reducing NO_x emissions, the key pollutant that creates ozone, by 67 percent more than is required by adopted rules and regulations by 2037. The only way to achieve the required NO_x reductions is through extensive use of zero emission (ZE) technologies across all stationary and mobile sources. South Coast AQMD’s primary authority is over stationary sources which account for approximately 20 percent of NO_x emissions. The overwhelming majority of NO_x emissions are from heavy-duty trucks, ships, and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD’s control. The region will not meet the standard without significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the standard. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low-NO_x technologies and (2) developing new ZE and ultra-low NO_x technologies for use in cases where the technology is not currently available. South Coast AQMD is prioritizing distribution of incentive funding in environmental justice areas and seeking opportunities to focus benefits on the most disadvantaged communities (South Coast AQMD 2022).

South Coast AQMD PM_{2.5} Redesignation Request and Maintenance Plan

In 1997, the EPA adopted the 24-hour fine PM_{2.5} standard of 65 µg/m³. In 2006, this standard was lowered to a more health-protective level of 35 µg/m³. The SoCAB is designated nonattainment for both the 65 µg/m³ and 35 µg/m³ 24-hour PM_{2.5} standards (24-hour PM_{2.5} standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour PM_{2.5} standards. The South Coast AQMD developed the “2021 Redesignation Request and Maintenance Plan” for the 1997 and 2006 24-hour PM_{2.5} Standards for the SoCAB PM_{2.5} Redesignation Request and Maintenance Plan, demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour PM_{2.5} standards (South Coast AQMD 2021b).

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County (County) portion of the SoCAB as a nonattainment area under the federal lead (Pb) classification because of the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the

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City of Industry that exceeded the new standard in the 2007 to 2009 period. The remainder of the SoCAB, outside the county nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval and was approved in March 2014.

Assembly Bill 617, Community Air Protection Program

AB 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems are installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan (Community Air Protection Blueprint) that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks. Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

South Coast AQMD Rules and Regulations

All projects are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.
- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

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- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth-moving and grading activities.
- **Rule 445, Wood Burning Devices.** In general, the rule prohibits new developments from the installing wood-burning devices. This rule is intended to reduce the emission of particulate matter from such devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operate a wood-burning device.
- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards in this rule.
- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.
- **Rule 1166, Volatile Organic Compound Emissions from Decontaminated Soil.** Under this rule, an excavation plan is required, and excavation operations are required to be monitored for VOC concentrations.
- **Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants,** to minimize the amount of off-site fugitive dust emissions containing TACs by reducing particulate emissions in the ambient air as a result of earthmoving activities, including excavating, grading, handling, treating, stockpiling, transferring, and removing soil that contains applicable TACs. Components of the fugitive dust control plan are required to include the following measures: fencing that is a minimum of six feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of 50 ± 5 percent; monitoring; notification; signage; and recordkeeping.

5.2.1.2 EXISTING CONDITIONS

South Coast Air Basin

The Project site is in the SoCAB, which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the

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remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

Meteorology

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the Project area that best represents the climatological conditions of the Project area is the Yorba Linda, California Monitoring Station (ID 049847). The average low is reported at 41.7°F in January, and the average high is 88.4°F in August (WRCC 2024).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through May. Rainfall averages 12.52 inches per year in the vicinity of the Project area (WRCC 2024).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Periods of heavy fog are frequent, especially along the coast. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (South Coast AQMD 1993).

Wind

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

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Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the “mixing height.” The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the Project area (South Coast AQMD 2005).

SoCAB Nonattainment Areas

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified.** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment.** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment.** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional.** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 5.2-3, *Attainment Status of Criteria Air Pollutants in the South Coast Air Basin*.

Table 5.2-3 Attainment Status of Criteria Air Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM ₁₀	Serious Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment ¹
CO	Attainment	Attainment
NO ₂	Attainment	Attainment/Maintenance
SO ₂	Attainment	Attainment

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Table 5.2-3 Attainment Status of Criteria Air Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Lead	Attainment	Nonattainment (Los Angeles County only) ²
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2024a.

¹ The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM_{2.5} standards. The 2021 PM_{2.5} Redesignation Request and Maintenance Plan demonstrates that the SoCAB meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 µg/m³ and 35 µg/m³ 24-hour PM_{2.5} standards. CARB has reviewed and adopted the 2021 PM_{2.5} Redesignation Request and Maintenance Plan to the US EPA as a revision to the California State Implementation Plan (SIP) (CARB 2021).

² In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas for lead in the SoCAB are unclassified. However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's SIP revision was submitted to the EPA for approval.

Multiple Air Toxics Exposure Study V

MATES is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis, MATES I, began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was conducted in 2004 to 2006, with MATES IV following in 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been reexamined using current Office of Environmental Health Hazards Assessment and California Environmental Protection Agency risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since 2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. DPM continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chrome-plating facilities (South Coast AQMD 2021a).

MATES V identifies that the maximum cancer risk in the Project area is 415 per million, which is higher than 37 percent of the South Coast AQMD population (South Coast AQMD 2024a). The primary factor contributing to this risk is DPM.

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Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the Project area are best documented by measurements taken by the South Coast AQMD. The proposed Project is located within Source Receptor Area (SRA) 16 – North Orange County.⁸ The air quality monitoring station closest to the proposed Project is the La Habra Monitoring Station, approximately four miles to the northwest of the Project site, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.⁹ This station monitors one-hour and eight-hour O₃ and NO₂. Data for PM₁₀ and PM_{2.5} are supplemented by the Anaheim-Pampas Lane Monitoring Station. Data from this station are summarized in Table 5.2-4, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the state and federal one-hour and eight-hour O₃ standards within the last five recorded years. Additionally, the area has regularly exceeded the state PM₁₀ standards and the federal PM_{2.5} standard.

Table 5.2-4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels ¹		
	2021	2022	2023
Ozone (O₃)¹			
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	2	1	5
State 8-hour ≥ 0.07 ppm (days exceed threshold)	3	4	9
Federal 8-Hour > 0.075 ppm (days exceed threshold)	2	3	9
Max. 1-Hour Conc. (ppm)	0.119	0.103	0.103
Max. 8-Hour Conc. (ppm)	0.103	0.106	0.112
Nitrogen Dioxide (NO₂)¹			
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppm)	0.0638	0.0577	0.047
Coarse Particulates (PM₁₀)²			
State 24-Hour > 50 µg/m ³ (days exceed threshold)	1	1	1
Federal 24-Hour > 150 µg/m ³ (days exceed threshold)	0	0	0
Max. 24-Hour Conc. (µg/m ³)	63.6	67.0	97.8
Fine Particulates (PM_{2.5})²			
Federal 24-Hour > 35 µg/m ³ (days exceed threshold)	10	0	1
Max. 24-Hour Conc. (µg/m ³)	54.4	33.1	45.6

Source: CARB 2024d.

ppm: parts per million; parts per billion, µg/m³: micrograms per cubic meter

¹ Data obtained from the La Habra Monitoring Station.

² Data obtained from the Anaheim-Pampas Lane Monitoring Station.

⁸ Per SCAQMD Rule 701, an SRA is defined as follows: “A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area.” There are 37 SRAs within the SCAQMD’s jurisdiction.

⁹ Locations of the SRAs and monitoring stations are shown here: <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

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Existing Emissions

The existing office building on the Project site is not operational and therefore does not generate emissions from mobile sources, including employee and vendor trips. It does, however, consume electricity (see Section 5.5, *Energy*) and generates some criteria air pollutant emissions with upkeep of the building (e.g., consumer cleaning products, landscaping equipment, and VOC emissions from paints). These emissions are negligible and are therefore not quantified as part of this analysis.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population. For air quality purposes, the nearest off-site sensitive receptors are the residences approximately 50 feet north of the Project site boundary on Greenbriar Lane, and east of the Project site on South Associated Road.

5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

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5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

Regional Emissions

South Coast AQMD has established thresholds of significance for air quality for construction activities and project operation in the SoCAB, as shown in Table 5.2-5, *South Coast AQMD Significance Thresholds*. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. As discussed in Section 5.2.1.1, there is growing evidence that although ultrafine particulate matter contributes a very small portion of the overall atmospheric mass concentration, it represents a greater proportion of the health risk from PM. However, because the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter, South Coast AQMD has not developed thresholds for it.

Table 5.2-5 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Volatile Organic Compounds (VOC)	75 lbs./day	55 lbs./day
Carbon Monoxide (CO)	550 lbs./day	550 lbs./day
Nitrogen Oxides (NO _x)	100 lbs./day	55 lbs./day
Sulfur Oxides (SO _x)	150 lbs./day	150 lbs./day
Coarse Particulates (PM ₁₀)	150 lbs./day	150 lbs./day
Fine Particulates (PM _{2.5})	55 lbs./day	55 lbs./day

Source: South Coast AQMD 2023a.

Health Outcomes Associated with the AQMD Regional Significance Thresholds

Projects that exceed the AQMD's regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Contributes to lower birth weight in newborns (PM_{2.5}) (South Coast AQMD 2015a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM_{2.5} is responsible for

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an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions thresholds shown in Table 5.2-5 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. These thresholds are based on the trigger levels for the federal New Source Review Program, which was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed previously. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 5.2-5 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If a project were to exceed the emission levels in Table 5.2-5, those emissions would cumulatively contribute to the nonattainment status of the air basin and would contribute to elevating health effects associated with these criteria air pollutants. Reducing emissions would contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 5.2-5, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment, because mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited previously.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health to address the issue raised in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 ("*Friant Ranch*"). South Coast AQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.¹⁰ Ozone concentrations are dependent on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, and the absence of modeling tools that could provide statistically valid data and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, it is not possible to link specific health risks

¹⁰ In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing Friant Ranch in the review and analysis of proposed projects under CEQA in Sacramento County. Consistent with the expert opinions submitted to the court in *Friant Ranch* by the San Joaquin Valley Air Pollution Control District and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the *Friant* court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum, SMAQMD has provided methodology to address health impacts. However, a similar analysis is not available for projects in the South Coast AQMD region.

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to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQs is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQs and National AAQs. The CO hotspot analysis conducted for attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.¹¹ As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in years before the 2007 redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. In the absence of screening criteria recommended by South Coast AQMD, CO hotspot screening criteria developed by the Bay Area AQMD are utilized in this analysis. According to the Bay Area AQMD, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—to generate a significant CO impact (BAAQMD 2023).¹²

Localized Significance Thresholds

South Coast AQMD identifies localized significance thresholds (LST), shown in Table 5.2-6, *South Coast AQMD Localized Significance Thresholds*. Emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at a project site could expose sensitive receptors to substantial concentrations of criteria air pollutants. Off-site mobile-source emissions are

¹¹ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

¹² The CO hotspot analysis refers to the modeling conducted by the Bay Area Air Quality Management District for its CEQA Guidelines because it is based on newer data and considers the improvement in mobile-source CO emissions. Although meteorological conditions in the Bay Area differ from those in the Southern California region, the modeling conducted by BAAQMD demonstrates that the net increase in peak hour traffic volumes at an intersection in a single hour would need to be substantial. This finding is consistent with the CO hotspot analysis South Coast AQMD prepared as part of its 2003 AQMP to provide support in seeking CO attainment for the SoCAB. Based on the analysis prepared by South Coast AQMD, no CO hotspots were predicted for the SoCAB. As noted in the preceding footnote, the analysis included some of Los Angeles' busiest intersections, with daily traffic volumes of 100,000 or more peak hour vehicle trips operating at LOS E and F (South Coast AQMD 2003a).

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not included in the LST analysis. A project would generate a significant impact if it were to generate emissions that, when added to the local background concentrations, violate the AAQS.

Table 5.2-6 South Coast AQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO ₂ Standard (CAAQS)	0.18 ppm
Annual NO ₂ Standard (CAAQS)	0.03 ppm
24-Hour PM ₁₀ Standard – Construction (South Coast AQMD) ¹	10.4 µg/m ³
24-Hour PM _{2.5} Standard – Construction (South Coast AQMD) ¹	10.4 µg/m ³
24-Hour PM ₁₀ Standard – Operation (South Coast AQMD) ¹	2.5 µg/m ³
24-Hour PM _{2.5} Standard – Operation (South Coast AQMD) ¹	2.5 µg/m ³
Annual Average PM ₁₀ Standard (South Coast AQMD) ¹	1.0 µg/m ³

Source: South Coast AQMD 2023a.

Notes: ppm – parts per million; µg/m³ – micrograms per cubic meter; CAAQS – California AAQS

¹ Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM₁₀ and PM_{2.5}, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (pounds per day) of emissions generated on-site that would trigger the levels shown in Table 5.2-6 for projects under five acres. These “screening-level” LST tables are the LSTs for all projects of five acres and less and are based on emissions over an 8-hour period; however, they can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 5.2-7, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The type of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses (CARB 2005). Thus, these thresholds are typically applied to new industrial projects only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the proposed Project on the environment, not the significant effects of the environment on the proposed Project. *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478).

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Table 5.2-7 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk (Project-Level)	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (Project increment)	≥ 1.0

Source: South Coast AQMD 2023a.

5.2.3 Plans, Programs, and Policies

The following plans, programs, and policies (PPP) include regulatory requirements and conditions of approval for air quality impacts applicable to the proposed Project.

- PPP AIR-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (24 CCR Part 6) and California Green Building Standards Code (CALGreen) (24 CCR Part 11). The 2022 Building Energy Efficiency Standards were effective starting on January 1, 2023. The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.
- PPP AIR-2 Construction activities will be conducted in compliance with California Code of Regulations Title 13, Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.
- PPP AIR-3 Construction activities will be conducted in compliance with any applicable South Coast Air Quality Management District rules and regulations, including but not limited to the following:
- **Rule 403**, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.
 - **Rule 402**, Nuisance, which states that a project shall not “discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”
 - **Rule 1113**, which limits the volatile organic compound content of architectural coatings.
 - **Rule 1403**, which governs requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

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5.2.4 Environmental Impacts

5.2.4.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed Project. South Coast AQMD's *CEQA Air Quality Handbook* (Handbook) and updates on its website are intended to provide local governments with guidance for analyzing and mitigating Project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis.

Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1 (CAPCOA 2022). CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, direct and indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. Construction and operational criteria air pollutant emissions modeling is included in Appendix B1 of this Draft EIR. The calculated emissions of the proposed Project are compared to thresholds of significance for individual projects using South Coast AQMD's Handbook. Following is a summary of the assumptions used for the proposed Project analysis.

Construction Phase

Criteria Air Pollutants Emissions

Construction would entail demolition of the existing office building and parking improvements; site remediation, including removal of the existing underground storage tanks; off-site hauling of demolition debris and earthwork material; rough grading; installation of utility infrastructure, including off-site improvements; and construction of the proposed residential buildings. The proposed Project is anticipated to be constructed from April 2026 to December 2028. Construction air pollutant emissions are based on the preliminary information provided by the applicant, including the construction equipment mix and specifications and number of workdays per construction phase. Construction worker and vendor trips were based on CalEEMod defaults.

Construction Health Risk Assessment

A construction HRA for TACs associated with construction equipment exhaust was prepared for the proposed Project. Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck haul route, as shown in Appendix B2. Modeling is based on the EPA's AERMOD 12.0 air dispersion modeling program and the latest HRA guidance from the Office of Environmental Health Hazard Assessment to estimate excess lifetime cancer risks and chronic noncancer hazard indices at the nearest maximum exposed off-site sensitive receptors (OEHHA 2015).

Construction modeling was prepared specifically for use in the HRA and is separate from that used in the regional and localized mass emissions analyses. The construction modeling for the HRA is identical to what is

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used in the regional and localized mass emissions analysis with respect to equipment type, quantity of equipment, horsepower, load factor, and activity durations; however, the construction modeling for the HRA normalizes the average daily hours of operation for each piece of equipment to better capture annual average emission rates when not all construction equipment is operating each workday in a given activity (see Appendix B1 for detailed calculations). By contrast, the construction modeling used for the regional and localized mass emissions analyses retains the maximum daily hours of operation for all construction equipment to account for potential overlapping daily use of equipment. The average daily emission rates for the HRA from equipment used during construction of the proposed Project were determined by dividing the annual average emissions for each construction year by the number of construction workdays per year for each calendar year of construction. The off-site hauling emission rates were adjusted to evaluate DPM emissions from the 0.5-mile haul route along Greenbriar Lane, Associated Road, and Imperial Highway from the Project site to the nearest highway (SR-57).

Air dispersion modeling using AERMOD was conducted to assess the impact of emitted compounds on sensitive receptors. The model is a steady-state Gaussian plume model and is approved by South Coast AQMD for estimating ground-level impacts from point and fugitive sources in simple and complex terrain. Meteorological data obtained from the South Coast AQMD for the nearest representative meteorological station (Fullerton Airport Monitoring Station) with the five latest available years (2012 to 2016) of record were used to represent local weather conditions and prevailing winds.

For all dispersion modeling runs with AERMOD, a unit emission rate of 1 gram per second was used. The on-site unit emission rate was proportioned over the poly-area sources for on-site construction emissions, and the off-site unit emission rate was divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations at each sensitive receptor were then multiplied by the construction emission rates to obtain the maximum concentrations at the maximum exposed resident (MER) of each receptor type (e.g., resident, daycare patron, preschool student, park visitor, worker). The calculated total cancer risk conservatively assumes that the risk for the residential MER consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the construction period spanning from 2026 to 2028; therefore, all calculated risk values were multiplied by an age sensitivity factor of 10 for the first 2.25 years of construction and by a factor of 3 for the remaining exposure duration. Risk calculations for other MER types also accounted for applicable age sensitivity factors depending on the potential starting age of patrons, visitors, and workers that could be present during Project construction. In addition, it was conservatively assumed that residents were outdoors 8 hours a day, 260 construction days per year, and exposed to all daily construction emissions.

Operational Phase

- **Transportation.** The average daily trip generations for weekday and Saturday trips were provided by RK Engineering Group (see Appendix F2). Project-related on-road emissions are based on year 2028 emission rates for the Project's buildout year. The primary source of mobile criteria air pollutant emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel). Additionally, for criteria air pollutants, brake and tire wear as well as re-entrainment of roadway fugitive dust created from vehicle use generate particulate matter.

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- **Area Sources.** Area source emissions from use of consumer cleaning products, landscaping equipment, and VOC emissions from paints are based on CalEEMod default values and the square footage of the proposed residential buildings, asphalt, and hardscape areas.
- **Building Energy.** Building energy consumption estimates utilize the California Emissions Estimator Model (CalEEMod version 2022.1) default energy (i.e., electricity and natural gas) rates for residential land uses, which are based on the CEC's 2019 Residential Appliance Saturation Survey (RASS). Use of the CalEEMod default energy rates results in conservative estimates compared to the 2022 Building Energy Efficiency Standards because the energy intensity estimates compiled from the RASS utilize data from residences constructed from 1974 to 2015. It is anticipated that new buildings under the current Building Energy Efficiency Standards will generally result in lower energy use.

5.2.4.2 IMPACT ANALYSIS

Impact 5.2-1: The proposed Project is consistent with the applicable air quality management plan. [Threshold AQ-1].

A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The regional emissions inventory for the SoCAB is compiled by South Coast AQMD and SCAG. Regional population, housing, and employment projections developed by SCAG are based, in part, on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into SCAG's regional transportation plan/sustainable communities strategy to determine priority transportation projects and vehicle miles traveled in the SCAG region. The AQMP strategy is based on projections from local general plans.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. The Project would result in 179 residential units and approximately 505 new residents.¹³ As discussed in Section 5.8, *Population and Housing*, the proposed Project's population and employment growth would be within SCAG's forecast growth projections for the City. Additionally, the proposed Project would address the need for additional housing to accommodate population growth in the City.

Finally, the long-term emissions generated by the proposed Project would not produce criteria air pollutants that exceed the South Coast AQMD significance thresholds for Project operations (see Impact 5.2-3). South Coast AQMD's significance thresholds identify whether or not a project has the potential to cumulatively contribute to the SoCAB's nonattainment designations. Because the proposed Project would not exceed the South Coast AQMD's regional significance thresholds and growth is consistent with regional growth

¹³ Population based on 2.75 persons per household.

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projections, the proposed Project would not interfere with South Coast AQMD's ability to achieve the long-term air quality goals identified in the AQMP.

Therefore, the proposed Project would be consistent with the AQMP, and this impact would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-2: Construction activities associated with the proposed Project would generate short-term emissions that exceed South Coast AQMD's threshold criteria. [Threshold AQ-2]

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Demolition and site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and trenching. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. An estimate of maximum daily construction emissions by year for the proposed Project is provided in Table 5.2-8, *Maximum Daily Regional Construction Emissions*. As previously discussed in Section 5.2.4.1, *Methodology*, the mass emissions modeling prepared for this analysis assumed that all equipment identified in a given construction activity would operate for the full duration of that activity to capture potential overlapping use of equipment.

Table 5.2-8 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lb/day) ^{1,2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 2026						
Demolition and Site Remediation	1	5	8	<1	2	<1
Demolition Debris Haul	<1	2	1	<1	7	1
Site Remediation Soil Haul	<1	<1	<1	<1	<1	<1
Rough Grading	5	43	34	<1	10	4
Year 2027						
Rough Grading	5	43	34	<1	10	4
Building Construction	1	10	18	<1	2	1
Infrastructure	1	5	7	<1	<1	<1
Year 2028						
Building Construction	1	10	19	<1	2	1
Overlapping Building Construction, Asphalt Paving, and Architectural Coating	162	15	31	<1	3	1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	162	43	34	<1	10	4

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Table 5.2-8 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lb/day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Exceeds Threshold?	Yes	No	No	No	No	No

Source: CalEEMod Version 2022.1 Highest winter or summer emissions are reported.

Emissions totals may not equal 100 percent due to rounding.

¹ Based on the preliminary information provided by the Applicant. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

² Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

³ Construction activities include any changes to overlapping construction activities, such as the start of another construction activity or the conclusion of a construction activity.

The SoCAB is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS, nonattainment for PM₁₀ under the California AAQS,¹⁴ and nonattainment for lead (Los Angeles County only) under the National AAQS. According to South Coast AQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values would not add significantly to a cumulative impact (South Coast AQMD 1993). As shown in Table 5.2-8, the maximum daily emissions for NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. However, the construction-related VOC emissions generated from overlapping building construction, asphalt paving, and architectural coating phases would exceed the South Coast AQMD regional significance threshold for VOCs. Consequently, construction of the proposed Project could potentially contribute to the O₃ nonattainment designation of the SoCAB in the absence of mitigation. This impact would be potentially significant prior to mitigation.

Level of Significance Before Mitigation: Potentially Significant.

Impact 5.2-3: Long-term operation of the proposed Project would not generate additional vehicle trips and associated emissions in exceedance of South Coast AQMD's threshold criteria. [Threshold AQ-2]

Buildout of the proposed Project would generate an increase in criteria air pollutant emissions from transportation (i.e., vehicle trips), area sources (e.g., landscaping equipment, architectural coating), and energy (i.e., natural gas used for heating and cooking). As shown in Table 5.2-9, *Project Regional Operation Emissions*, the net change in maximum daily emissions from operation-related activities would be less than their respective South Coast AQMD regional significance threshold values. Therefore, impacts to the regional air quality associated with operation of the Project would be less than significant.

¹⁴ Portions of the SoCAB along SR-60 in Los Angeles, Riverside, and San Bernardino counties are proposed nonattainment for NO₂ under the California AAQS.

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Table 5.2-9 Project Regional Operation Emissions

Source	Maximum Daily Emissions (lbs/Day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	5	4	43	<1	12	3
Energy	18	3	55	<1	6	6
Mobile	0	1	<1	<1	<1	<1
Total	22	8	99	<1	18	9
South Coast AQMD Regional Threshold	55	55	550	150	150	550
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1 Highest winter or summer emissions are reported.
Note: lbs – Pounds.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-4: Construction activities associated with the proposed Project could expose sensitive receptors to substantial pollutant concentrations. [Thresholds AQ-2 and AQ-3]

This impact analysis describes changes in localized impacts from short-term construction activities. The proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.2-8, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu\text{g}/\text{m}^3$) and can be correlated to potential health effects.

Construction-Phase LSTs

Screening-level LSTs (pounds per day) are the amount of Project-related mass emissions at which localized concentrations (ppm or $\mu\text{g}/\text{m}^3$) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. They are based on the acreage disturbed and distance to the nearest sensitive receptor. Thresholds are based on the California AAQS, which are the most stringent, established to provide a margin of safety in the protection of the public's health and welfare. They are designed to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other illness, and persons engaged in strenuous work or exercise. Table 5.2-10, *Construction Emissions Compared to the Screening-Level LSTs*, shows the maximum daily construction emissions (pounds per day) generated during on-site construction activities at the Project area compared with the South Coast AQMD's screening-level LSTs thresholds. As previously discussed in Section 5.2.4.1, *Methodology*, the mass emissions modeling prepared for this analysis assumed that all equipment identified in given construction activity would operate for the full duration of that activity to capture potential overlapping use of equipment.

On-site emissions include fugitive dust emissions and exhaust emissions associated with operation of off-road construction equipment in addition to fugitive dust from the movement of dirt. As shown in the table, the maximum daily NO_x, CO, PM₁₀, and PM_{2.5} construction emissions from on-site construction-related activities would be less than their respective South Coast AQMD screening-level LSTs.

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Table 5.2-10 Construction Emissions Compared to the Screening-Level LSTs

	Pollutants(lbs/day) ¹			
	NO _x	CO	PM ₁₀ ²	PM _{2.5} ²
South Coast AQMD ≤0.5-acre LST	92	647	4	3
Building Construction (2027)	9	12	<1	<1
Building Construction (2028)	9	12	<1	<1
Building Construction, Paving, and Architectural Coating	14	24	<1	<1
Exceeds LST?	No	No	No	No
South Coast AQMD 1.41-Acre LSTs	108	775	5	4
Infrastructure	5	7	<1	<1
Exceeds LST?	No	No	No	No
South Coast AQMD 2.84-Acre LSTs	164	1,337	11	7
Demolition & Site Remediation	5	7	1	<1
Exceeds LST?	No	No	No	No
South Coast AQMD 5.00-Acre LSTs	193	1,711	14	9
Rough Grading (2026)	41	32	9	4
Rough Grading (2027)	40	32	9	4
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2022.1 and South Coast AQMD 2008 and 2011.

Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment occurring on the Project area are included in the analysis. LSTs are based on sensitive receptors within 82 feet (25 meters) of the Project site in Source Receptor Area (SRA) 16.

¹ Based on information provided or verified by the City. Where specific information regarding Project-related construction activities or processes was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by the South Coast AQMD.

² Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

Construction Health Risk

The proposed Project would elevate concentrations of TACs (i.e., DPM) in the vicinity of sensitive land uses during temporary construction activities that would use offroad equipment operating on-site and at different levels depending on the type of activity. A site-specific construction HRA of TACs was prepared to quantify potential health risk emissions during construction (see Appendix B2). The pollutant concentration results of the analysis are shown on page 201 in Attachment B, *Air Dispersion Model Output*, of the construction HRA in Appendix B2,, and health risk results are shown in Table 5.2-11, *Construction Health Risk Summary*. As shown, the proposed Project construction would exceed the South Coast AQMD health risk threshold of 10 cancer cases per one million people for the residential MER but would not exceed the South Coast AQMD health risk threshold for other receptor types.

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Table 5.2-11 Construction Health Risk Summary

Receptor	Cancer Risk (per million)	Chronic Hazards
Residential MER	30	0.01
Worker MER	<1	<0.01
Park MER	2	<0.01
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	Yes	No

Source: Appendix B2, Construction Health Risk Assessment.
Notes: MER = Maximally Exposed Receptor.

The results of the HRA are based on the maximum receptor concentration over the entire construction exposure duration for receptors.

- Cancer risk for the residential MER from construction activities would be an estimated 30 in a million, exceeding the 10 in a million significance threshold.
- For noncarcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for each MER type. Therefore, chronic noncarcinogenic hazards are less than significant.

Because cancer risks for the residential MER would exceed South Coast AQMD significance threshold, construction activities associated with the proposed Project would expose sensitive receptors to substantial pollutant concentrations, and this impact would be potentially significant prior to mitigation.

Level of Significance Before Mitigation: Potentially Significant.

Impact 5.2-5: Operation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3].

This impact analysis describes changes in localized impacts from long-term operation of the Project. The proposed Project could expose sensitive receptors to elevated pollutant concentrations during operational activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.2-8, which is described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu\text{g}/\text{m}^3$) and can be correlated to potential health effects.

Operational Phase Localized Emissions

The proposed Project would not constitute a major source of localized air pollutant emissions, including TACs, during operation. Land uses that have the potential to include substantial sources of emissions require a permit from South Coast AQMD, such as chemical processing or warehousing operations where substantial truck idling could occur on-site. As a residential development, the proposed Project does not fall within these

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categories of uses. While operation of the proposed Project could result in the use of standard on-site mechanical equipment such as heating, ventilation, and air conditioning units and occasional use of landscaping equipment for Project area maintenance, air pollutant emissions generated would be small. Therefore, net localized air quality impacts from Project-related operations would be less than significant.

Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. The SoCAB has been designated as attainment under both the National and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—to generate a significant CO impact (BAAQMD 2023). The proposed Project would generate a maximum of 86 AM peak hour trips on weekdays and 103 midday peak hour trips on Saturday (RK Engineering 2024). As described in Appendix F2, the existing weekday AM peak hour trips counted at the busiest intersection in the vicinity of the Project site, Redbay Avenue at Birch Street, was 1,969 trips. The highest hourly volume of trips counted at this intersection on a Saturday was 1,967 trips at 2:00 pm (RK Engineering 2024). The combined 2,055 weekday AM peak hour trips and 2,070 Saturday midday peak hour trips, respectively, would not exceed BAAQMD's recommended screening criteria of greater than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Therefore, the proposed Project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the Project site. This impact would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.2-6: The proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. [Threshold AQ-4]

The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating

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operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

The proposed Project would develop residential structures, which would not fall within the types of uses that are associated with foul odors that constitute a public nuisance. Odors associated with residential development typically include vehicle and landscaping equipment exhaust, trash receptacles, and periodic recoating/painting. The odors from these sources would be temporary throughout operation of the proposed Project and limited to the Project site. Furthermore, the proposed Project would not involve any unusual or atypical features that would generate odors out of the ordinary for a residential development. During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, construction-related odor emissions would be temporary and intermittent and would not affect a significant number or people.

Level of Significance before Mitigation: Less Than Significant.

5.2.5 Cumulative Impacts

In accordance with South Coast AQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Consistent with the methodology, projects that do not exceed the regional significance thresholds would not result in significant cumulative impacts. Cumulative projects in the local area include new development and general growth in the proposed Project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted by cumulative emissions (i.e., the SoCAB), South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions thresholds shown in Table 5.2-5 (South Coast AQMD 1993).

Construction

The SoCAB is designated nonattainment for O₃ and PM_{2.5} under the California and National AAQS and nonattainment for PM₁₀ and lead (Los Angeles County only) under the National AAQS. Construction of cumulative projects will further degrade the regional and local air quality. As shown in Table 5.2-8, Project-related construction activities would generate short-term emissions for VOCs that would exceed the South Coast AQMD regional emissions thresholds. Construction of the proposed Project would also exceed localized significance thresholds for PM₁₀. As shown in Table 5.2-11, the proposed Project would result in potentially significance health risk impacts at nearby receptor locations during construction; however, as discussed in Section 5.2.7, implementation of mitigation would reduce health risks to a less than significant level. South Coast AQMD has published a report on how to address cumulative impacts from air pollution, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, which considers the 10 per one million cancer risk threshold to be appropriate for analyzing both project-level and cumulative construction health risk impacts (South Coast AQMD 2003b). Therefore, while other projects shown in Table 4-1, *Cumulative Projects*, may be constructed near or concurrent with the proposed Project, such as the Brea Plaza Living project located at 1639 East Imperial Highway, the proposed Project would not result in a cumulatively considerable health risk impact to off-site receptors during construction after mitigation. Odors associated with construction activities

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would be temporary and intermittent and would not affect a significant number of people. Because regional construction emissions would potentially exceed the South Coast AQMD's significance thresholds during construction in the absence of mitigation, the proposed Project's contribution to cumulative air quality impacts would potentially be cumulatively considerable without mitigation.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values would not be considered by South Coast AQMD to be a substantial source of air pollution and would not add significantly to a cumulative impact. Operation of the proposed Project, as shown in Table 5.2-9, would not result in emissions in excess of the South Coast AQMD regional emissions thresholds. In addition, no significant impacts were identified with regard to CO hotspots, operational health risk, or odors. Therefore, the proposed Project's contribution to cumulative air quality impacts would not be cumulatively considerable.

5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.2-1, 5.2-3, 5.2-5, and 5.2-6.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.2-2** Construction of the proposed Project would exceed South Coast AQMD's threshold for VOC emissions and would cumulatively contribute to the nonattainment designations of the SoCAB.
- **Impact 5.2-4** Construction of the proposed Project could expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants.

5.2.7 Mitigation Measures

Impact 5.2-2

AQ-1 During construction, the construction contractor shall only use interior and exterior paints with a low VOC (volatile organic compound) content with a maximum concentration of 10 grams per liter (g/L) for building architectural coating to reduce VOC emissions. Prior to building permit issuance, all building and site plans shall note use of paints with a maximum VOC concentration of 10 g/L, and the construction contractor(s) shall ensure that all construction plans submitted to the City of Brea Community Development Department clearly show this requirement.

Impact 5.2-4

AQ-2 During construction, the construction contractor shall, at minimum, use equipment that meets the United States Environmental Protection Agency's (EPA) Tier 4 (Final) emissions standards

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for off-road diesel-powered construction equipment with more than 50 horsepower, except for the Telebelts anticipated for use. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 4 Final emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations. Prior to issuance of building permit, the Project engineer shall ensure that all plans clearly show the requirement for EPA Tier 4 Final emissions standards for construction equipment over 50 horsepower except for the Telebelts used for Project construction, Tier 4 Final models of which could not be verified as commercially available for purposes of this measure. During construction, the construction contractor shall maintain a list of all operating equipment associated with building demolition in use on the site for verification by the City. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.

5.2.8 Level of Significance After Mitigation

Impact 5.2-2

Construction of the proposed Project would exceed the South Coast AQMD VOC threshold. Mitigation Measure AQ-1 would require use of low-VOC interior and exterior paints for the proposed buildings. As shown in Table 5.2-12, *Maximum Daily Regional Construction Emissions with Mitigation Incorporated*, with the implementation of Mitigation Measure AQ-1, construction-related emissions would be reduced to below the South Coast AQMD threshold for VOC. Project and cumulative construction-related air quality impacts under Impact 5.2-2 would be reduced to less than significant.

Table 5.2-12 Maximum Daily Regional Construction Emissions with Mitigation Incorporated

Construction Phase	Pollutants (lb/day) ^{1,2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 2026						
Demolition and Site Remediation	1	5	8	<1	2	<1
Demolition Debris Haul	<1	2	1	<1	6	1
Site Remediation Soil Haul	<1	<1	<1	<1	<1	<1
Rough Grading	5	43	34	<1	10	4
Year 2027						
Rough Grading	5	42	34	<1	10	4
Building Construction	1	10	18	<1	2	1
Infrastructure	<1	5	7	<1	<1	<1
Year 2028						
Building Construction	1	10	19	<1	2	1
Building Construction, Asphalt Paving, and Architectural Coating	36	15	31	<1	3	1

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Table 5.2-12 Maximum Daily Regional Construction Emissions with Mitigation Incorporated

Construction Phase	Pollutants (lb/day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Construction Emissions						
Maximum Daily Emissions	36	43	34	<1	10	4
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1 Highest winter or summer emissions are reported.

Emissions totals may not equal 100 percent due to rounding.

¹ Based on the preliminary information provided by the Applicant. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

² Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Modeling also includes implementation of Mitigation Measures AQ-1 and AQ-2.

³ Construction activities include any changes to overlapping construction activities, such as the start of another construction activity or the conclusion of a construction activity.

Impact 5.2-4

Construction-Phase Health Risk Significance Thresholds

Construction of the proposed Project could expose sensitive receptors to substantial pollutant concentrations of TACs from use of large, offroad construction equipment. Mitigation Measure AQ-2 requires the use of newer, lower-emitting, Tier 4 Final equipment or better for all off-road construction equipment greater than 50 horsepower, except for the Telebelts anticipated for use during construction.¹⁵ As shown in Table 5.2-13, *Mitigated Construction Health Risk Summary*, the proposed Project would not exceed the South Coast AQMD health risk thresholds of 10 cancer cases per one million people after implementation of mitigation.

Table 5.2-13 Mitigated Construction Health Risk Summary

Receptor	Cancer Risk (per million)	Chronic Hazards
Residential MER	6	<0.01
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	No	No

Source: Appendix B2, Construction Health Risk Assessment.

Notes: MER = Maximally Exposed Receptor.

The results of the HRA are based on the maximum receptor concentration over the entire construction exposure duration for receptors.

- Cancer risk for the residential MER from construction activities would be an estimated 6 in a million, which would be below the 10 in a million significance threshold.

¹⁵ The reason Telebelts were omitted from this measure was due to the uncertainty of construction contractors being able to secure Telebelts certified for Tier 4 Final emission standards.

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- For noncarcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for all receptors. Therefore, chronic noncarcinogenic hazards are less than significant.

Cancer risk for the residential MER would be reduced to below the South Coast AQMD significance threshold after implementation of Mitigation Measure AQ-2. Therefore, the proposed Project would not expose sensitive receptors to substantial TAC concentrations during construction, and Impact 5.3-4 for construction health risk would be less than significant with mitigation.

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5.3 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed Greenbriar Residential Development Project (proposed Project) to impact cultural and paleontological resources in the City of Brea. With the update of the CEQA Guidelines approved in December 2018, impacts to paleontological resources moved to the Geology and Soils section of the Appendix G checklist. However, geology and soils questions have been scoped out of the DEIR. Therefore, this DEIR analyzes paleontological resources as part of this section. See Chapter 8, *Impacts Found Not to Be Significant*, for an analysis of the Project impacts to geology and soils.

Cultural resources consist of archaeological and historical resources. Paleontological resources are the fossilized remains of plants and animals. Archaeology is the branch of paleontology that studies human artifacts, such as places, objects, and settlements that reflect a group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. The analysis in this section is based in part on the following information:

- *Cultural and Paleontological Resource Services for the Mercury Insurance Property*, Duke CRM, July 25, 2024

A complete copy of this study is included in Appendix C of this DEIR.

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the act requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

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National Register of Historic Places

The National Register of Historic Places (NRHP) is authorized by the National Historic Preservation Act of 1966 (Code of Federal Regulations, Title 36, Chapter I, Part 60). It is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archaeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance that have been documented and evaluated according to uniform standards and criteria.

The NRHP is administered by the National Park Service. Properties are nominated to the NRHP by the State Historic Preservation Officer of the state in which the property is located; by the Federal Preservation Officer for properties under federal ownership or control; or by the Tribal Historic Preservation Officer if a property is on tribal lands.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of history.
- B. Is associated with the lives of persons in our past.
- C. Embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

A final critical component of eligibility is "integrity." Integrity refers to the ability of a property to convey its significance and the degree to which the property retains the identity, including physical and visual attributes, for which it is significant under the four basic criteria. The NRHP criteria recognize seven aspects or qualities of integrity: location, design, setting, materials, workmanship, feeling, association.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was established in the Omnibus Public Land Management Act of 2009 and regulates the management, collection, and curation of paleontological resources from national forest systems' lands.

Preservation of American Antiquities

The Federal Antiquities Act of 1906 was enacted with the primary goal of protecting cultural resources in the United States. It explicitly prohibits appropriation, excavation, injury, and destruction of any "historic or prehistoric ruin or monument, or any object of antiquity" on lands owned or controlled by the federal government without permission of the secretary of the federal department with jurisdiction. It also established

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criminal penalties for these acts, including fines and/or imprisonment. Neither the Antiquities Act itself nor its implementing regulations specifically mention paleontological resources. However, several federal agencies—including the National Park Service, Bureau of Land Management, and the US Forest Service—have interpreted objects of antiquity to include fossils. Consequently, the Antiquities Act also represents an early cornerstone for efforts to protect the nation’s paleontological resources.

Native American Graves Protection and Repatriation Act

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

State

California Register of Historic Resources

The State Historical Resources Commission designed this program for state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California’s historical resources. The California Register of Historical Resources (CRHR) is the authoritative guide to the state’s significant historical and archaeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- B. Associated with the lives of persons important to local, California, or national history.
- C. Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values.
- D. Has yielded, or has the potential to yield, information important to the prehistory of history of the local area, California, or the nation. (California Public Resources Code [PRC] Section 5024.1[c])

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource’s physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource’s period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. In summary, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has

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lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion D, it maintains the potential to yield significant scientific or historical information or specific data.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission; require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

Local

City of Brea General Plan

The City of Brea General Plan (2003) identifies Historic Brea—which includes neighborhoods in the southwest portion of the City—as well as goals to preserve Brea’s unique historic and cultural resources and neighborhoods. The Community Resources Element of the General Plan includes a section on historic resources and provides goals for preserving historical resources, encouraging rehabilitation, and ensuring all residents are aware of the importance of historic preservation.

City of Brea Municipal Code

Chapter 20.60, Historic Preservation, promotes the historic, cultural, educational, economic, and general welfare of the community by ensuring development is consistent with the Land Use, Housing, and Historic Resource elements of the Brea General Plan; establishing mechanisms to identify and preserve historic and architectural characteristics of Brea; and encouraging preservation, restoration, and rehabilitation of resources, thereby preventing blight. Chapter 20.60 also includes criteria for what is potentially a local historic resource.

5.3.1.2 EXISTING CONDITIONS

The Project site consists of the 164,908-square-foot former Mercury Insurance office building, three-story parking structure, parking lot, and two underground emergency generators each supplied by its own diesel storage tank.

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5.3.1.3 CULTURAL SETTING

Prehistoric Resources

The Puente and Carbon Canyon Hills lie within an area considered by archaeologists and ethnologists to have been inhabited prehistorically by the Gabrieleno (Brea 2003a). Only a small portion of Brea has been surveyed for archaeological resources, so the full extent of archaeological resources in Brea is not known.

Historical Resources

The land that composes the City of Brea used to be part of land holdings of the San Gabriel Mission, established in 1771 by the Franciscan padres. During the Mission period and subsequent Rancho era, vast herds of Mexican cattle pastured on all the land in and surrounding Brea (Brea 2003b). In 1863, Brea and thousands of acres of rancho lands were acquired by Abel Stearns, who later leased land to sheep ranchers.

Sheep ranching and oil production were the predominant business activities during the latter half of the 1800s, and the Puente Hills and Brea Canyon supported substantial petroleum production. The first village in Brea was called Olinda and was originally situated where Carbon Canyon Regional Park lies today (Brea 2003b). Along with the oil boom, land in and around the City began converting from sheep ranchers to orange groves.

Cultural Resources Records Search

The South Central Coastal Information Center (SCCIC) conducted a records search which included a review of all recorded cultural resources and reports within a half-mile radius of the Project site. The SCCIC records indicated that a total of 14 cultural resource reports cover areas within the half-mile radius, and one of the studies, which ran adjacent to the Project site, did not observe any cultural resources within or near the Project site. Additionally, one historic era cultural resource and no prehistoric resources have been recorded within a half-mile radius of the Project site; no resources have been recorded within the Project site (Duke 2024).

An online search of the California Built Environment Resources Directory, which includes data from the NRHP, the CRHR, and the lists of California Historical Landmarks and California Points of Historical Interest, did not identify any cultural resources within the Project site (Duke 2024).

Paleontological Setting

The Cooper Center conducted a paleontological records search for known fossil localities within and in the vicinity of the Project site. No fossil localities had been documented within a one-mile radius of the Project site; however, a locality was reported approximately 1.2 miles to the southwest of the Project site, in the highly paleontologically sensitive sediments of the late to middle Pleistocene La Habra Formation (*Qllb*) (Duke 2024). The geologic unit at the surface of the Project site was mapped as Quaternary very old alluvial fan deposits (*Qrof*) dating from the late to middle Pleistocene Epoch; extensive Pleistocene fauna have been recovered from the Quaternary very old alluvial fan deposits (*Qrof*) in the vicinity of the Project site (Duke 2024).

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5.3.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.
- C-4 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5.3.2.1 CITY OF BREA SIGNIFICANCE CRITERIA

Historic Resources

To evaluate historic resources in Brea, Municipal Code Chapter 20.60, Section 20.60.030, Criteria for Designation of Individual Historic Resources, provides criteria to supplement CEQA Guidelines Section 15064.5:

- If the resource exemplifies or reflects special elements of the City’s cultural, social, economic, political, aesthetic, engineering, architectural, or natural history;
- If the resource is identified with persons or events significant in local, state, or national history;

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- If it embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
- If it is representative of the work of a notable builder, designer, or architect;
- If it contributes to the significance of a historic area, being a geographically definable area possessing a concentration of historic or scenic properties or thematically related grouping of properties which contribute to each other and are unified aesthetically by plan or physical development;
- If it embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation;
- If it reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning;
- If it is one of the few remaining examples in the City, region, state, or nation possessing distinguishing characteristics of an architectural or historical type or specimen.

5.3.3 Plans, Programs, and Policies

These plans, programs, and policies (PPP) include applicable regulatory requirements and conditions of approval for cultural and paleontological impacts.

- | | |
|-----------|---|
| PPP CUL-1 | Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods. |
| PPP CUL-2 | The removal, without permission, of any paleontological site or feature is prohibited from lands under the jurisdiction of the state or any city, county, district, authority, or public corporation or any agency thereof (PRC Section 5097.5). This applies to agencies' own activities, including construction and maintenance, and permit actions by others. |
| PPP CUL-3 | Adverse impacts to paleontological resources from developments on public lands (state, county, city, and district) require reasonable mitigation. (PRC Section 5097.5) |
| PPP CUL-4 | If human remains are discovered within a project site, disturbance of the site must stop until the coroner has investigated and made recommendations for the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative. If the coroner has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. (California Health and Safety Code Section 7050.5) |

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5.3.4 Environmental Impacts

Impact 5.3-1: Development of the Project would not impact an identified historic resource. [Threshold C-1]

An SCCIC records search for the Project site included review of all recorded cultural resources and reports within a half mile of the site. A Built Environment Resources Directory search included a review of data from the NRHP, the CRHR, and the lists of California Historical Landmarks and California Points of Historical Interest. Based on the results of the records searches, no resources have been recorded within the Project site. The existing building on the Project site was constructed in 1976 and is therefore not of historic age.

The SCCIC records indicated that a total of 14 cultural resource reports cover areas within the half-mile radius, and one of the studies, which ran adjacent to the Project site, did not observe any cultural resources within or near the Project site. Additionally, one historic era cultural resource and no prehistoric resources have been recorded within a half-mile radius of the Project site. The Brea General Plan Figure CR-6, Historic Resources, shows that the nearest historic resource to the Project site is the locally designated “Practice House,” approximately 0.6 mile to the west; there are no resources on the Project site identified as City of Brea Historic Resources, CRHR, or NRHR (Brea 2003b). Construction would occur within the footprint of the Project site; therefore, no impact would occur.

Level of Significance Before Mitigation: No Impact.

Impact 5.3-2: Development of the Project could impact archaeological resources. [Threshold C-2]

Only a small portion of Brea has been surveyed for archaeological resources, so the full extent of archaeological resources in Brea is not known (Brea 2003a). The Project site has been graded, paved, and developed with the former Mercury Insurance office building, parking lot, and parking structure. Therefore, the surface and subsurface have been previously disturbed. The Project site would require demolition, ground clearing, excavation, grading, and other ground-disturbing activities. Additionally, the Native American Heritage Commission’s Sacred Land Files record search found no tribal resources on the site (see Section 5.12, *Tribal Cultural Resources*) (Duke 2024).

Although the likelihood of discovering archaeological resources onsite is low given that the site is fully developed and there are no historic resources onsite, because the proposed Project would require ground-disturbing activities that may require excavations below the current foundations, it is possible that subsurface archaeological resources may be encountered. Therefore, the proposed Project could potentially unearth previously unknown/unrecorded archaeological resources.

Level of Significance Before Mitigation: Potentially Significant.

Impact 5.3-3: Grading activities could potentially disturb human remains, but compliance with existing regulations would ensure that impacts are less than significant. [Threshold C-3]

The Project site is currently developed and would require demolition, ground clearing, excavation, grading, and other construction activities to accommodate the proposed improvements onsite. California Health and Safety

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Code, Section 7050.5; CEQA Section 15064.5; and Public Resources Code, Section 5097.98, mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically, California Health and Safety Code, Section 7050.5, requires that disturbance of the site shall halt until the coroner has investigated the circumstances, manner, and cause of death and made the recommendations concerning the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative, according to PRC Section 5097.98. If the coroner determines that the remains are not subject to his or her authority and has reason to believe they belong to a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. In the unlikely event soil-disturbing activities associated with the proposed Project would result in the discovery of human remains, compliance with existing law (see PPP CUL-4) would ensure that impacts to human remains would not be significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.3-4:	Development of the Project could impact paleontological resources or unique geologic features. [Threshold C-4]
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The Project site is underlain by late to middle Pleistocene Quaternary very old alluvial fan deposits (*Q_{vo}*), which are considered to have high sensitivity for paleontological resources. The highly paleontologically sensitive La Habra formation, dating to the middle Pleistocene, is also present on the Project site underneath the Quaternary very old alluvial fan deposit (*Q_{vo}*) sediments (Duke 2024). Therefore, the Project site is assessed as having high sensitivity for paleontological resources at depths of and exceeding six feet. If ground-disturbing activities would exceed these depths, there would be potential that natural landform beneath the Project site would be encountered during construction and that subsurface resources and/or paleontological resources would be discovered.

Level of Significance Before Mitigation: Potentially Significant.

5.3.5 Cumulative Impacts

The area considered for cumulative impacts to historic and archaeological resources is within a half mile of the site, and one mile of the site for paleontological resources, according to the records search. One historic era cultural resource was recorded within a half-mile radius of the site, and one fossil locality was located 1.2 miles southwest of the site. Other projects in the region could demolish or otherwise alter historical and archaeological resources. Other projects would be required to comply with CEQA Guidelines Section 15064.5, which requires the lead agency to determine if discovered resources are unique or historically significant, and if so, to avoid or mitigate impacts to such resources in accordance with the provisions of PRC Section 21083.2. The Project would not result in a cumulatively considerable impact to cultural or paleontological resources.

5.3.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.3-1 and 5.3-3.

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Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.3-2** Development of the Project could result in the discovery of subsurface archaeological resources.
- **Impact 5.3-4** Development of the Project could result in the discovery of paleontological resources.

5.3.7 Mitigation Measures

Impact 5.3-2

CUL-1 If cultural resources are encountered during ground disturbing activities, work in the immediate area shall cease and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service) [NPS] 1983 shall be contacted immediately to evaluate the find(s). If the discovery proves to be significant as determined by the site archeologist, additional work such as data recovery excavation may be warranted and will be reported to the City.

Impact 5.3-4

CUL-2 During ground-disturbing activities, a qualified paleontologist shall monitor all excavations below five feet. If unique paleontological resources are discovered during excavation and/or construction activities, construction shall stop within 50 feet of the find, and the qualified paleontologist shall be consulted to determine whether the resource requires further study. The paleontologist shall make recommendations to the City of Brea to protect the discovered resources. Any paleontological resources recovered shall be provided for curation at a local curation facility such as the Los Angeles County Natural History Museum, the John D. Cooper Center in Fullerton, or any other local museum or repository willing and able to accept and house the resource to preserve for future scientific study.

5.3.8 Level of Significance After Mitigation

Impact 5.3-2

Mitigation Measure CUL-1 would require that a qualified archaeological monitor be contacted in the event that cultural resources are uncovered during ground-disturbing activities. In the event resources are uncovered, Mitigation Measure CUL-1 requires that additional work such as data recovery be reported to the City. Mitigation Measure CUL-1 would reduce potential impacts to archaeological resources to a level that is less than significant. Impact 5.3-2 would be less than significant with mitigation.

Impact 5.3-4

Mitigation Measure CUL-2 requires a qualified paleontologist to be present onsite during all excavation activities below five feet. If resources are discovered during ground-disturbing activities, the resources would be

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recovered and deposited at a local museum or repository. Due to the low potential to uncover paleontological resources onsite and the size of the Project site, a 50-foot buffer would be sufficient and would not halt construction across the entire Project site. Mitigation Measure CUL-2 would reduce potential impacts to paleontological resources to a level that is less than significant. Impact 5.3-4 would be less than significant with mitigation.

5.3.9 References

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5.4 ENERGY

This section evaluates the potential for energy-related impacts associated with the Greenbriar Residential Project (proposed Project) and ways in which the Project would reduce unnecessary energy consumption, consistent with the suggestions in Appendix F of the CEQA Guidelines. Energy service providers to the site include Southern California Edison for electrical service and Southern California Gas Company for natural gas. Modeling of electricity and natural gas usage of the Project is included in Appendix B1 of this DEIR.

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

Federal

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of U.S. crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE Standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. On March 30, 2020, the US Environmental Protection Agency (EPA) finalized updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. On December 21, 2021, under direction of Executive Order 13990 issued by President Biden, the National Highway Traffic Safety Administration (NHTSA) repealed SAFE Vehicles Rule Part One, which had preempted State and local laws related to fuel economy standards. In addition, on March 31, 2022, the NHTSA finalized new fuel standards that will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which will be a 10 mpg increase compared to model year 2021 (NHTSA 2022).

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased corporate average fuel economy standards; the renewable fuel standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy,

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geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2023).

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration of the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

California Public Utilities Commission

In September 2008, the California Public Utilities Commission adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision and goals for each economic sector, identifying specific near-term, midterm, and long-term strategies to assist in achieving these goals. This plan sets the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

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- All new residential construction in California will be zero net energy by 2020.¹
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation and air conditioning, or “HVAC,” will be transformed to ensure that its energy performance is optimal for California’s climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector’s five-billion-plus square feet of space accounts for 38 percent of the state’s power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, and space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of STATE’S electricity and gas use (CPUC 2011).

The California Public Utilities Commission and the CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Energy Related Regulations

Table 5.4-1, *State Energy Regulations*, provides a summary list of energy regulations in California.

¹ Zero net energy buildings are buildings where the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

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Table 5.4-1 State Energy Regulations

Sector	Regulation	Description
Transportation	Assembly Bill 1493	AB 1493 (Pavley I) reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016.
	Executive Order N-79-20	Establishes a time frame for the transition to zero-emission passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop: 1) Passenger vehicle and truck regulations requiring increasing volumes of new zero emission vehicles sold in California toward the target of 100 percent of in-state sales by 2035; 2) Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035; and 3) Strategies to achieve 100 percent zero emission from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.
Renewable Energy	Senate Bill (SB) 107, SB X1-2, Executive Order S-14-08,	Renewables Portfolio Standard (RPS). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2).
	SB 350	Established tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.
	SB 100	RPS for publicly owned facilities and retail sellers will consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.
	Senate Bill 1020	SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.
Energy Efficiency	Title 24, Part 6, Building Energy Efficiency Standards	Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (24 CCR [California Code of Regulations], Part 6). Part 6 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Building Energy Efficiency Standards were approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the 2019 standards on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).
	Title 24, Part 11, Green Building Standards Code (CALGreen)	On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11), or "CALGreen," was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory

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Table 5.4-1 State Energy Regulations

Sector	Regulation	Description
		provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective January 1, 2023.
	Title 20, Appliance Efficiency Regulations	The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Energy Storage

California has set ambitious long-term goals for energy storage beyond 2026 to support its clean energy and climate goals. The state aims to reach 100 percent carbon-free electricity by 2045, which will require significant investment in renewable energy sources like wind and solar, as well as energy storage technologies to balance the variability of these sources.

The California Independent System Operator (CAISO) has a total energy storage capacity of more than 3,160 megawatts (MW) as of June 2022. This includes both large-scale and distributed energy storage systems, such as batteries, pumped hydroelectric storage, and thermal storage. CAISO is responsible for managing the electricity grid for much of California, and it has set a target of adding 3,300 MW of additional energy storage capacity by 2024 to support the integration of more renewable energy sources like wind and solar. As part of SB 100, load serving entities were required to procure no less than 1.3 gigawatts (GW) of energy storage capacity by 2020, and 3 GW by 2030. Additionally, the California Public Utilities Commission has established a target of 15 GW of energy storage capacity by 2030.

The Integrated Resource Plan

CAISO develops a coordinated grid management plan to integrate the generation and storage capacities of load serving entities called the Integrated Resource Plan (IRP). The IRP is a comprehensive planning document that outlines CAISO’s forecasts for electricity demand, supply, and transmission needs over a 20-year planning horizon, as well as its strategies for integrating renewable energy resources and other grid services to meet those needs. The plan is developed in collaboration with load serving entities, regulators, and other stakeholders and is updated periodically to reflect changes in the energy landscape and evolving policy goals. Overall, the IRP plays a critical role in ensuring the reliability and resilience of California’s electricity grid as the state continues to transition to a cleaner and more sustainable energy system.

When an individual Battery Energy Storage System (BESS) facility or generation infrastructure (i.e., solar panels) comes online in California, it is typically included in the IRP through a process known as the Interconnection Queue. The Interconnection Queue is managed by CAISO, which oversees the operation of the State’s electricity grid.

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The Interconnection Queue

The Interconnection Queue is an application process that functions as a waiting list of proposed electricity generation and storage projects that are seeking to connect to the grid. When a new BESS facility or generation infrastructure is proposed, the developer submits an application to CAISO to request an interconnection to the grid. CAISO evaluates the application to ensure that the facility meets technical and operational requirements, such as voltage regulation and frequency response, and that it can be integrated effectively into the grid.

Once the BESS facility or generation infrastructure is approved by CAISO, it is assigned a point of interconnection on the grid, and its output is added to the IRP as a resource that can provide electricity and other grid services, such as frequency regulation or ramping support. The facility is then dispatched by CAISO based on its bids into the day-ahead and real-time electricity markets, and its output is used to help balance supply and demand on the grid in real-time.

Overall, the Interconnection Queue is an important mechanism for integrating new BESS facilities and other electricity resources into the California grid, and for ensuring that the grid remains reliable and resilient as the state continues to transition to a cleaner and more sustainable energy system.

Local

There are no local plans governing energy.

5.4.1.2 EXISTING CONDITIONS

Electricity

Southern California Edison Service Area

The plan area is in Southern California Edison's (SCE) service area, which spans much of southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north (CEC 2023a). Total electricity consumption in SCE's service area was approximately 107,876 gigawatt-hours (GWh) in 2022 (CEC 2024a). As shown in Table 5.4-2, *Orange County 2022 Residential Electricity Consumption*, residential electricity consumption in Orange County was approximately 7,830 GWh in 2022, or approximately 7.25 percent of SCE's total service area electricity consumption (CEC 2024b). Therefore, as shown in Table 5.4-2, Orange County experienced a residential per capita consumption rate of 2,588 kilowatt-hours (kWh) per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

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Table 5.4-2 Orange County 2022 Residential Electricity Consumption

Parameter	Quantity
Residential Electricity Consumption (kWh per year)	7,830,122,428
2022 Orange County Population	3,026,078
Per Capita Electricity Consumption (kWh per year)	2,588

Sources: CEC 2024b; DOF 2024.

Sources of electricity sold by SCE in 2022 were:

- 31.4 percent renewable, consisting mostly of solar and wind
- 2.3 percent large hydroelectric
- 22.3 percent natural gas
- 9.2 percent nuclear
- 0.2 percent other
- 34.6 percent unspecified sources—that is, not traceable to specific sources.² (SCE 2023)

Existing Site Electricity Use

Operation of the existing Mercury Insurance Building consumes electricity for various purposes, including but not limited to heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; security and control center functions; lighting; and use of onsite equipment and appliances. While the building consumes energy for these base functions, it has been vacant since mid-2020. Based on historical electricity consumption data provided by SCE from the period June 2021 to August 2024, the existing building has consumed an average of 1,184,310 kWh annually. Existing electricity consumption for the existing building is shown in Table 5.4-3, *Existing Building Electricity Consumption*.

Table 5.4-3 Existing Building Electricity Consumption

Period	Electricity (kWh)
2021–2022	1,514,711
2022–2023	1,134,702
2023–2024	903,516
3-Year Average	1,184,310
Monthly Average (2021–2024)	88,726

Source: SCE 2024.

Note: These calculations include electricity use from meters on the Mercury Insurance Building property labeled V349N-004819 and V349N-010840.

kWh = kilowatt-hour

² The electricity sources listed reflect changes after the 2013 closure of the San Onofre Nuclear Generating Station, which is owned by SCE. Numbers are rounded up and may cause the total to not add up to exactly 100 percent.

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Gas

The Southern California Gas Company (SoCalGas) provides natural gas to the City of Brea. SoCalGas's service area spans much of the southern half of California, from Imperial County on the southeast to San Luis Obispo County on the northwest, to part of Fresno County on the north, to Riverside County and most of San Bernardino County on the east (CEC 2022). Total natural gas consumption in SoCalGas's service area was approximately 503 billion kBtu (thousand-British thermal units) in 2022 (CEC 2024c). As shown in Table 5.4-4, *Orange County 2022 Residential Natural Gas Consumption*, residential natural gas consumption in Orange County was approximately 35 billion kBtu in 2022, or approximately 7 percent of SoCalGas's total service area natural gas consumption (CEC 2024d). Therefore, as shown in Table 5.6-5, Orange County experienced a residential per capita consumption rate of 11,619 kBtu per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

Table 5.4-4 Orange County 2022 Residential Natural Gas Consumption

Parameter	Quantity
Residential Natural Gas Consumption (kBtu per Year)	35,160,569,008
Orange County Population	3,026,078
Per Capita Natural Gas Consumption (kBtu per Year)	11,619

Sources: CEC 2024d; DOF 2024.
Note: Utilizes a conversion rate of 100 kBtu per Therm. kBtu = 1,000 Btu.

Transportation Fuels

In 2023, California was the sixth largest top producer of petroleum in the nation, behind Alaska, Texas, North Dakota, Oklahoma, and New Mexico (EIA 2024a). A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay Area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay Area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports (CEC 2024e). Since 2012, foreign supplies, led by Saudi Arabia through 2019, Ecuador in 2020 and 2021, and Iraq in 2022, provide over half of the crude oil refined in California (CEC 2024f). According to the United States Energy Information Administration, California's field production of crude oil has steadily declined since the mid-1980s, totaling approximately 188 million barrels in 2022 (EIA 2024a).

According to the Energy Information Administration, transportation accounted for nearly 38 percent of California's total energy demand in 2021, the latest year of available information, amounting to approximately 2,785 trillion British thermal units (EIA 2024b). The CEC produces a California Annual Retail Fuel Outlet Report every year, which is a compilation of gasoline and diesel fuel sales across the state, available at the county level. According to the CEC, California's 2022 fuel sales totaled an estimated 13,640 million gallons of gasoline and 3,601 million gallons of diesel fuel, and Orange County fuel sales totaled an estimated 1,176 million gallons of gasoline and 66 million gallons of diesel fuel in 2022 (CEC 2023b). Therefore, as shown in Table 5.4-5, *Orange County 2022 Transportation Fuel Consumption*, Orange County experienced a per capita consumption rate

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of 606 gallons of fuel per person per year in 2022. It should be noted that county energy consumption rates were retrieved to characterize existing energy consumption because that is the smallest scale at which energy consumption estimates are publicly available.

Table 5.4-5 Orange County 2022 Transportation Fuel Consumption

Parameter	Quantity
Gasoline Fuel Consumption (gallons per year)	1,176,000,000
Diesel Fuel Consumption (gallons per year)	66,000,000
Total Transportation Fuel Consumption (gallons per year)	1,242,000,000
Orange County Population	3,026,078
Per Capita Transportation Fuel Consumption (gallons per year)	410

Source: CEC 2024d; DOF 2024.

5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.4.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for transportation and traffic impacts are identified below.

- PPP E-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2022 Building Energy Efficiency Standards were effective starting on January 1, 2023. The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.
- PPP E-2 New single-family residential construction is required to comply with the California Building Energy and Efficiency Standard by either the performance or prescriptive pathway. The prescriptive pathway requires installation of photovoltaic (PV) systems for new single-family residential construction, along with other energy efficiency and renewable energy design requirements. Should a new single-family residential construction project use the performance pathway for compliance instead, solar may be included in the project design but does not have

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to meet the system sizing requirements prescribed in the prescriptive pathway but must incorporate additional energy efficiency or renewable energy generation in the project design to offset the omission or reduced size of a PV system.

PPP E-3 Construction activities are required to adhere to Title 13 California Code of Regulations Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.

PPP E-4 New buildings are required to adhere to the California Green Building Standards Code and Water Efficient Landscape Ordinance requirements to increase water efficiency and reduce urban per capita water demand.

5.4.4 Environmental Impacts

5.4.4.1 METHODOLOGY

Based on CEQA Guidelines Appendix F, *Energy Conservation*, in order to ensure energy implications are considered in project decisions, EIRs include a discussion of the potential impacts of projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources. Environmental effects may include a project's energy requirements and its energy use efficiencies by amount and fuel type during demolition, construction, and operation; the effects of a project on local and regional energy supplies; the effects of a project on peak- and base-period demands for electricity and other forms of energy; the degree to which a project complies with existing energy standards; the effects of a project on energy resources; and the project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable.

To assist in analyzing whether the ORSC's energy consumption is considered wasteful, inefficient, or unnecessary, the following energy conservation goals from Appendix F of the CEQA Guidelines are used:

- Decrease overall per capita energy consumption.
- Decrease reliance on fossil fuels such as coal, natural gas, and oil.
- Increase reliance on renewable energy sources.

Though these energy conservation goals are used in this analysis to determine whether long-term operations of the proposed Project could result in wasteful, inefficient, or unnecessary energy consumption, they are not considered bright-line significance thresholds. In other words, even though a project may result in an increase in per capita energy consumption, that does not necessarily mean that the consumption of that energy would be wasteful, inefficient, or unnecessary because the consumption of energy alone does not constitute the wasteful, inefficient, or unnecessary use of energy resources. Because different land use types consume different types of energy resources at different rates depending on that occupancy's operational objectives and energy needs, comparing the per capita energy consumption of the proposed Project against the aggregated residential energy consumption data for the county is informative but not determinative of whether that energy consumption would be wasteful, inefficient, or unnecessary. Therefore, this analysis focuses on whether the use of that energy resource is carried out in a wasteful, inefficient, or unnecessary manner in the context of the

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Appendix F energy conservation goals and explores whether mitigation may be warranted to ensure that the use of energy resources is not considered wasteful, inefficient, or unnecessary.

The provided energy and fuel usage information for the proposed Project are based on the following.

- **Building Energy.** Building energy consumption estimates utilize the California Emissions Estimator Model (CalEEMod version 2022.1) default energy (i.e., electricity and natural gas) rates for residential land uses, which are based on the CEC's 2019 Residential Appliance Saturation Survey (RASS). Use of the CalEEMod default energy rates results in conservative estimates compared to the 2022 Building Energy Efficiency Standards because the energy intensity estimates compiled from the RASS utilize data from residences constructed from 1974 to 2015. It is anticipated that new buildings under the current Building Energy Efficiency Standards will generally result in lower energy use.
- **On-Road Vehicle Fuel Usage.** Fuel usage associated with operation-related vehicle trips and construction-related vehicle trips (i.e., worker and vendor trips) is based on fuel usage data obtained from EMFAC2021, version 1.0.2, and on vehicle trip generation data provided in the traffic impact analysis (see Appendix F2, *Traffic Impact Study*).
- **Off-Road Equipment Fuel Usage.** Fuel usage for construction-related off-road equipment are based on fuel usage data obtained from OFFROAD2021, version 1.0.7, and on the equipment mix and operations anticipated for the proposed Project (see the methodology discussion under Section 5.2.4.1, *Methodology*, of Section 5.2, *Air Quality*, for more details).

5.4.4.2 IMPACT ANALYSIS

Impact 5.4-1: Project construction and operation would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. [Threshold E-1]

Short-Term Construction Impacts

Construction of the proposed Project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

Construction of the proposed Project would not require electricity to power most construction equipment. Electricity use during construction would vary during different phases of construction. The majority of construction equipment during demolition and grading would be gas or diesel powered, and the later construction phases would require electricity-powered equipment for interior construction and architectural coatings. Overall, the use of electricity would be temporary and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities. Therefore, Project-related construction activities would not result in wasteful or unnecessary electricity demands, and impacts would be less than significant.

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Natural Gas Energy

It is not anticipated that construction equipment used for the proposed Project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, impacts would be less than significant with respect to natural gas usage.

Transportation Energy

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that the majority of off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, use of all construction equipment would cease upon completion of Project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Energy consumption during construction (2026 through 2028) was calculated using the CalEEMod computer model, version 2022.1, and data from the EMFAC2021 and OFFROAD2021 databases. The results are shown in Table 5.4-6, *Construction-Related Fuel Usage*.

Table 5.4-6 Construction-Related Fuel Usage

Project Component	Gas		Diesel		Electricity	
	VMt	Gallons	VMt	Gallons	VMt	kWh
Construction Worker Commute	798,890	41,418	1,503	65	50,570	18,904
Construction Vendor Trips	12,900	2,454	91,836	12,588	0	0
Construction Truck Haul Trips	1	0	1,292	226	0	0
Construction Off-Road Equipment	N/A	0	N/A	128,269	N/A	0
Total	811,791	43,872	94,632	141,148	50,570	18,904

Source: CalEEMod Version 2022.1; EMFAC2022 Version 1.0.2; OFFROAD2021 Version v1.0.7.

VMt=vehicle miles traveled; kWh=kilowatt hour

The proposed Project would not result in wasteful, inefficient, or unnecessary use of energy during construction. It is anticipated that the construction equipment would be well maintained and meet the appropriate tier ratings per CALGreen or EPA emissions standards so that adequate energy efficiency level is achieved. Construction trips would not result in unnecessary use of energy since the Project area is centrally located and is served by numerous regional freeway systems (e.g., I-10, I-15, and SR-60) that provide the most direct routes from various areas of the region. Electrical energy would be available for use during construction from existing power lines and connections, precluding the use of less-efficient generators. Thus, energy use

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during construction of the proposed Project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

Long-Term Impacts During Operation

Operation of the proposed Project would create additional demands for electricity and natural gas compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; and indoor, outdoor, and perimeter lighting.

Electrical Energy

Electrical service to the proposed Project would be provided by SCE through connections to existing off-site electrical lines and new on-site infrastructure. Operation of the existing office building, despite being vacant, consumes electricity for various purposes, including heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; security and control center functions; lighting; and use of on-site equipment and appliances. As shown in Table 5.4-7, *Electrical Energy Consumption*, the projected electricity consumption for the proposed 179 residences is 656,184 kWh per year, which is a net decrease of 528,126 kWh per year compared to the average electricity consumption of the existing office building from the period 2021 to 2024 while it was vacant. The proposed Project's per capita electricity consumption is approximately 1,547 kWh per year, which is approximately 1,041 kWh less than the residential per capita average for the county in 2022. Therefore, consistent with the Appendix F goal of reducing per capita energy consumption, the proposed Project's electricity consumption would result in a reduction in per capita consumption rates when compared with existing residences in the county.

Table 5.4-7 Electrical Energy Consumption

Parameter	kWh/Year
Building Electricity Consumption	
Existing Building Electricity Consumption	1,184,310
Proposed Project Residential Electricity Consumption	656,184
Net Decrease Between Existing Building and Proposed Project	528,126
Per Capita Electricity Consumption	
Proposed Project ¹	1,547
County Average ²	2,588
Project Exceeds County Average?	No

Source: Appendix B1.

¹ This includes the 656,184 kWh of electricity consumed by the proposed residences in addition to the 125,328 kWh of electricity consumed by electric vehicles as shown in Table 5.4-9, *Proposed Project Annual Operation-Related Fuel Usage*. 505 residents are projected for the proposed Project (see Chapter 3, *Project Description*).

² County average per capita consumption is drawn from Table 5.4-2.

Furthermore, the proposed Project would be consistent with the requirements of the current Building Energy Efficiency Standards and CALGreen, which would require the installation of PV systems on the new buildings

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or alternative equivalent energy efficiency design considerations, such as higher performing insulation or fenestration, and must verify its compliance with the standards using a CEC-approved energy model (see PPP E-2). Installation of solar panels would offset the proposed Project's demand for electricity.

Electricity utility compliance with the State's RPS program under SB 100 would also ensure that the proportion of electricity that is sourced from renewable and carbon-free sources—and consumed by the proposed Project—increases until it must be 100 percent in 2045. Project compliance with the CBSC and CALGreen and utility compliance with SB 100 would result in incremental shifts away from reliance on fossil fuels and toward a greater reliance on renewable energy sources, consistent with the energy conservation goals of Appendix F.

Overall, the proposed Project would result in lower per capita electricity consumption when compared to existing consumption rates in the county and lower electricity consumption when compared to the existing building on the Project site. It would also decrease reliance on fossil fuels and increase reliance on renewable energy sources.

Natural Gas Energy

The projected natural gas consumption for the proposed Project is 1,988,125 kBtu per year, as shown in Table 5.4-8, *Building Natural Gas Consumption*. The per capita natural gas consumption for the proposed Project would be 5,053 kBtu per year, which is approximately 6,566 kBtu per year less than the county's average residential gas consumption per capita in 2022. Additionally, because the proposed Project would be built to meet the Building Energy Efficiency Standards, it would not result in wasteful or unnecessary natural gas demands. Moreover, the proposed Project's design would be compliant with the current Building Energy Efficiency Standards and CALGreen requirements to minimize the consumption of natural gas from space and water heating. Therefore, operation of the proposed Project would result in less than significant impacts with respect to natural gas usage. Furthermore, implementation of Mitigation Measure GHG-1 would reduce natural gas consumed by the proposed Project.

Table 5.4-8 Building Natural Gas Consumption

Parameter	kBtu/Year
Proposed Project Building Natural Gas Consumption	1,988,125
Per Capita Natural Gas Consumption	
Proposed Project ¹	5,053
County Average ²	11,619
Project Exceeds County Average?	No

Source: Appendix B1.

¹ Per capita consumption for the 505 residential population of the proposed Project.

² County average per capita consumption is drawn from Table 5.4-4.

Transportation Energy

The proposed Project would consume transportation energy during operations from the use of motor vehicles. The efficiency of motor vehicles in use, such as the average miles per gallon for motor vehicles involved with

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the proposed Project, are unknown. However, transportation energy use was quantified using overall vehicle miles traveled (VMT) for the proposed Project, average countywide fuel efficiencies, and average countywide fleet mix and is provided in Table 5.4-9, *Proposed Project Annual Operation-Related Fuel Usage*. As shown in this table, the annual VMT for the proposed Project is estimated to be 4,751,854 miles.

The proposed Project would construct new residential housing opportunities in an urbanized area with nearby amenities and public transit options. As an infill residential project, the proposed Project would contribute to minimizing per capita VMT and transportation-related fuel usage. As shown in Table 5.4-9, vehicles commuting to and from the proposed Project are expected to consume 192,878 gallons of fuel per year, which makes the per capita average for the proposed Project 382 gallons per year. This would be approximately 28 gallons less than the per capita county average of 410 gallons per year.

Table 5.4-9 Proposed Project Annual Operation-Related Fuel Usage

	Gasoline		Diesel		CNG		Electricity	
	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual kWh
Passenger Vehicles	4,751,854	175,415	195,151	16,675	5,985	788	353,383	125,328
VMT TOTAL¹	5,306,373 miles per year							
Fuel Consumption TOTAL	192,878 gallons per year							

Source: EMFAC2021, CalEEMod v20221.1.

Notes: ¹ Total VMT was calculated using the trip generation estimates from the RK Engineering VMT Study (Appendix F1) and CalEEMod default trip distances for the project site, which provides a conservative assessment of potential transportation fuel consumption for the proposed Project.

Additionally, because of State and federal vehicle fuel efficiency standards, the average fuel efficiency for vehicles used by residents or visitors of the proposed Project is anticipated to improve with each year as older and less fuel-efficient vehicles are retired and replaced with newer, more fuel-efficient vehicles or vehicles powered by alternative fuel sources (e.g., electricity, hydrogen). Therefore, the proposed Project is anticipated to result in lower per capita transportation fuel consumption. Moreover, incremental vehicle fleet turnover in future years would decrease reliance on fossil fuels and slowly shift a greater proportion of transportation energy needs to electricity, which will incrementally increase the proposed Project's reliance on renewable energy sources through electricity utility compliance with SB 100. This impact would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.4-2: The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. [Threshold E-2]

This impact analysis evaluates consistency of the proposed Project with California's RPS Program.

California Renewable Portfolio Standard Program

The state's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024

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(SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as SCE, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. The proposed Project would comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen.

Level of Significance Before Mitigation: Less Than Significant.

5.4.5 Cumulative Impacts

The areas considered for cumulative impacts to electricity and natural gas supplies are the service areas of SCE and SoCalGas, respectively, described above in Section 5.4.1. Other projects would generate increased electricity and natural gas demands. However, all projects within the SCE and SoCalGas service areas would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute in minimizing wasteful energy consumption. Therefore, cumulative impacts would be less than significant, and Project impacts would not be cumulatively considerable.

5.4.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.4-1 and 5.4-2.

5.4.7 Mitigation Measures

No mitigation measures are necessary because there were no significant impacts identified under the applicable thresholds.

5.4.8 Level of Significance After Mitigation

Because no mitigation measures are required, impacts are the same as described in Section 5.4.6.

5.4.9 References

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5.5 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Greenbriar Residential Development Project (proposed Project) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). GHG emissions modeling was conducted using the California Emissions Estimator Model (CalEEMod), version 2022.1, and model outputs are in Appendix B1, *Air Quality, Energy, and GHG Modeling*, of this DEIR. Cumulative impacts related to GHG emissions are based on the State GHG reduction goals.

Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO₂) over a given period of time (20, 100, and 500 years). CO₂ has a GWP of 1.
- **Carbon dioxide equivalent (CO₂e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO₂ that would cause the same amount of warming. CO₂e is based on the GWP ratios between the various GHGs relative to CO₂.
- **MTCO₂e.** Metric ton of CO₂e.
- **MMTCO₂e.** Million metric tons of CO₂e.

5.5.1 Environmental Setting

5.5.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N₂O), sulfur hexafluoride (SF₆),

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hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).^{1,2} The major GHGs applicable to the proposed Project are briefly described.

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.5-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO₂*. The GWP is used to convert GHGs to CO₂e to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4) GWP values, 10 MT of CH₄ would be equivalent to 250 MT of CO₂.

Table 5.5-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO₂

GHGs	Fourth Assessment Report Global Warming Potential Relative to CO ₂ ¹	Fifth Assessment Report Global Warming Potential Relative to CO ₂ ¹	Sixth Assessment Report Global Warming Potential Relative to CO ₂ ¹
Carbon Dioxide (CO ₂)	1	1	1
Methane (CH ₄) ²	25	28	30
Nitrous Oxide (N ₂ O)	298	265	273

Sources: IPCC 2007, 2013, and 2022.

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂. However, GWP values identified in AR4 are used in CalEEMod. Therefore, this analysis utilizes AR4 GWP values.

¹ Based on 100-year time horizon of the GWP of the air pollutant compared to CO₂.

² The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

¹ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.

² Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

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Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO₂ in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near term, even for the very low GHG emissions scenario (IPCC 2022). Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1°F higher than historical levels, and some areas have seen average increases in

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excess of 2°F (CalOES 2020). The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.
- High heat increases the risk of death from cardiovascular, respiratory, cerebrovascular, and other diseases.
- Droughts are likely to become more frequent and persistent through 2100.³
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.
- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.
- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.
- Sea level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs. (CalOES 2020)

Global climate change risks to California are shown in Table 5.5-2, *Summary of GHG Emissions Risks to California*, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

³ Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016 and unprecedented dry years in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years from 2012 to 2015 (OEHHA 2018).

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Table 5.5-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	<ul style="list-style-type: none"> • Heat waves will be more frequent, hotter, and longer • Fewer extremely cold nights • Poor air quality made worse • Higher temperatures increase ground-level ozone levels • Deaths due to extreme heat
Water Resources Impacts	<ul style="list-style-type: none"> • Decreasing Sierra Nevada snowpack • Challenges in securing adequate water supply • Potential reduction in hydropower • Loss of winter recreation
Agricultural Impacts	<ul style="list-style-type: none"> • Increasing temperature • Increasing threats from pests and pathogens • Expanded ranges of agricultural weeds • Declining productivity • Irregular blooms and harvests
Coastal Sea Level Impacts	<ul style="list-style-type: none"> • Accelerated sea-level rise • Increasing coastal floods • Shrinking beaches • Worsened impacts on infrastructure
Forest and Biological Resource Impacts	<ul style="list-style-type: none"> • Increased risk and severity of wildfires • Lengthening of the wildfire season • Movement of forest areas • Conversion of forest to grassland • Declining forest productivity • Increasing threats from pests and pathogens • Shifting vegetation and species distribution • Altered timing of migration and mating habits • Loss of sensitive or slow-moving species
Energy Demand Impacts	<ul style="list-style-type: none"> • Potential reduction in hydropower • Increased energy demand

Sources: CEC 2006, 2009; CCCC 2012; CNRA 2014; CalOES 2020.

5.5.1.2 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in

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2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Reporting Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MTCO₂e or more per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2017 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 mpg for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

On December 21, 2021, under the direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the National Highway Traffic Safety Administration announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which would be a 10 mpg increase relative to model year 2021 (NHTSA 2022).

State

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill 32 (AB 32), AB 1279, Senate Bill 32 (SB 32), and SB 375.

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Executive Order S-03-05

EO S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. The California Air Resources Board (CARB) prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, *Safeguarding California*, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the executive order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO₂e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

Assembly Bill 1279, signed by Governor Newsom in September 2022, codifies the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for

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anthropogenic GHG emissions. AB 1279 directs CARB to work with relevant state agencies to ensure updates to the scoping plan identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

2022 Climate Change Scoping Plan

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State’s anthropogenic GHG emissions (CARB 2022a). The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This plan expands on earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon, including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the IPCC’s recent AR6, and the measures would achieve 85 percent below 1990 levels by 2045 in accordance with AB 1279. CARB’s 2022 Scoping Plan identifies strategies, as shown in Table 5.5-3, *Priority Strategies for Local Government Climate Action Plans*, that would have the most impact at the local level for ensuring substantial process toward the State’s carbon neutrality goals.

Table 5.5-3 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide electric vehicle charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
Vehicle Miles Traveled Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert “greenfield” land to urban uses (e.g., green belts, strategic conservation easements)

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Table 5.5-3 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: CARB 2022a.

For residential and mixed-use development projects, CARB recommends local agencies use this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- Transportation Electrification
 - Provide electric vehicle (EV) charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- Vehicle Miles Traveled (VMT) Reduction
 - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
 - Does not result in the loss or conversion of the State's natural and working lands.
 - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS).
 - Reduces parking requirements by:
 - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
 - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or

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- For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
- At least 20 percent of the units are affordable to lower-income residents.
- Result in no net loss of existing affordable units.
- Building Decarbonization
 - Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions, especially for new residential development. The third approach is to align with GHG thresholds of significance, which many local air quality management and air pollution control districts have developed or adopted (CARB 2022a).

Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act, was adopted in 2008 to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018 that became effective in October 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32) while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of “percent per capita” reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets

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that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

Transportation Sector-Specific Regulations

Advanced Clean Fleets and Advanced Clean Trucks

CARB adopted the Advanced Clean Fleets (ACF) regulation in 2023 to accelerate the transition to zero-emission medium- and heavy-duty vehicles. In conjunction with the Advanced Clean Trucks regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach, which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs and creates a catalyst to accelerate development of a heavy-duty public charging infrastructure network.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the previous discussion in federal regulations under "Update to Corporate Average Fuel Economy Standards [2017 to 2026].")

In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZEVs into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new low-carbon fuel standard for transportation fuels sold in the state. EO S-01-07 set a declining standard for GHG emissions measured in CO_{2e} gram per unit of fuel energy sold in California. The low-carbon fuel standard required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the "fuel cycle."

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and

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the California Fuel Cell Partnership to establish benchmarks to accommodate ZEVs in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). EO B-16-2012 also directed the number of ZEVs in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed EO N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the state is to transition to 100 percent in-state sales of ZE off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

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Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 Part 6 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

The CEC adopted the 2022 Building Energy Efficiency Standards on August 11, 2021, and it went into effect on January 1, 2023. The 2022 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, etc. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system for multifamily residential occupancies and nonresidential occupancies such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021). The 2025 Building Energy Efficiency Standards, which builds on the 2022 code, were adopted by the CEC in September 2024 and will become effective January 1, 2026.

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of CALGreen first became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective on January 1, 2023, and the 2025 CALGreen standards become effective on January 1, 2026.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

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Solid Waste Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939) (Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of a 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

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AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

On September 19, 2016, the governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

Regional

SCAG's 2024-2050 RTP/SCS

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan (RTP/SCS). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction target of 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices

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by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

Local

There are no local GHG reduction plans.

5.5.1.3 EXISTING CONDITIONS

California's GHG Sources and Relative Contribution

In 2022, the statewide GHG emissions inventory was updated for 2000 to 2020 emissions using the GWPs in IPCC's AR4, and California produced 369.2 MMTCO₂e GHG emissions (CARB 2022b), 35.3 MMTCO₂e lower than 2019 levels and 61.8 MMTCO₂e below the 2020 GHG limit of 431 MMTCO₂e. The 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic. Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2014, statewide GHG emissions dropped below the 2020 GHG limit and have remained below the limit since that time. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 MT per person to 9.3 MT per person in 2020, a 33 percent decrease (CARB 2022b).

California's transportation sector remains the largest source of GHG emissions, producing 37 percent of the state's total emissions in 2020. Industrial sector emissions made up 20 percent and electric power generation made up 16 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (4 percent), agriculture and forestry (8.6 percent), high-GWP gases (5.8 percent), and recycling and waste (2 percent) (CARB 2022b).

Transportation emissions continued to decline for the past three consecutive years with the rise of fuel efficiency in the passenger vehicle fleet and increase in battery electric vehicles. The deployment of renewable and/or less-carbon-intensive resources and higher energy efficiency standards have facilitated the continuing decline in fossil fuel electricity generation. The industrial sector trend has been more flat in recent years but saw a decrease of 7.1 MMTCO₂e in 2020. Commercial and residential emissions saw a decrease of 1.7 MMTCO₂e. Emissions from high-GWP gases have continued to increase as they replace ozone-depleting substances that are being phased out under the 1987 Montreal Protocol. Emissions from other sectors have remained mostly constant in recent years. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining. From 2000 to 2020, the carbon intensity of California's economy decreased by 49 percent while the gross domestic product increased by 56 percent (CARB 2022b).

5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

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GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.5.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

South Coast AQMD has adopted a significance threshold of 10,000 MTCO₂e per year for permitted (stationary) sources of GHG emissions for which South Coast AQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group. Based on the last Working Group meeting (Meeting No. 15) in September 2010, South Coast AQMD identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a). This following tiered approach has not been formally adopted by South Coast AQMD.

- **Tier 1.** If a project is exempt from CEQA, project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level criterion, project-level and contribution to significant cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The South Coast AQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. South Coast AQMD identified a screening-level threshold of 3,000 MTCO₂e annually for all land use types. The bright-line screening-level criteria are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions. South Coast AQMD recommends use of the 3,000 MTCO₂e interim bright-line screening-level criterion for all project types (South Coast AQMD 2010b).

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.⁴

⁴ South Coast AQMD had identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 MTCO₂e per year per service population (MTCO₂e/year/SP) for project-level analyses and 6.6 MTCO₂e/year/SP for plan-

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The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 MTCO₂e per year per service population (MTCO₂e/year/SP) for project-level analyses and 6.6 MTCO₂e/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.⁵ The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.⁶

5.5.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for transportation and traffic impacts are identified below.

- PPP GHG-1 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2022 Building Energy Efficiency Standards were effective starting on January 1, 2023. The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.
- PPP GHG-2 California's Green Building Standards Code (CALGreen) requires the recycling and/or salvaging for reuse at minimum of 65 percent of the nonhazardous construction and demolition waste generated during most "new construction" projects (CALGreen Sections 4.408 and 5.408). Construction contractors are required to submit a construction waste management plan that identifies the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project, or salvaged for future use or sale and the amount (by weight or volume).
- PPP GHG-3 New buildings are required to adhere to the California Green Building Standards Code and Water Efficient Landscape Ordinance requirements to increase water efficiency and reduce urban per capita water demand.
- PPP GHG-4 New single-family residential construction is required to comply with the California Building Energy and Efficiency Standard by either the performance or prescriptive pathway. The prescriptive pathway requires installation of photovoltaic (PV) systems for new single-family residential construction, along with other energy efficiency and renewable energy design requirements. Should a new single-family residential construction project use the performance pathway for compliance instead, solar may be included in the project design but does not have

level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan (CARB 2008)

⁵ It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

⁶ South Coast AQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

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to meet the system sizing requirements prescribed in the prescriptive pathway but must incorporate additional energy efficiency or renewable energy generation in the project design to offset the omission or reduced size of a PV system.

5.5.4 Environmental Impacts

5.5.4.1 METHODOLOGY

This GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG emissions impacts are likely in conjunction with the type and scale of development associated with the proposed Project. Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The following provides a summary of the assumptions utilized for the proposed Project analysis. GHG emissions modeling datasheets are in Appendix B1.

Construction Phase

Construction would entail demolition of the existing office building and parking improvements; site remediation, including removal of the existing underground storage tanks; off-site hauling of demolition debris and earthwork material; rough grading; installation of utility infrastructure, including off-site improvements; and construction of the proposed residential buildings. The proposed Project is anticipated to be constructed over an approximately 31-month period from April 2026 to December 2028. Construction air pollutant emissions are based on the preliminary information provided by the applicant, including the construction equipment mix and specifications and number of workdays per construction phase. Construction worker and vendor trips were based on CalEEMod defaults.

Operational Phase

- **Transportation.** The average daily trip generation for weekday and Saturday trips was provided by RK Engineering Group Inc. (see Appendix F2). Project-related on-road emissions are based on year 2028 emission rates for the Project's buildout year. The primary source of mobile criteria air pollutant emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel). Additionally, for criteria air pollutants, brake and tire wear along with fugitive dust created from vehicles traveling roadways also generate particulate matter.
- **Area Sources.** Area source emissions from use of consumer cleaning products, landscaping equipment, and VOC emissions from paints are based on CalEEMod default values and the square footage of the proposed residential buildings, asphalt, and hardscape areas.
- **Energy.** Building energy consumption estimates utilize the California Emissions Estimator Model (CalEEMod version 2022.1) default energy (i.e., electricity and natural gas) rates for residential land uses, which are based on the CEC's 2019 Residential Appliance Saturation Survey (RASS). Use of the CalEEMod

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default energy rates results in conservative estimates compared to the 2022 Building Energy Efficiency Standards because the energy intensity estimates compiled from the RASS utilize data from residences constructed from 1974 to 2015. It is anticipated that new buildings under the current Building Energy Efficiency Standards will generally result in lower energy use.

- **Solid Waste Disposal:** Indirect emissions from waste generation are based on the California Department of Resources Recycling and Recovery resident disposal rates for the City of Brea in 2022.
- **Water/Wastewater:** Emissions of GHG are associated with the embodied energy used to supply, treat, and distribute water. Indoor water use is based on the wastewater generation rate used in the Preliminary Sewer System Hydraulic Analysis for the proposed Project (see Appendix G2). Outdoor water use is based on the State Department of Water Resources' Water Budget Workbook for New and Rehabilitated Non-Residential Landscapes, Beta Version 1.09.

Life cycle emissions are not included in the GHG analysis consistent with California Resources Agency directives.⁷ Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's AB 32/SB 32 inventory but treats it separately.⁸

5.5.4.2 IMPACT ANALYSIS

Impact 5.5-1: Implementation of the proposed Project would not generate a net increase in GHG emissions, either directly or indirectly, that would have a significant impact on the environment. [Threshold GHG-1]

Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is by definition a cumulative environmental impact.

Implementation of the proposed Project would result in 179 new attached single-family residences. From these additional land uses, the proposed Project would generate up to 1,296 weekday vehicle trips and 1,577 Saturday vehicle trips. Furthermore, operation of the proposed Project would result in an increase in water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., natural gas and electricity). South Coast AQMD does not have a significance threshold for construction

⁷ Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analysis was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials is also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (LCI 2008).

⁸ Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017).

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emissions but recommends that construction emissions be amortized over a 30-year project lifetime and added to the Project's operational emissions for comparison to the South Coast AQMD Working Group's screening-level threshold of 3,000 MTCO₂e annually (South Coast AQMD 2009). Project emissions during operation combined with amortized construction-related emissions are shown in Table 5.5-4, *Project-Related GHG Emissions*. As noted above, the Project site is assumed to generate no GHG emissions because the existing office building is currently vacant. However, historically the Project site did generate GHG emissions associated with its former use as an office building. Therefore, the estimate in this table provides a conservative analysis of the proposed Project's impacts on GHG emissions. As shown in the table, GHG emissions from the proposed Project would not exceed South Coast AQMD's bright-line significance threshold. As a result, GHG emissions associated with the proposed Project are considered less than significant.

Table 5.5-4 Project-Related GHG Emissions

Source	Proposed Project (MTCO ₂ e)
Mobile ¹	1,737
Area	55
Energy	209
Water	38
Solid Waste	233
Refrigerants	1
30-Year Construction Amortization ²	58
Total Emissions	2,331
South Coast AQMD Bright Line Threshold	3,000
Exceeds South Coast AQMD Bright Line Threshold	No

Sources: CalEEMod Version 2022.1

¹ Transportation emissions are based on trip generation data provided by RK Engineering. Assumed VMT and vehicle fleet mix based on CalEEMod default rates.

² Construction emissions are amortized over a 30-year period (South Coast AQMD 2010b).

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.5-2: Implementation of the proposed Project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. [Threshold GHG-2]

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

CARB Scoping Plan

CARB's latest Climate Change Scoping Plan (2022 Scoping Plan) outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, and AB 1279 (CARB 2022). The Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

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Statewide strategies to reduce GHG emissions in the 2022 Climate Change Scoping Plan include: implementing SB 100, which expands the RPS to 60 percent by 2030; expanding the Low Carbon Fuel Standards to 18 percent by 2030; implementing the Mobile Source Strategy to deploy zero-electric vehicle buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures as necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, and AB 1279. In addition, new developments are required to comply with the current Building Energy Efficiency Standards and CALGreen. The proposed Project would comply with these GHG emissions reduction measures since they are statewide strategies.

Table 5.5-5, *Project Consistency with the 2022 Scoping Plan Priority Areas*, contains a list of the GHG-reducing strategies from the 2022 Scoping Plan. The analysis describes the proposed Project's compliance and consistency with these strategies. As discussed in the table, the proposed Project would generally be consistent with the priority areas pertaining to transportation electrification and VMT reductions, but is not currently designed to be a 100 percent electric product (i.e., no natural gas appliances). Thus, although the proposed Project would adhere either directly or indirectly to statewide strategies, because it would not meet one of the three local action priority areas, it is considered potentially inconsistent with the Scoping Plan.

Table 5.5-5 Project Consistency with the 2022 Scoping Plan Priority Areas

Priority Area	Priority Area Attributes	Project Consistency
Transportation Electrification	Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.	Consistent: The proposed Project would comply with CALGreen requirements for EV charging. The proposed Project would include garage parking for all units. The garages would include electrical outlets that would allow for EV charging.
VMT Reduction	Meets local jurisdiction adopted SB 743 threshold for VMT.	Consistent: As discussed in Chapter 5.12, <i>Transportation</i> , the proposed Project would result in less VMT than that generated by the former office use. Therefore, the proposed Project would meet the City's VMT thresholds.
Building Decarbonization	Uses all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.	Inconsistent: The proposed Project is not currently designed to include electric heating, water heating, and indoor cooking.

Source: CARB 2022a.

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SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2024-2050 RTP/SCS, Connect SoCal, in April 2024. Connect SoCal is a long-term plan for Southern California region that details the development, integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area (SCAG 2024). This plan outlines a forecast development pattern that demonstrates how the region can sustainably accommodate needed housing and job centers with multimodal mobility options. The overarching vision is to expand alternatives to driving, advance the transition to clean-transportation technologies, promote integrated and safe transit networks, and foster transit-oriented development in compact and mixed-use developments (SCAG 2024). In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and federal Clean Air Act requirements. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

The Connect SoCal Plan does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers. The proposed Project would develop 179 new residences and would not generate a significant VMT impact. The proposed Project's consistency with the 2024 SCAG RTP/SCS, Connect SoCal, is detailed in Table 5.7-1, *SCAG's Connect SoCal Consistency Analysis*, of Section 5.7, *Land Use and Planning*. The goals of Connect SoCal are related to housing, transportation technologies, equity, and resilience. Although the Project site is not considered to be in a TPA, the proposed Project would redevelop the underutilized site with types of housing necessary to accommodate the demographic shifts in the City. Therefore, from a planning perspective, the proposed Project is slightly favorable, as it would provide housing units in proximity to commercial uses and employment opportunities (see Section 5.8, *Population and Housing*). Therefore, the proposed Project would not interfere with SCAG's ability to implement the regional strategies in Connect SoCal, and this impact would be less than significant.

Level of Significance before Mitigation: Potentially Significant.

5.5.5 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.5-1 are not Project-specific impacts, but the proposed Project's contribution to this cumulative impact. As discussed under Impact 5.5-1, implementation of the proposed Project would not result in annual emissions that would exceed South Coast AQMD's bright-line threshold. Therefore, Project-related GHG emissions and their contribution to global climate change would not be cumulatively considerable.

5.5.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.5-1.

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Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.5-2** Development pursuant to the proposed Project could potentially conflict with the state goals for carbon neutrality identified in the 2022 Scoping Plan.

5.5.7 Mitigation Measures

Impact 5.5-2

GHG-1 The Project Applicant shall design and build all residential homes to be electric, meaning that electricity is the primary permanent source of energy for water heating; mechanical; heating, ventilation, and air conditioning (HVAC) (i.e., space-heating and space cooling); cooking; and clothes-drying. All major appliances (e.g., dishwashers, refrigerators, clothes washers and dryers, and water heaters) provided/installed shall be electric-powered EnergyStar-certified or of equivalent energy efficiency, where applicable. Prior to the issuance of building permits for new development projects within the Project site, the Project Applicant shall show provide documentation (e.g., building plans) to the City of Brea Building Division official or his/her designee, to verify implementation of this requirement. Prior to the issuance of the certificate of occupancy, the City of Brea shall verify implementation of the building electrification design requirement.

5.5.8 Level of Significance After Mitigation

Impact 5.5-2

CARB Scoping Plan

The proposed Project has the potential to be inconsistent with the Scoping Plan priority area for building electrification. Mitigation Measure GHG-1 would require buildings on-site to use electric appliances and have all-electric heating and water heating systems, ensuring consistency with the Scoping Plan priority area for building decarbonization. Therefore, Impact 5.5-2 would be less than significant with mitigation.

5.5.9 References

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5.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the proposed Project on human health and the environment due to exposure to hazardous materials or conditions associated with the Project site, Project construction, and Project operations. Potential Project impacts and appropriate mitigation measures or standard conditions are included as necessary.

The analysis in this section is based in part on the following technical studies:

- *Phase I Environmental Site Assessment Report for Mercury Insurance Facility 1698-1700 Greenbriar Lane Brea, Orange County, California 92821*, Enviro Applications, November 2023.
- *Results of Limited Site Investigation 1698-1700 Greenbriar Lane Brea, California 92821*, Enviro Applications, November 2023.

Complete copies of these studies are included in this DEIR as Appendices I1 and I2, respectively.

5.6.1 Environmental Setting

Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Project site are summarized below.

5.6.1.1 REGULATORY BACKGROUND

Federal

Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is a law developed to protect the water, air, and soil resources from the risks created by past chemical disposal practices. This law is also referred to as the Superfund Act and regulates sites on the National Priority List, which are called Superfund sites. The Act was intended to be comprehensive in encompassing both the prevention of, and response to uncontrolled hazardous substances releases. The Act deals with environmental response, providing mechanisms for reacting to emergencies and chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Emergency Planning and Community Right-To-Know Act

In 1986, Congress passed the Superfund Amendments and Reauthorization Act. Title III of this regulation is called the “Emergency Planning and Community Right-to-Know Act of 1986” (EPCRA). The act required the establishment of state commissions, planning districts, and local committees to facilitate the preparation and

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implementation of emergency plans. Under its requirements, local emergency planning committees are responsible for developing a plan for preparing for and responding to a chemical emergency.

The Orange County Environmental Health Hazardous Materials Team is responsible for coordinating hazardous material and disaster preparedness planning and appropriate response efforts with city departments and local and state agencies.

Another purpose of the EPCRA is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of EPCRA require businesses to report to state and local agencies the location and quantities of chemicals stored on-site. Under section 313 of EPCRA, manufacturers are required to report chemical releases for more than 600 designated chemicals. In addition to chemical releases, regulated facilities are also required to report off-site transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and chemical recycling activities. The US Environmental Protection Agency (EPA) maintains the Toxic Release Inventory database, which documents the information that regulated facilities are required to report annually.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act was intended to be comprehensive in encompassing both the prevention of and response to uncontrolled hazardous substances releases. The Act deals with environmental response, providing mechanisms for reacting to emergencies and chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Hazardous Materials Transportation Regulations

The Hazardous Materials Transportation Act and Hazardous Materials Transportation Uniform Safety Act provide regulatory and enforcement authority to the Secretary of Transportation to reduce risks to life and property from hazards associated with the transport of hazardous materials.

Title 29, Code of Federal Regulations, Section 1926.62

Title 29, CFR Section 1926.62, sets standards for occupational health and environmental controls for lead exposure in construction, regardless of the lead content of paints and other materials.

State

Hazardous Materials Release Notification

Many state statutes require emergency notification of a hazardous chemical release:

- California Health and Safety Codes Sections 25270.8, and 25507
- Vehicle Code Section 23112.5

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- Public Utilities Code Section 7673, (PUC General Orders #22-B, 161)
- Government Code Sections 51018, 8670.25.5(a)
- Water Codes Sections 13271, 13272
- California Labor Code Section 6409.1 (b)10

Requirements for immediate notification of all significant spills or threatened releases cover owners, operators, persons in charge, and employers. In addition, all releases that result in injuries or harmful exposure to workers must be immediately reported to the California Occupational Safety and Health Administration pursuant to the California Labor Code Section 6409.1(b).

Hazardous Materials Disclosure Programs

The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs, which include: Hazardous Materials Release Response Plans and Inventories (business plans), the California Accidental Release Prevention (CalARP) Program, and the Underground Storage Tank (UST) Program. The Unified Program is implemented at the local government level by Certified Unified Program Agencies (CUPAs).

The CUPA for the City of Brea is the Orange County Environmental Health Division (OCEHD).

Hazardous Materials Business Plans

Both the federal government (Code of Federal Regulations) and the State of California (California Health and Safety Code) require all businesses that handle more than a specified amount—or “reporting quantity”—of hazardous or extremely hazardous materials to submit a hazardous materials business plan to their CUPA.

The OCEHD verifies information disclosed by businesses and provides it to agencies responsible for the protection of public health and safety and the environment, such as fire departments, hazardous materials response teams, and other local environmental regulatory groups (OC Health 2024). Businesses that handle hazardous materials are required by law to provide an immediate verbal report of any release or threatened release of hazardous materials if there is a reasonable belief that the release or threatened release poses a significant present or potential hazard to human health and safety, property, or the environment. The OCEHD is also charged with the responsibility of conducting compliance inspections of regulated facilities in Orange County.

California Accidental Release Prevention Program

CalARP aims to be proactive and therefore requires businesses to prepare risk management plans, which are detailed engineering analyses of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential.

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Leaking Underground Storage Tanks

Leaking USTs have been recognized since the early 1980s as the primary cause of groundwater contamination from gasoline compounds and solvents. The State Water Resources Control Board has been designated the lead California regulatory agency in the development of UST regulations and policy. The California Regional Water Quality Control Boards, in cooperation with the Office of Emergency Services, maintain an inventory of leaking USTs in a statewide database.

California Code of Regulations

Title 22, Division 4.5, of the California Code of Regulations (CCR) sets forth the requirements for hazardous-waste generators; transporters; and owners or operators of treatment, storage, or disposal facilities. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste.

Title 23, Chapter 16, sets forth the requirements for new underground storage tank design, construction, and monitoring requirements.

Asbestos-Containing Materials Regulations

State-level agencies, in conjunction with the EPA and the US Occupational Safety and Health Administration, regulate removal, abatement, and transport procedures for asbestos-containing material (ACM). Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official fire code for the State and all political subdivisions. It is found in CCR Title 24, Part 9, and is revised and published every three years by the California Building Standards Commission. The CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The Brea Fire Department, the City's fire service provider, regularly adopts each new CFC update under the Brea Fire Code in the Brea City Code. Chapter 50 of the CFC contains general requirements for hazardous materials that are intended to be paired with specific requirements for a given hazardous material in Chapter 51 through Chapter 67. These chapters contain more restrictive regulations beyond what is listed in the California Health and Safety Code concerning hazardous materials.

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California Building Code

CCR Title 24, Part 2, Section 907.2.11.2. Smoke alarms shall be installed and maintained on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms, in each room used for sleeping purposes, and in each story within a dwelling unit.

California Health and Safety Code

California Health and Safety Code Chapter 6.95 and CCR Title 19, Section 2729, set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a management plan if the hazardous material is handled in certain quantities.

Within the California Health and Safety Code Sections 17920.10 and 105255 defines lead hazards and restricts lead-related construction work on any residential or public building in a manner that creates a lead hazard.

Regional

South Coast Air Quality Management District

SCAQMD Rule 1403 governs the demolition of buildings containing asbestos materials. Rule 1403 specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACM.

Local

Brea Fire Department

The primary mission of the Brea Fire Services Department is the delivery of life safety services. The department provides 24-hour emergency response to a wide variety of critical situations, including fires, explosions, hazardous materials incidents, medical emergencies, accidents, and miscellaneous public assistance requests (Brea 2024).

City of Brea Emergency Operations Plan

Adopted in March of 2020, the Emergency Operations Plan (EOP) establishes a comprehensive framework of policy and guidance for emergency and disaster response operations (Brea 2020). Within the EOP, hazardous materials are described, and Brea Fire was identified as the lead agency within the City limits if a hazardous material incident occurred.

Depending upon the scale of the accident, large segments of the residential and business populations may need to be evacuated quickly for extended periods of time. Effective emergency planning with regard to hazardous materials, therefore, requires the concentrated efforts of the City Fire and Police Departments as well as other public safety officials and private organizations, such as the Red Cross (Brea 2019).

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5.6.1.2 EXISTING CONDITIONS

Historical Use of the Project Site

As described in the Phase I ESA, the Project site was vacant and undeveloped until approximately 1972. From 1972 to 2008, the space was occupied by a commercial office building in the western portion and parking lot directly to the east. Adjoining properties to the site included residential properties to the north and east, commercial properties to the south, and Highway 57 and a shopping mall to the west. From 2009 to 2020, a second commercial building was constructed in the southeast corner of the property.

The property has been occupied by various commercial office tenants, including Mercury Casualty Company and Allstate Insurance Company.

Site Geology and Hydrogeology

The subject property is in the northern edge of the Coastal Plan of Orange County, a subunit of the Central Plain of the Orange County Groundwater Basin. Soil in the vicinity of the subject property has been identified by the United States Department of Agriculture Natural Resource Conservation Service as a combination of Myford sandy loam, 9 to 15 percent slopes, and Alo clay, 15 to 30 percent slopes, dry. These soils typically occur on ridges and moderately sloping terraces and backslopes. These soils are described as well drained with a low subsoil permeability and high runoff potential.

Based on the Phase I ESA, the depth to groundwater in the vicinity (south) of the subject property ranges between approximately 15 and 25 feet below ground surface. The estimated groundwater flow direction is to the southwest (see Appendix I1).

Project Site Hazardous Materials

Asbestos-Containing Materials

Asbestos is a naturally occurring fibrous material once commonly used as a fireproofing and insulating agent in building construction before the EPA banned such uses in the 1970s. Asbestos can also be atmospherically deposited from vehicle brake shoes. Naturally occurring asbestos can be found in serpentinite or other metamorphosed ultramafic rocks such as dunite, peridotite, and pyroxenite. Natural occurrences of asbestos are of concern due to potential exposure to the tiny fibers that can become airborne if asbestos-bearing rocks are disturbed by natural erosion or human activities such as road building, excavations, and other ground-disturbing activities. Overall, 53 of the 58 California counties contain reported asbestos occurrences and/or ultramafic rocks such as serpentinite that can contain asbestos fibers. However, in general, natural occurrences of asbestos fibers do not pose a threat unless disturbed and/or introduced into the air as fugitive dust.

No survey for ACMs was conducted as part of the Phase I ESA. In the past, asbestos sampling that confirmed ACMs (carpet mastic) was performed and the material was abated. Based on the age of the subject building, it is possible that ACMs are present in other building materials (see Appendix I1).

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Lead and Lead-Based Paint

The presence of lead in soils above natural background levels is a common occurrence in areas that were created by fill and in former industrial areas. Lead concentrations can also be elevated in fill materials because the fill can originate from building and industrial rubble containing or affected by sources of lead such as piping, coatings, and other construction materials. A lead-based paint (LBP) survey was not conducted as part of the Phase I ESA or known to have been previously conducted (see Appendix I1). According to the Phase I ESA, LBP may exist based on the age of the subject building.

Underground Storage Tanks

The Project site currently has two diesel USTs on-site (2,000-gallon and a 3,000-gallon double-walled fiberglass) that were installed in 2001 to power on-site emergency generators. The Phase I ESA concluded that the USTs represent a material threat of a release of hazardous substances and are therefore considered an American Society for Testing and Materials recognized environmental condition (ASTM REC). ASTM standards are used to determine if there is a presence of hazardous substances or petroleum products. Due to this, a limited Phase II ESA was prepared to rule out potential subsurface soil impacts related to the USTs, along with potential vapor intrusion to future on-site occupants.

According to the limited Phase II ESA, the Project site has reported concentrations of benzene and tetrachloroethene (PCE) that exceeded the commercial soil gas screening levels in soil samples taken in close proximity to the two USTs on the Project site. The elevated benzene concentration was detected adjacent to the UST in the southwest corner of the site. The elevated benzene concentration was $1.0 \mu\text{g}/\text{m}^3$ above the screening level and would not be in an area directly under planned residential development.

The limited Phase II ESA concluded that the detection of PCE is considered an isolated occurrence in the immediate vicinity of the northern UST location and does not appear to extend to nearby boring locations. The source is likely from the use of a solvent-based cleaner during UST installation or maintenance. Additionally, no soil contamination was reported in samples collected near the two UST locations (see Appendix I1).

Other Hazardous Substances

The Phase I ESA did not identify any volatile organic compound release sites hydro-geologically up-gradient or immediately side-gradient of the subject property that could act as a source of soil gas contamination underlying the subject property. The Phase I ESA also identified that radon is not expected to represent an environmental impact risk at the Project site (see Appendix I1).

Hazardous Materials Sites

The Project site is currently listed on the following databases: South Coast Air Quality Management District Facility Information Detail (FINDS), Enforcement & Compliance History Information (ECHO), Resource Conservation and Recovery Act Non-generator/No Longer Regulated (RCRA NonGen/NLR), Underground Storage Tank Facilities (UST), Hazardous Waste Tracking System (HWTS), Hazardous Waste Information

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System (HAZNET), California Environmental Reporting System (CERS) Tanks, California Integrated Water Quality System (CIWQS), and CERS (see Appendix I1).

Schools

The Project site is 0.3 mile north of North Fullerton KinderCare, which offers school and infant services to the community. Additionally, Heights Christian School is approximately 0.3 miles northeast of the project site. Heights Christian School is a private school system that offer school services to preschool and elementary school children (Heights 2024).

Airport Hazards

The nearest public-use airport is the Fullerton Municipal Airport, approximately eight miles southwest of the Project site (AirNav 2024).

5.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- H-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.
- H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area.
- H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

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5.6.3 Plans, Programs, and Policies

Plans, programs, and policies are identified below, including applicable regulatory requirements and conditions of approval for utilities and service systems.

- PPP HAZ-1 Project-related hazardous materials and hazardous wastes will be transported to and/or from the Project site in compliance with any applicable state and federal requirements, including the U.S. Department of Transportation regulations listed in the Code of Federal Regulations (Title 49, Hazardous Materials Transportation Act); California Department of Transportation standards; and the California Occupational Safety and Health Administration standards.
- PPP HAZ-2 Project-related hazardous waste generation, transportation, treatment, storage, and disposal will be conducted in compliance with the Subtitle C of the Resource Conservation and Recovery Act (Code of Federal Regulations, Title 40, Part 263), including the management of nonhazardous solid wastes and underground tanks storing petroleum and other hazardous substances. The proposed Project will be designed and constructed in accordance with the regulations of the Orange County Environmental Health Division, which serves as the designated Certified Unified Program Agency and which implements State and federal regulations for the following programs: (1) Hazardous Waste Generator Program, (2) Hazardous Materials Release Response Plans and Inventory Program, (3) California Accidental Release Prevention, (4) Above Storage Tank Program, and (5) Underground Storage Tank Program.
- PPP HAZ-3 Project-related underground storage tank (UST) repairs and/or removals will be conducted in accordance with the California UST Regulations (Title 23, Chapter 16 of the California Code of Regulations). Unauthorized release of hazardous materials will require release reporting, initial abatement, and corrective actions that will be completed with oversight from the Regional Water Quality Control Board, Department of Toxic Substances Control, Brea Fire Department, South Coast Air Quality Management District, and/or other regulatory agencies as necessary. Project-related use of existing USTs will also have to be conducted (i.e., used, maintained, and monitored) in accordance with the California UST Regulations (Title 23, Chapter 16 of the California Code of Regulations).
- PPP HAZ-4 Project-related demolition activities that have the potential to expose construction workers and/or the public to asbestos-containing materials or lead-based paint will be conducted in accordance with applicable regulations, including, but not limited to:
- South Coast Air Quality Management District's Rule 1403
 - California Health and Safety Code (Section 39650 et seq.)
 - California Code of Regulations (Title 8, Section 1529)
 - California Occupational Safety and Health Administration Regulations (California Code of Regulations, Title 8, Section 1529 [Asbestos] and Section 1532.1 [Lead])

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- Code of Federal Regulations (Title 40, Part 61 [asbestos], Title 40, Part 763 [asbestos], and Title 29, Part 1926 [asbestos and lead])

5.6.4 Environmental Impacts

Impact 5.6.1: Construction and operation of the proposed Project could involve use of hazardous materials; however, compliance with existing regulations would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes would be minimized. [Thresholds H-1]

Operational Phase

The proposed Project would include residential uses and would not involve use of substantial quantities of hazardous materials. Operation of the proposed Project may involve the routine storage and use of small quantities of commercially available hazardous materials for routine maintenance (e.g., paint, cleaning supplies, and fuel). Hazardous materials used during operation of the proposed Project would be transported, used, stored, and disposed in accordance with existing regulations and product labeling, thereby minimizing the hazard to the public and the environment. Federal and State regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in Section 5.6.1.1, *Regulatory Background*. With the exercise of normal safety practices, the proposed Project would not create substantial hazards to the public or the environment. Therefore, a less than significant impact would occur.

Construction

Hazardous materials (e.g., fuel, oils, solvents, paints) would be routinely transported, stored, and used at the Project site during construction. The routine transportation, use, and disposal of hazardous materials during construction and operation may pose health and safety hazards to workers if the hazardous materials are improperly handled. The handling, use, transport, and disposal of hazardous materials during the construction phase of the Project would comply with existing regulations of several agencies—the United State Environmental Protection Agency, the Orange County Environmental Health Division, Occupational Safety and Health Administration, California Division of Occupational Safety and Health, and United State Department of Transportation. Additionally, construction projects typically maintain supplies on-site for containing and cleaning small spills of hazardous materials. However, construction activities would not involve a significant amount of hazardous materials. Project construction workers would be trained on the proper use, storage, and disposal of hazardous materials.

Construction activities would also be conducted in accordance with the Storm Water Pollution Prevention Plan (SWPPP) as part of the National Pollution Discharge Elimination System (NPDES) permit. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMP) to reduce or eliminate pollutants in stormwater discharges and authorized non-storm water discharges from the construction site. BMPs for hazardous materials may include, but are not limited to, off-site refueling, placement of generators on impervious surfaces, establishing cleanout areas for cement, etc. While the risk of exposure to hazardous materials cannot be eliminated, adherence to existing regulations would ensure

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compliance with safety standards related to the use and storage of hazardous materials and with the safety procedures mandated by applicable federal, state, and local laws and regulations.

Compliance with these regulations would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with the proposed Project, and the potential for accident or upset is less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.6.2: Project construction and operations would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. [Thresholds H-3]

The North Fullerton KinderCare is about 0.3 mile south of the Project site. Meanwhile Heights Christen School is approximately 0.3 miles northeast of the project site. Both schools are outside of the one-quarter-mile range, and therefore the Project site is not near an existing or proposed school. Additionally, the proposed Project is not a project type identified by South Coast AQMD as emitting toxic air contaminants.. Therefore, the proposed Project would result in no impact.

Level of Significance Before Mitigation: No Impact.

Impact 5.6-3: The Project site is on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and existing buildings may contain lead-based paint and asbestos-containing materials. [Thresholds H-2 and H-4]

As disclosed in the Phase I ESA, the Project site was identified in the following databases: South Coast AQMD Facility Information Detail (FINDS), Enforcement & Compliance History Information (ECHO), Resource Conservation and Recovery Act Non-Generator/No Longer Regulated (RCRA NonGen/NLR), Underground Storage Tank Facilities (UST), Hazardous Waste Tracking System (HWTs), Hazardous Waste Information System (HAZNET), California Environmental Reporting System (CERS) Tanks, California Integrated Water Quality System (CIWQS), and CERS (see Appendix I1).

Underground Storage Tanks

The Project site currently has two diesel USTs on-site (2,000-gallon and a 3,000-gallon double-walled fiberglass) that were installed in 2001 to power on-site emergency generators. The Phase I ESA concluded that the USTs represent a material threat of a release of hazardous substances and are therefore considered an ASTM recognized environmental condition. ASTM standards are used to determine if there is a presence of hazardous substances or petroleum products (see Appendix I1). Due to this, a limited Phase II ESA was prepared to rule out potential subsurface soil impacts related to the USTs, along with potential vapor intrusion to future on-site occupants (see Appendix I2).

According to the limited Phase II, the Project site has reported concentrations of benzene and PCE that exceed the commercial soil gas screening levels in soil samples taken in close proximity to the two USTs on the Project site.

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Benzene

The elevated benzene concentration was detected adjacent to the UST in the southwest corner of the site. The elevated benzene concentration was only 1.0 µg/m³ above the screening level and would not be in an area directly under planned residential development. Due to the concentration being only slightly above the screening level, the pending removal of the USTs, and the location of planned development, the limited Phase II determined that benzene does not appear to be a potential vapor intrusion concern (see Appendix I2).

PCE

The limited Phase II concluded that the detection of PCE is considered an isolated occurrence in the immediate vicinity of the northern UST location and does not appear to extend to nearby boring locations. The source is likely from the use of a solvent-based cleaner during UST installation or maintenance. The area where PCE was detected would be beneath a proposed road location, not beneath residential structures. Therefore, the Phase II ESA determined that PCE does not appear to be a potential vapor intrusion concern for the proposed Project.

Soil Contamination

No soil contamination was reported in any other samples collected near the two UST locations, indicating the source of the petroleum-related volatile organic compounds in soil vapor are likely from de minimis incidental spillage. Based on the soil samples collected and analyzed, there is no indication of any significant UST leakage or potential threat to groundwater. Removal of the UST would be conducted in accordance with the California UST Regulations (Title 23, Chapter 16 of the California Code of Regulations). Unauthorized release of hazardous materials would require release reporting, initial abatement, and corrective actions that will be completed with oversight from the Regional Water Quality Control Board, Department of Toxic Substances Control, Brea Fire Department, South Coast Air Quality Management District, and/or other regulatory agencies as necessary. Compliance with existing regulations would ensure that impacts from removal of the USTs are reduced to less-than-significant levels.

Lead-Based Paint and Asbestos-Containing Materials

The Phase I ESA noted that based on the age of the subject building, LBP may exist, and ACMs were previously confirmed in carpet mastic (see Appendix I1). Project-related demolition activities that have the potential to expose construction workers and/or the public to ACMs or LBP would be conducted in accordance with applicable regulations, including, but not limited to:

- California Health and Safety Code (Section 39650 et seq.)
- California Code of Regulations (Title 8, Section 1529 [asbestos], Title 8, Section 1532.1 [Lead], and Title 24, Part 9 [California Fire Code])
- California Occupational Safety and Health Administration Regulations (California Code of Regulations, Title 8, Section 1529 [Asbestos] and Section 1532.1 [Lead])

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- Code of Federal Regulations (CFR) (Title 40, Part 61 [asbestos], Title 40, Part 763 [asbestos], and Title 29, Part 1926 [asbestos and lead]).
- South Coast Air Quality Management District Rule 1403

These requirements all serve to limit the environmental impact of the transportation, use, and disposal of ACMs or LBP. However, demolition of the structures may release LBP and ACM, and without implementation of any mitigation measures, impacts are considered potentially significant.

Level of Significance Before Mitigation: Potentially Significant.

Impact 5.6-4: The Project site is not in the vicinity of an airport or within the jurisdiction of an airport land use plan. [Threshold H-5]

The Project site is not within an airport land use plan or within two miles of a public use airport. The nearest public-use airport is the Fullerton Municipal Airport, approximately eight miles southwest of the Project site (AirNav 2024). Therefore, the proposed Project would not result in a safety or noise hazard for people residing at the Project site.

Level of Significance Before Mitigation: No Impact.

Impact 5.6-5: Project construction and operation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. [Threshold H-6]

The addition of Project residents would be expected to increase the volume of vehicles leaving the residential area in the event of an emergency, which could impede emergency vehicles from attempting to get into the residential development. This issue is also discussed in Section 5.12, *Transportation*, and Section 8.6, *Wildfire*.

While the City of Brea has an adopted EOP, the EOP does not provide specific procedures for evacuation events or designate evacuation routes throughout the City because the details for specific evacuation events would vary depending on the location, magnitude, and nature of the emergency. Therefore, this analysis focuses on whether construction or operation of the proposed Project could generally interfere with or impede safe and orderly evacuation in the City.

As identified in Section 8.6, *Wildfire*, Carbon Canyon Road and State Route 57 (SR-57) are critical evacuation routes in Brea. The proposed Project is bounded by SR-57 but would not hinder access to the designated access route. Although the proposed Project would require circulation improvements to nearby roadways, as discussed in Section 5.12, *Transportation*, such impacts would be temporary, would not create a hazard, and would not significantly impact circulation and emergency routes. Additionally, the proposed Project's construction and staging would be within the boundaries of the Project site and not impact access to the designated evacuation route (SR-57).

The surrounding roadways would continue to provide emergency access to the Project site and surrounding properties during construction and postconstruction. The proposed Project would comply with zoning,

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building, and fire codes, and the Project applicant is required to submit appropriate plans for plan review prior to issuance of a building permit. Adherence to these requirements would ensure that the proposed Project would not have a significant impact on emergency response and evacuation plans. Impacts are less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.6-6: Project construction and operations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. [Threshold H-7]

The Project site is in a highly urbanized, built-out portion of the City of Brea. According to the California Department of Forestry and Fire Protection, the Project site is not within a Very High Fire Hazard Severity Zone (CAL FIRE 2024). No impact would occur.

Level of Significance Before Mitigation: No Impact.

5.6.5 Cumulative Impacts

The area considered for cumulative impacts is Orange County, the service area for OCEHD, the affected CUPA. The population of Orange County is forecast to increase from about 3.19 million in 2019 to 3.44 million in 2050, and employment in the county is forecast to increase from 1.8 million to 2.02 million over the same period (SCAG 2024). Other projects would use, store, transport, and dispose of increased amounts of hazardous materials and thus could pose substantial risks to the public and the environment. The use, storage, transport, and disposal of hazardous materials by other projects would conform with regulations of the multiple agencies described in Section 5.6.4. Cumulative impacts would be less than significant after compliance with such regulations, and Project impacts would not be cumulatively considerable.

5.6.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.6-1, 5.6-2, 5.6-4, 5.6-5, and 5.6-6.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.6-3** Existing buildings may contain lead-based paint and asbestos-containing materials that, when demolished, could release of hazardous materials into the environment.

5.6.7 Mitigation Measures

Impact 5.6-3

HAZ-1 Lead-Based Paint and Asbestos-Containing Materials. Prior to issuance of demolition permits, the Project applicant shall conduct asbestos-containing material (ACM) and Lead Based Paint (LBP) surveys. The ACM and LBP surveys shall be conducted in accordance with

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EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) and South Coast Air Quality Management District (South Coast AQMD) rules. The results of the survey shall be submitted to the City prior to issuance of a demolition permit. If ACMs or LBPs are identified during the field surveys, an Operations and Maintenance (O&M) plan shall be implemented during the construction phase.

- The ACM O&M plan shall be prepared by the Project applicant in line with the California Code of Regulations Title 8, Section 1529.
- The LPB O&M plan shall be prepared by the Project applicant in line with the California Code of Regulations Title 8, Section 1532.1.

5.6.8 Level of Significance After Mitigation

Impact 5.6-3

Implementation of Mitigation Measure HAZ-1 requires ACM and LBP surveys to identify if an Operations and Maintenance (O&M) plan shall be completed for the Project site. The primary objective of the Asbestos O&M plan is to control building occupant exposure to asbestos fibers and lead. The procedures in the plan shall minimize any potential hazard posed by ACM and LBP or presumed ACM and LBP during cleaning, maintenance, and general operation activities. The presence of LBP and ACM would be reduced after implementation of HAZ-1. Therefore, during demolition the proposed Project would not expose people to LBP and ACM., and Impact 5.6-3 would be less than significant with mitigation.

5.6.9 References

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5.7 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to land use in the City of Brea from implementation of the Greenbriar Residential Development Project (proposed Project). Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY BACKGROUND

Regional Regulations

Southern California Association of Governments

Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives. The plans most applicable to the proposed Project are discussed below.

Regional Transportation Plan/Sustainable Communities Strategy

SCAG's Regional Council adopted the 2024-2050 Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS) (RTP/SCS) on April 4, 2024. The RTP/SCS was adopted as part of SCAG's planning obligations. While the RTP/SCS remains focused on its core responsibilities, and on the requirements of comprehensive regional transportation planning integrated with the development of a Sustainable Communities Strategies, it also encompasses a holistic approach to programs and strategies that support the success of the RTP, such as workforce development, broadband, and mobility hubs. The 2024-2050 RTP/SCS aims to address regional challenges in the areas of the environment, economy, communities (housing and essential services), and mobility (SCAG 2024).

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Local Regulations

City of Brea General Plan

The State of California mandates that every city adopt a comprehensive long-range plan that guides physical development and regulates land use. The 2003 City of Brea General Plan addresses the City's vision for and growth into the future. The General Plan guides future decision-making about development, resource management, public safety, and community well-being. The City is in the process of updating their general plan with an anticipated adoption of spring 2026.

Existing City of Brea General Plan Designations

The Project site currently has a General Plan land use designation of General Commercial (GC) (see Figure 4-1, *Existing General Plan Land Use* and Figure 4-2, *Existing Zoning Designation* in Chapter 4, *Environmental Setting*).

The General Commercial designation creates areas with a broad range of retail, office, and service-oriented business activities. Business should be intended to serve a community-wide area and population. Public and private hiking trails and related facilities can be established within the General Commercial designation (described in Brea's General Plan p. 2-14).

Goals and Policies

Four overarching goals guide Brea's General Plan:

- **Goal 1:** Create an inclusive community that strives to meet the needs of residents of all ages, income levels, occupations, family types, and lifestyles.
- **Goal 2:** Plan for the sustainable stewardship of natural resources.
- **Goal 3:** Provide a range of mobility options that reduce dependence on the automobile.
- **Goal 4:** Maintain a sustainable economic base to provide a solid fiscal foundation and diverse employment opportunities, and to ensure the provision of quality community facilities and services.

To implement these goals, the General Plan has five chapters, or elements: Community Development, Housing, Community Resources, Community Services, and Public Safety. These elements conform to the State's mandated elements.

Community Development Element

The land use section of the Community Development Element defines the distribution of land uses and the intensity of development. It provides goals and policies that are used to guide implementation of land use objectives that provide for the present and future population.

- **Policy CD-1.1.** Create neighborhoods that effectively integrate single-family and multi-family housing with convenience and neighborhood shopping centers, park and recreation areas, and other uses appropriate for the neighborhoods

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- **Policy CD-1.2.** Maintain a land use structure that balances the provision of jobs and housing with available infrastructure and public and human services.
- **Policy CD-1.4.** Ensure that the City maintains a balance among residential, commercial, and industrial land uses.
- **Policy CD-1.5.** Provide opportunities for development of housing that responds to diverse community needs in terms of density, size, location, design, and cost.
- **Policy CD-1.9.** Encourage new development that is organized around compact, walkable, mixed-use neighborhoods and districts to conserve open space resources, minimize infrastructure costs, and reduce reliance on the automobile.
- **Policy CD-1.10.** Preserve open space wherever possible, especially in hillside areas.
- **Policy CD-1.15.** Strongly encourage the master planning of any large contiguous land holdings.
- **Policy CD-9.2.** Accommodate emerging housing trends, and encourage pedestrian linkage to surrounding neighborhoods and activity centers.
- **Policy CD-9.3.** Encourage the establishment of community recreation and park facilities in the area.
- **Policy CD-9.4.** Support efforts to establish quality, community institutions in the area.
- **Policy CD-9.5.** Provide quality, affordable housing that would accommodate young families, college students, and educators.
- **Policy CD-9.6.** Preserve open space within this area, and provide outdoor recreation facilities.
- **Policy CD-9.7.** Strongly encourage the master planning of any large contiguous land holdings in this area.
- **Policy CD-27.4.** Explore infill development opportunities wherever possible as open space becomes more limited

Housing Element

The Housing Element identifies strategies and programs that focus on the conservation and improvement of existing affordable housing; the provisions of adequate housing sites; assistance in the development of affordable housing; removal of governmental and other constraints to housing development; promotion of equal housing opportunities; and promotion of sustainability and energy efficiency.

- **Policy 2.1 Financial Resources.** Pursue expanded financial resources to support in the production of housing affordable to Brea's workforce, disadvantaged communities, and special needs populations.

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- **Policy 2.2 Mixed Income Housing.** Utilize the City's Inclusionary Housing Ordinance as a tool to integrate affordable units within market rate developments, or pay an in-lieu fee to support the provision of affordable housing.
- **Policy 2.3 Homeownership Assistance.** Encourage the provision of financial assistance to low and moderate first-time homebuyers through County and State programs.
- **Policy 2.4 Housing for Workforce.** Promote the City's Affordable Housing Programs with employers in Brea.
- **Policy 2.5 Public/Private Partnerships.** Explore collaborative partnerships with major employers, educational institutions, non-profit organizations, and others in the provision of affordable, workforce and special needs housing.
- **Policy 3.1 Variety of Housing Choices.** Provide site opportunities for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit that promote walkability.
- **Policy 3.2 Housing in Brea Core.** Provide opportunities for mixed use and infill housing development opportunities in the Brea Core as part of the City's ongoing revitalization strategy for the area.
- **Policy 3.3 Residential Mixed Use.** Promote the efficient use of land by encouraging commercial and residential uses on the same property in both horizontal and vertical mixed-use configurations. Prohibit 100 percent commercial projects on sites in the Housing Element sites inventory.
- **Policy 3.4 Housing on Existing Commercial Sites.** Explore opportunities to integrate housing in underutilized commercial centers, and to reuse excess or obsolete commercial buildings for housing.
- **Policy 6.6 Jobs/Housing Balance.** Encourage a closer link between housing and jobs in the community, including housing opportunities affordable to Brea's modest income workforce.

City of Brea Municipal Code

The City of Brea Zoning Ordinance, Title 20 of the Brea Municipal Code, is designed to encourage the most appropriate use of land and to facilitate adequate provision for community facilities and utilities. Section 20.04.010 of the Municipal Code establishes zones for allowable uses. The Project site is currently zoned C-G General Commercial (see Figure 4-1, *Existing General Plan Land Use* and Figure 4-2, *Existing Zoning Designation* in Chapter 4, *Environmental Setting*).

Chapter 20.236, C-G General Commercial Zone, indicates that the purpose of the C-G zone is to provide for the development of general commercial and highway-related uses.

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5.7.1.2 EXISTING CONDITIONS

The Project site is bounded by State Route 57 (SR-57) to the west, residential uses and the Brea Glenbrook Club and Greenbriar Park along Greenbriar Lane to the north, residential uses separated by Fullerton Creek drainage channel and South Associated Road to the east, and the Brea Plaza Shopping Center to the south. The Project site is developed with a 164,908-square-foot office building that has been vacant since the COVID-19 pandemic but had previously been in operation since 1976. Other structures on the Project site include a three-story parking structure serving both the office building and the adjacent Brea Plaza Shopping Center. The Project site is accessible via Greenbriar Lane for the eastern parking lot and South Associated Road for the southern parking lot and parking structure via the Brea Plaza Shopping Center. Historically, office workers at Mercury Insurance building could access the Project site via Imperial Highway through Brea Plaza site. However, due to construction at the northwestern portion of Brea Plaza, access is limited.

5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- LU-1 Physically divide an established community.
- LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

5.7.3 Plans, Programs, and Policies

There are no existing plans, programs, and policies applicable to the proposed Project.

5.7.4 Environmental Impacts

Impact 5.7-1: Project implementation would not divide an established community. [Threshold LU-1]

The Project site encompasses a vacant office building and parking structure. There is no established community within the Project site, and various land uses surround the Project site, such as residential and commercial. The proposed Project would not physically divide an established community, and no impact would occur.

Level of Significance Before Mitigation: Impact 5.7-1 would have no impact.

Impact 5.7-2: Project Implementation would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]

This section discusses the proposed Project's consistency with applicable regional and local plans that are adopted for the purpose of avoiding or mitigating a physical impact on the environment.

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General Plan and Zoning

The General Plan land use designation for the site is General Commercial, which is intended to create areas with a broad range of retail, office, and service-oriented business activities. The proposed Project would result in a change to the Mixed-Use II (MU-II) designation, providing opportunities for coordinated development of urban villages that offer a diverse range of complementary land uses in close proximity to one another. Redesignation of the Project site from General Commercial to MU-II would not result in physical impacts on the environment.

- **Project Density.** The residential density range for development in the MU-II zone is 6.1 to 40 units per acre, and the maximum allowed floor area ratio (FAR) is 2.00. The average project density on the 9.7-acre Project site is 18.4 units per acre, which would be within the residential density range for development in the MU-II.
- **Project Height.** The proposed Project would not conflict with the MU-II zone's maximum height restriction of 60 feet—the highest point of the tallest residential buildings, the Villas, would be 48 feet and 11 inches tall. The proposed Project would place residential development near existing nonresidential development, which would be consistent with the purpose of the MU-II zoning designation, that is, creating urban villages, placing land uses close to one another, and creating pedestrian linkages.
- **Open Space Requirements.** Development in the MU-II zone is required to provide a minimum of 75 square feet per dwelling unit of common residential open space and a minimum of 50 square feet per dwelling unit of private open space. The proposed Project would include 104,785 square feet of common open space landscape area and 35,423 square feet of common hardscape area. Therefore, the proposed Project would meet the open space requirements of the MU-II zone.

Furthermore, the proposed Project would be consistent with the Brea General Plan policies regarding mixed-use and infill projects. For example, Policy CD-27.4 directs the City to explore infill development opportunities wherever possible as open space becomes more limited. The proposed Project would replace a vacant office building with residential development and would not replace open space in the City. In addition, Policies CD-1.2 and HE-6.6 call for a balance between the provision of jobs and housing as well as a closer link between housing and jobs, and the Project would include employment and residential uses in an area surrounded by commercial, institutional, and residential uses. The proposed Project would also be consistent with Policy HE-3.3, which calls for the efficient use of land by encouraging commercial and residential uses on the same property, and with Policy 3.4, which encourages opportunities to integrate housing in underutilized commercial centers and to reuse excess or obsolete commercial buildings for housing. Although the proposed Project would provide entirely residential development, it would place housing near existing nonresidential development.

Policies CD-1.7, CD-4.5, and HE-6.4 call for creating large interactive open and public spaces and pedestrian access that serve the entire community and promote healthy living and physical activity, and the proposed Project would include open space and a passive park. The Project would also improve pedestrian connectivity to allow pedestrian connections to the Brea Plaza to the south and Greenbriar Park to the northeast of the

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Project site. This would be consistent with Policy CD-1.9, which encourages new development that is organized around compact, walkable, mixed-use neighborhoods and districts to conserve open space resources, minimize infrastructure costs, and reduce reliance on the automobile.

The proposed Project would be consistent with the policies of the General Plan. The proposed Project would not conflict with policies adopted to mitigate an environmental effect, and impacts are less than significant.

2024–2050 RTP/SCS: Connect SoCal

Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Table 5.7-1, *SCAG's Connect SoCal Consistency Analysis*, evaluates the proposed Project's consistency with applicable RTP/SCS goals and subgoals. The proposed Project would redevelop the underutilized site with housing that would provide new types of housing necessary to accommodate the demographic shifts in the City. Therefore, from a planning perspective, the proposed Project is slightly favorable, as it would provide housing units in proximity to commercial uses and employment opportunities.

Table 5.7-1 SCAG's Connect SoCal Consistency Analysis

Goals	Consistency Analysis
Mobility: Build and maintain an integrated multimodal transportation network	
Subgoal #1: Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions	Consistent. The proposed Project would redevelop the underutilized site with housing, which would provide new types of housing necessary to accommodate the demographic shifts in the City. The proposed Project would provide housing units in proximity to commercial uses and employment opportunities (see Section 5.8, <i>Population and Housing</i>). As described in Section 5.2, <i>Air Quality</i> , Section 5.4, <i>Energy</i> , and Section 5.5, <i>Greenhouse Gas Emissions</i> , the proposed Project would generate less energy use than the current vacant office building. Additionally, new residential structures would include solar panels that would help offset energy demand.
Subgoal #2: Ensure that reliable, accessible, affordable and appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities	Consistent. The proposed Project would enhance pedestrian connections from the Project site to the Brea Plaza Shopping Center. Figure 3-11, <i>Pedestrian Connectivity</i> , shows the pedestrian paths and crossings within the Project site.
Subgoal #3: Support planning for people of all ages, abilities and backgrounds	Consistent. Refer to the discussion in Subgoals #1 and #2 above. The proposed Project would redevelop the underutilized site with housing, which would provide new types of housing necessary to accommodate the demographic shifts in the City. The proposed Project would also enhance pedestrian connections from the Project site to the Brea Plaza Shopping Center.
Communities: Develop, connect and sustain livable and thriving communities	
Subgoal #1: Create human-centered communities in urban, suburban, and rural settings to increase mobility options and reduce travel distances	Consistent. As described in Section 5.12, <i>Transportation</i> , the proposed Project would result in a decrease in trips and VMT compared to the Project site's former use as an office building. The proposed Project would provide housing units close to commercial uses and employment opportunities (see Section 5.8, <i>Population and Housing</i>).

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Table 5.7-1 SCAG's Connect SoCal Consistency Analysis

Goals	Consistency Analysis
Subgoal #2: Produce and preserve diverse housing types in an effort to improve affordability, accessibility and opportunities for all households	Consistent. The proposed Project would replace a vacant office building with a residential development, increasing the City's housing supply, offering higher-density housing, and providing diverse housing options.
Environment: Create a healthy region for the people of today and tomorrow	
Subgoal #1: Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change	Consistent. The proposed Project is not within a Very High Fire Hazards Severity Zone (VHFHSZ) or Flood Zone. The proposed Project would be constructed to achieve the current California Building Energy Standards Code and meet the requirements of CALGreen. Additionally, the proposed Project includes design features (e.g., solar panels) and Mitigation Measure GHG-1 to ensure that the proposed Project would not hinder the ability to meet California's carbon neutrality goals.
Subgoal #2: Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions, and enable more sustainable use of energy and water	Consistent. Refer to the discussion in Subgoal #1 above regarding transportation network. As described in Section 5.12, <i>Transportation</i> , the proposed Project would result in a decrease in trips and VMT compared to the Project site's former use as an office building. As described in Section 5.2, Air Quality, Section 5.4, Energy, and Section 5.5, <i>Greenhouse Gas Emissions</i> , the proposed Project would generate less energy use than the current vacant office building. Additionally, new residential structures would include solar panels that would help offset energy demand. As described in Section 5.14, <i>Utilities and Service Systems</i> , the proposed Project would be planted with drought tolerant landscape, in accordance with Brea's Water Efficient Landscape Ordinance.
Subgoal #3: Conserve the region's resources	Consistent. The proposed Project is an infill project in an urban area. Therefore, the proposed Project would not warrant substantial infrastructure needs that a green-field development may require. The proposed Project would be constructed to achieve the current California Building Energy Standards Code and meet the requirements of CALGreen. Additionally, the proposed Project includes design features (e.g., solar panels) and Mitigation Measure GHG-1 to ensure that the proposed Project would not hinder the ability to meet California's carbon neutrality goals.
Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all people in the region	
Subgoal #1: Improve access to jobs and educational resources	Not Applicable. The proposed project is a residential project and not a commercial project. However, the proposed Project would contribute to a sustainable economic base by providing short-term construction jobs during the buildout of the proposed Project. The proposed Project would create residential units near the Brea Plaza Shopping Center.
Subgoal #2: Advance a resilient and efficient goods movement system that supports the economic vitality of the region, attainment of clean air and quality of life for our communities	Not Applicable. The proposed project is a residential project and not a commercial project. There are existing commercial uses south of the Project site. The proposed Project would provide housing units in proximity to commercial uses and employment opportunities (see Section 5.8, <i>Population and Housing</i>).
Source: SCAG 2024.	

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Conclusion

As discussed under Impact 5.7-2, the proposed Project would be consistent with goals and policies of the City's General Plan and SCAG's RTP/SCS.

Level of Significance Before Mitigation: Less Than Significant.

5.7.5 Cumulative Impacts

The proposed Project involves an amendment to the General Plan land use designations and zoning classifications for the Project site, but as demonstrated in Impact 5.7-2, the proposed Project would not conflict with policies adopted to mitigate an environmental effect. Other development projects in the City are also required to demonstrate consistency with the City's General Plan and other applicable policies and regulations governing land use prior to approval. The proposed Project would redevelop the underutilized site with housing that would provide new types of housing necessary to accommodate the demographic shifts in the City. Therefore, from a planning perspective, the proposed Project results in a favorable impact, as it would provide housing units in proximity to commercial uses and employment opportunities (see Section 5.8, *Population and Housing*). Implementation of cumulative development, when combined with the proposed Project, would not result in cumulatively considerable land use impacts.

5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.7-1 and 5.7-2.

5.7.7 Mitigation Measures

No mitigation measures are required.

5.7.8 Level of Significance After Mitigation

Impacts are less than significant prior to mitigation. Therefore, no significant unavoidable adverse impacts relating to land use remain.

5.7.9 References

Brea, City of. 2003. General Plan. <https://www.ci.brea.ca.us/179/General-Plan>.

———. 2024, September 6 (accessed). Interactive Brea Zoning and Land Use. <https://brea.maps.arcgis.com/apps/webappviewer/index.html?id=d45bc07b4dc74935827c9c0b2d11de31>.

Southern California Association of Governments (SCAG). 2024, April 4. *Connect SoCal 2024 Plan*. <https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf?1714175547>

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5.8 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Greenbriar Residential Project to result in noise and vibration impacts to sensitive receptors in the vicinity of the Project. This chapter describes the fundamentals of sound, regulatory framework, existing noise conditions, identifies criteria used to determine impact significance, and identifies noise and vibration mitigation measures for potentially significant impacts. Noise modeling data is included as Appendix D to this Draft EIR.

5.8.1 Environmental Setting

5.8.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” The following are brief definitions of terminology used in this section:

Technical Terminology

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L_{90} is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

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- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 pm to 7:00 am.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second (1×10^{-6} in/sec).

Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment, and a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Sound Measurement

Sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear’s de-emphasis of these frequencies.

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Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as “spreading loss.” For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L50 noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L2, L8, and L25 values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These “L” values are typically used to demonstrate compliance for stationary noise sources with a City’s noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (Ldn). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 pm to 10:00 pm and 10 dBA for the hours from 10:00 pm to 7:00 am. The Ldn descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 pm and 10:00 pm. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling

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sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. Table 5.8-1, *Typical Noise Levels*, shows typical noise levels from familiar noise sources.

Table 5.8-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2013.

Vibration Fundamentals

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard. Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal, and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, and RMS (typically expressed in VdB) for potential annoyance. The units for PPV are normally inches per second (in/sec). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

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The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

5.8.1.2 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, and municipalities in the state have established standards and ordinances to control noise.

Federal

The Federal Transit Administration (FTA) has identified construction noise thresholds in the *Transit Noise and Vibration Impact Assessment Manual*, which limit daytime construction noise to 80 dBA L_{eq} , 8-hour, at residential land uses and to 90 dBA L_{eq} , 8-hour, at commercial and industrial land uses. The FTA also provides damage criteria during construction vibration exposure. The criteria is summarized in Table 5.8-2, *Construction Vibration Damage Criteria*.

Table 5.8-2 Construction Vibration Damage Criteria

Building/Structural Category	PPV (in/sec)	Approximate L_v ¹
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Note:

¹. Root-mean square velocity in decibels, VdB re 1 micro-in/sec

Source: FTA 2018

State

General Plan Guidelines

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. Local municipalities adopt these compatibility standards as part of their General Plan and modify them as appropriate for their local environmental setting. The City of Brea standards are discussed below.

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California Building Code

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

Residential structures within the noise contours identified above require an acoustical analysis showing that the structure has been designed to limit intruding noise to the prescribed allowable levels. To comply with these regulations, applicants of new residential projects are required to submit an acoustical report in areas where noise and land use compatibility are a concern. The report is required to analyze exterior noise sources affecting the proposed dwelling site, predicted noise spectra at the exterior of the proposed dwelling structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met. If interior allowable noise levels are met by requiring that windows be inoperable or closed, the design for the structure must also specify the means that will be employed to provide ventilation and cooling, if necessary, to provide a habitable interior environment.

The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq}(1hr)$.

Local Noise Standards

City of Brea General Plan

The Public Safety Chapter of the City of Brea General Plan includes noise and vibration goals and policies that aim to minimize the impact of noise sources found in the City. The relevant noise goals and policies are listed below.

Goal PS-9: Minimize the impact of point source noise and ambient noise levels throughout the community.

- **Policy PS-9.1.** Evaluate the need to require acoustical studies for development proposals that address both direct and indirect, particularly traffic, noise impacts and require such studies, with appropriate mitigation included as warranted.

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- **Policy PS-9.3.** Ensure that acceptable noise levels are maintained near schools, hospitals, convalescent homes, and other noise sensitive areas in accordance with the City's Municipal Code and noise standards contained in the General Plan.
- **Policy PS-9.4.** Employ creative methods of reducing noise pollution in the City.

Goal PS-2: Minimize the impacts of transportation-related noise.

- **Policy PS-2.1.** Reduce transportation noise by imposing traffic restrictions where necessary.

Goal PS-3: Minimize noise impacts from sources other than transportation.

- **Policy PS-3.1.** Require the inclusion of noise mitigation measures, techniques, and design features in the planning, design, and construction of future development and redevelopment projects.
- **Policy PS-3.2.** Require that mixed-use structures be designed to prevent transfer of noise and vibration from commercial/retail to residential use.
- **Policy PS-3.3.** Minimize stationary noise sources and noise emanating from construction activities and special events.

The City of Brea's primary goal is to minimize the exposure of residents to unhealthy and excessive noise levels. The City has adopted noise and land use compatibility guidelines, shown in Table 5.8-3, *Community Noise and Land Use Compatibility: City of Brea*.

Table 5.8-3 Community Noise and Land Use Compatibility: City of Brea

Land Uses	CNEL or Ldn (dBA)					
	55	60	65	70	75	80
Residential-Low Density Single Family, Duplex, Mobile Homes						
Residential- Multiple Family						
Transient Lodging: Hotels and Motels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						

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Table 5.8-3 Community Noise and Land Use Compatibility: City of Brea

Land Uses		CNEL or Ldn (dBA)					
		55	60	65	70	75	80
Playground, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Businesses, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agricultural							
Explanatory Notes							
	Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction, without any special noise insulation requirements			Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.			
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.			Clearly Unacceptable: New construction or development should generally not be undertaken.			
Source: Brea 2003.							

City of Brea Municipal Code

Stationary Noise

Chapter 8.20, Noise Control, provides exterior standards for all Zone 1 (entire territory of the City of Brea) residential properties. Table 5.8-4, *City of Brea Exterior Noise Standards*, summarizes allowable noise levels at the receiving property lines of residences. Per Section 8.20.090, the noise standards also apply to schools, hospitals, and churches while they are in use.

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Table 5.8-4 City of Brea Exterior Noise Standards

Zone 1	Time Period	Exterior Noise Level, dBA				
		L ₅₀ ¹	L ₂₅ ²	L ₈ ³	L ₂ ⁴	L _{max} ⁵
Residential Daytime	7:00 am to 10:00 pm	55	60	65	70	75
Residential Nighttime	10:00 pm to 7:00 am	50	55	60	65	70

Source: City of Brea Municipal Code, Section 8.20.050 Exterior Noise Standards

Notes: A 5 dBA penalty shall be applied in the event of an alleged offensive noise such as impact noise, simple tones, speech, music, or any combination of thereof.

The standards are based on the following:

- ¹ The noise standard for a cumulative period of more than 30 minutes in any hour; or
- ² The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
- ³ The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour; or
- ⁴ The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour; or
- ⁵ The noise standard plus 20 dBA for any period of time.

Construction

Under Section 8.20.070, Special Provisions, the following are exempt from the provisions of the Municipal Code:

- Noise associated with construction, repair, remodeling, or grading of any real property is exempt from the provisions of the Municipal Code, provided said activities do not take place between the hours of 7:00 pm and 7:00 am on weekdays, including Saturday, or any time on Sunday or a federal holiday.

Vibration

Per Section 20.20.040, ground vibration is limited to no greater than 0.003 inches/second (in/sec) at receiving sensitive properties. This criterion is equivalent to approximately 70 VdB (root-mean-square vibration decibel level).

5.8.1.3 EXISTING CONDITIONS

The existing noise environment is characterized by traffic noise. The Project site is bounded by State Route 57 (SR-57) to the west and South Associated Road to the east. The Project site is adjacent to and north of the Brea Plaza Shopping Center. Single-family homes and Brea Glenbrook Club are to the north. East of the Project site, across South Associated Road, are additional single-family homes. According to the Brea General Plan Future Noise Contours, the Project site is within the 60 to 65 dBA and 65 to 70 dBA CNEL traffic noise contours.

Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals, are particularly sensitive to noise and vibration. Sensitive noise receptors include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, working from home, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise. However, nonresidential structures are still analyzed for potential vibration impacts, such as architectural

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damage to a structure due to construction or demolition activities in close proximity. The nearest noise-sensitive receptors to the Project are the single-family homes and Greenbriar Park to the north and northeast along Greenbriar Lane and single-family homes to the east across South Associated Road. The nearest off-site structure that could be susceptible to potential vibration damage is the Mercury Insurance building north of the Project.

Ambient Noise Monitoring

Four short-term (15-minute) measurement locations were selected and conducted around the Project site. All measurements were conducted Friday, August 9, 2024. The short-term sound level meter used (Larson Davis LxT) for noise monitoring satisfies the American National Standards Institute (ANSI) standard for Type 1 instrumentation. The short-term sound level meter was set to “slow” response and “A” weighting (dBA). The meter was calibrated prior to and after each monitoring period. All measurements were at least 5 feet above the ground and away from reflective surfaces. Temperatures were moderate, approximately 88 degrees Fahrenheit, wind speeds of 10 miles per hour, and 39 percent relative humidity during the noise measurements. Short-term measurement locations are described below and shown on Figure 5.8-1, *Approximate Noise Monitoring Locations*; the results are summarized in Table 5.8-5, *Short-Term Noise Measurements Summary in A-Weighted Sound Levels*.

Table 5.8-5 Short-Term Noise Measurements Summary in A-Weighted Sound Levels

Monitoring Location	Description	15-minute Noise Level, dBA						
		Leq	L _{max}	L _{min}	L50	L25	L8	L2
ST-1	Adjacent to SR-57 next to the front yard of the residence at 1605 Greenbriar Lane 8/9/24, 3:15 PM	65.2	69.9	60.8	65.0	65.8	66.8	67.9
ST-2	Parking lot of the Project site, across from the Brea Glenbrook Club, located at 1821 8/9/24, 2:23 PM	54.0	65.5	50.4	53.2	54.3	55.9	58.2
ST-3	East of existing parking structure along South Associated Road 8/9/24, 2:48 PM	56.5	63.1	52.3	55.9	57.2	58.7	60.7
ST-4	Southern Project boundary, adjacent to Brea Plaza Shopping Center loading docks. 8/9/24, 2:00 PM	58.3	69.3	53.7	56.8	58.1	60.5	64.9

Source: See Appendix D.

- **Short-Term Location 1 (ST-1)** was adjacent to SR-57 next to the front yard of the residence at 1605 Greenbriar Lane. The location was approximately 195 feet east of the SR-57 centerline. There is an existing SR-57 soundwall at approximately 15 feet 8 inches tall. A 15-minute noise measurement began at 3:15 pm on Friday, August 9, 2024. The noise environment is characterized by traffic noise on SR-57 and Greenbriar Lane. Noise levels measured 65.2 dBA Leq and 69.9 dBA L_{max} during the measurement period at ST-1.

Figure 5.8-1 - Approximate Noise Monitoring Locations



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- **Short-Term Location 2 (ST-2)** was in parking lot of the Project site, across from the Brea Glenbrook Club, located at 1821 Greenbriar Lane. A 15-minute noise measurement began at 2:23 pm on Friday, August 9, 2024. The noise environment is characterized primarily by residential activity, people talking, kids playing, and distant highway noise. Noise levels measured 54.0 dBA Leq and 65.5 dBA L_{max} during the measurement period at ST-2.
- **Short-Term Location 3 (ST-3)** was east of the exiting parking structure, approximately 205 feet northwest of South Associated Road. A 15-minute noise measurement began at 2:48 pm on Friday, August 9, 2024. The noise environment is characterized primarily by traffic noise on South Associated Road, noise related to the Fullerton Creek drainage canal, animals and birds. Noise levels measured 56.5 dBA Leq and 63.1 dBA L_{max} during the measurement period at ST-3.
- **Short-Term Location 4 (ST-4)** was in the parking area at the southern Project property line, adjacent to the loading dock areas of the Brea Plaza Shopping Center. A 15-minute noise measurement began at 2:00 pm on Friday, August 9, 2024. The noise environment is characterized primarily by construction activity in the vicinity and vehicle pass-bys within the shopping center. No loading dock activity was observed during the noise measurement period. Noise levels measured 56.5 dBA Leq and 63.1 dBA L_{max} during the measurement period at ST-4.

5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

- N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- N-2 Generation of excessive groundborne vibration or groundborne noise levels.
- N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

5.8.2.1 CONSTRUCTION NOISE THRESHOLDS

The City of Brea has established acceptable construction activity hours in Section 8.20.070 of the Municipal Code, provided construction, repair, remodeling, or grading of any real property does not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday. However, the City does not have an established numerical noise limit for construction noise impact assessment. Therefore, this noise impact analysis follows the most reasonable thresholds to determine construction noise impacts, which are the thresholds in the Federal Transportation Administration's (FTA) Transit Noise and Vibration Assessment Manual. Additionally, a discussion of the City of Los Angeles CEQA guidance is provided below to substantiate use of the FTA absolute noise exposure level over an extended

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period for evaluating potential noise impacts during daytime hours, as this metric better reflects potential health impacts due to construction noise.

FTA Construction Noise Assessment Guidelines

Table 5.8-6, *FTA Construction Noise Assessment Guidelines*, summarizes the suggested noise impact criteria for construction activities. As shown in the table, the FTA recommends an 8-hour average noise limit of 80 dBA L_{eq} at property lines of residential noise-sensitive receptors during the daytime. A significant impact would occur if construction noise exceeds the thresholds in the table.

Table 5.8-6 FTA Construction Noise Assessment Guidelines

Land Use	8-Hour L_{eq} (dBA)		30-Day Average Ldn (dBA)
	Day	Night	
Residential	80	70	75 ¹
Commercial	85	85	80 ²
Industrial	90	90	85 ²

Source: FTA 2018

Notes: "Daytime" is defined as 7 am to 10 pm and "Nighttime" is defined as 10 pm to 7 am.

dBA=velocity in decibels; L_{eq} =equivalent noise level; Ldn=day night average sound level

¹ In urban areas with very high ambient noise levels (Ldn greater than 65 dB), Ldn from construction operations should not exceed existing ambient + 10 dB.

² 24-hour L_{eq} , not Ldn.

The City of Los Angeles Construction Noise Criteria

Since there are no measurable construction noise level limits set by the City of Brea, thresholds from adjacent municipalities were reviewed. The City of Los Angeles recently proposed an update to its guidance, in accordance with CEQA, for assessing impacts from construction noise and vibration to account for reasonable expectations regarding construction noise and vibration during daytime and nighttime hours, and also include absolute maximum noise levels to protect human health. See Appendix D for the Los Angeles City Planning Fact Sheet.

Daytime Construction. Construction activities between 7 am and 7 pm Monday through Friday and between 8 am and 6 pm on Saturdays would be limited to a maximum noise level of 80 dBA L_{eq} , 8-hour at sensitive uses (at the property line with outdoor uses or at the exterior of the building), including outdoor public recreational areas. This threshold is based on the recommended criteria in the FTA Manual.

Nighttime Construction. For construction activities between 7 pm and 7 am Monday through Friday, between 6 pm and 8 am on Saturdays, and anytime on Sundays or national holidays, noise levels at sensitive uses would not exceed 5 dBA above the ambient noise level at the receptor. Mat pour activities (and other types of concrete pour, which require an extended continuous pour beyond the allowable construction hours) that are required to occur during nighttime hours for less than five days are exempt from this provision.

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Nighttime-Absolute Noise

- Maximum 55 dBA Leq (Equivalent Continuous Sound Pressure Level) for sensitive uses within older buildings that would have operable windows that may be open;
- Maximum 65 dBA Leq for sensitive uses with windows closed that are not operable and are single-glazed;
- Maximum 70 dBA Leq for sensitive uses that have newer construction (i.e., the structures have been designed to ensure that an interior 45 dBA is obtained with double-paned windows). Certain mat pour activities are exempt from this provision.

5.8.2.2 TRANSPORTATION NOISE THRESHOLDS

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Note that a doubling of traffic flows (e.g., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dBA CNEL increase in traffic-generated noise levels. Based on this, the following thresholds of significance, similar to those recommended by the Federal Aviation Administration, are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increase would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher;
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL; or
- 5 dBA in ambient noise environments of less than 60 dBA CNEL.

5.8.2.3 STATIONARY NOISE THRESHOLDS

As discussed above in Section 5.8.1.2, *Regulatory Background*, the City's noise ordinance establishes exterior noise standards at receiving residential Zone I property lines as well as schools, hospitals, and churches. These standards are used to determine impact significance.

5.8.2.4 VIBRATION THRESHOLDS

Vibration Annoyance

The City of Brea establishes a threshold of 0.003 in/sec (70 VdB) for vibration at the sensitive receptor property line, which is used to determine impact significance.

Architectural Damage

The City of Brea does not have specific limits for vibration-induced architectural damage related to construction activities. The FTA provides criteria for acceptable levels of groundborne vibration for various

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types of buildings, and the FTA criteria are used in this analysis. Table 5.8-7, *Groundborne Vibration Criteria: Architectural Damage*, summarizes the thresholds.

Table 5.8-7 Groundborne Vibration Criteria: Architectural Damage

Building Category		PPV (in/sec)
I.	Reinforced concrete, steel, or timber (no plaster)	0.5
II.	Engineered concrete and masonry (no plaster)	0.3
III.	Nonengineered timber and masonry buildings	0.2
IV.	Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018.
PPV = peak particle velocity

5.8.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for transportation and traffic noise impacts are identified below.

- PPP NOI-1 Project-related construction activity will be limited to the hours of 7:00 am to 7:00 pm on weekdays and Saturdays. Construction is prohibited on Sundays. Project-related construction activity outside these hours would require City approval.
- PPP NOI-2 The Project will comply with the City of Brea's stationary exterior noise standards, summarized in Section 8.20.050, Exterior Noise Standards, of the Brea City Code.
- PPP NOI-3 The Project will comply with the City of Brea's vibration standards of 70 VdB at the property line of the sensitive receptor, as identified in Section 20.20.04, Vibration, of the Brea Zoning Code.
- PPP NOI-4 The residential development will comply with the California Building Code, Part 2, Volume 1, Chapter 12, Section 1207.11.2, Allowable Interior Noise Levels.
- PPP NOI-5 Residential exterior areas shall be designed to be sound attenuated against present and future transportation noise. New residential projects shall provide an acoustical analysis report by an acoustical engineer verifying proposed wall heights adjacent to SR-57 and commercial loading and unloading areas to satisfy the City General Plan's conditionally acceptable exterior noise standard of 65 dBA CNEL for land use compatibility and Section 8.20.050, Exterior Noise Standards, of the Brea City Code.
- PPP NOI-6 The Project's covenants, conditions, and restrictions shall include a disclosure that the loading and unloading of goods may occur at adjacent commercial uses. The commercial use is subject to Section 20.258.030 (H)(3), Loading and Unloading Activities, of the Brea City Code, which

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states that in no event shall loading or unloading take place after 10:00 pm or before 7:00 am on any day of the week.

PPP NOI-7 Residents of the Project shall be notified in writing before taking up residence adjacent to SR-57 that they will be living in an urban type of environment and that the noise levels may be higher than a typical residential area. The covenants, conditions, and restrictions of a residential project shall require that the residents acknowledge their receipt of the written noise notification. Their signatures shall confirm receipt and understanding of this information in accordance with Section 20.258.030 (H)(4), Noise Notification, of the Brea City Code.

PPP NOI-8 Noise-generating equipment (air conditioning units) shall be reviewed during plan check for location and screening, to the extent feasible, to avoid creating a nuisance in accordance with Section 20.258.030 (K)(3), Noise Generating Equipment, of Brea City Code.

5.8.4 Environmental Impacts

5.8.4.1 METHODOLOGY

This noise evaluation was prepared in accordance with the requirements of CEQA to determine if the proposed Project would result in significant construction and operational impacts at nearby sensitive receptors. Due to the *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478) ruling issued December 17, 2015, noise compatibility for on-site sensitive receptors is generally no longer the purview of the CEQA. However, the City requires projects to be designed to achieve the interior noise standards of the CBC for residential uses per PPP NOI-4, which require exterior-to-interior noise insulation sufficient to achieve interior noise levels of 45 dBA CNEL, and PPP NOI-5 requires an acoustical report to satisfy exterior standards prior to the issuance of a building permit. However, no significance determination is required for the noise and land use compatibility of the proposed future uses.

Construction noise modeling was conducted using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). Traffic noise increases were estimated using version of the FHWA Traffic Noise Prediction Model and average daily traffic (ADT) along study roadway segments provided by RK Engineering Group, Inc. (see Appendix F2).¹ Impacts from nontransportation, stationary noise sources are based on the noise limits of the City of Brea Municipal Code. Vibration impacts are assessed using methodology in the FTA guideline document on noise and vibration impact assessment (FTA 2018).

5.8.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

¹ Traffic noise increase = $10 \cdot \log(\text{existing plus project volume} / \text{existing volume})$; Cumulative increase = $10 \cdot \log(\text{future plus project volume} / \text{existing volume})$.

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Impact 5.8-1: Construction activities would result in temporary noise increases in the vicinity of the proposed Project. [Threshold N-1]

Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Construction is anticipated to start in April of 2026 and be completed by fall of 2028. Per PPP NOI-1, Project-related construction activity will be limited to the hours of 7:00 am to 7:00 pm on weekdays and Saturdays. Construction is prohibited on Sundays.

Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along roadways in the vicinity of the Project site. Individual construction vehicle pass-bys and haul truck trips may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, but these occurrences would generally be infrequent and short lived.

Construction generates temporary worker and vendor trips, and the number of trips vary by activity phase. Construction vehicles would generate up to 148 daily vendor and worker trips at their peak during building construction. The Project would generate a maximum of 27 daily haul truck trips during building demolition. This increase in haul trucks and construction vehicles trips would result in a negligible noise increase of less than 1 dBA CNEL when compared to existing average daily trips—from 10,800 to 36,120 (RK Engineering 2024)—along nearby roadway segments in the Project vicinity. Therefore, noise impacts related to temporary construction vehicle trips would be less than significant.

Construction Noise

Noise generated by on-site construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each phase of construction involves different types of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest several pieces of equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on the specific construction activity performed at any given moment. Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the Project site with different loads and power requirements.

Noise levels were calculated at spatially averaged distances (i.e., from the acoustical center of the construction site) to the property line of the nearest receptors. Although construction may occur across the entire

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construction area, the center of construction activities best represents the potential average construction-related noise levels associated with the single mixed-use building at the various sensitive receptors.

PlaceWorks used construction phase activity information provided by the applicant to estimate construction noise using the FHWA RCNM. The average noise produced during each construction phase is determined by combining the L_{eq} contributions from the three loudest pieces of construction equipment while accounting for the ongoing time variations of noise emissions (commonly referred to as the usage factor).

The associated, aggregate sound levels—grouped by construction activity—are summarized in Table 5.8-8, *Project-Related Construction Noise at Sensitive Receptors*. RCNM modeling input and output worksheets are included in Appendix D. Temporary Project construction noise level increases of up to +20 dBA, depending on construction phase and proximity to residential uses, over ambient conditions would be intermittent and considered short term at noise sensitive residential uses. However, as shown in Table 5.8-8, construction-related noise levels would not exceed the 80 dBA $L_{eq}(8hr)$ threshold at nearest sensitive receptors and would not result in hearing loss, sleep disruption, or impact public health. Therefore, Project construction noise impacts would be less than significant.

Table 5.8-8 Project-Related Construction Noise at Sensitive Receptors

Construction Activity Phase	L_{eq} dBA			
	RCNM Reference Noise Level	Residences to north	Residences to east	Commercial to south
<i>Distance</i>	50 feet	215 feet	425 feet	235 feet
Building and Asphalt Demolition	85	72	66	72
Site Preparation	85	72	66	72
Grading	85	72	66	72
Utility Trenching	81	68	62	68
<i>Distance</i>	50 feet	90 feet	240 feet	300 feet
Building Construction	80	75	66	64
Architectural Coating	74	69	60	58
<i>Distance</i>	50 feet	95 feet	250 feet	100 feet
Paving (all ground floor)	80	74	66	74
Maximum L_{eq} dBA		75	66	74
Ambient Noise Levels		54.0 to 65.2	56.5	58.3

Notes: Calculations performed with the FHWA's RCNM software are included in Appendix D.
Distances measured from the construction site acoustical center to sensitive receptor property line. Noise levels rounded up the nearest whole number.

Level of Significance Before Mitigation: Less Than Significant.

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Impact 5.8-2: Project implementation would result in long-term operation-related noise that would not exceed applicable standards. [Threshold N-1]

Stationary Noise

Mechanical Equipment

The proposed Project would have heating, ventilation, and air conditioning systems (HVAC). Mechanical equipment could be installed on roofs or ground mounted on proposed residential buildings. HVAC equipment typically generates noise levels of 72 dBA at a distance of 3 feet and would diminish at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation from ground and shielding effects). The nearest sensitive receptors are single-family homes to the north, approximately 60 feet, across Greenbriar Lane. At a distance of 60 feet, HVAC noise would attenuate to approximately 46 dBA or less, which would not exceed the nighttime threshold of 50 dBA L50. Furthermore, HVAC noise would only cause a 0.6 dBA increase over existing noise levels and would not result in a substantial increase over ambient conditions. This impact would be less than significant.

Outdoor Common Areas

The Project proposes an outdoor common area for residents and guests. The main components could be a fountain, a barbeque area with outdoor seating, and an open lawn area. This area would be located within the plan area, surrounded by proposed residential buildings. Noise would consist mostly of people talking. It is over 200 feet from the nearest edge of the proposed outdoor common space to the nearest noise-sensitive receptors to the north and east. No amplified music or public address systems are proposed. In addition, proposed buildings of the proposed Project would provide acoustical shielding. Therefore, noise associated with Project recreational activities would be localized and is not anticipated to be audible at the nearest sensitive receptors over existing noise levels. This impact would be less than significant.

Traffic Noise

Roadway segment ADT volumes were provided by RK Engineering Group (see Appendix F2). To determine the Project-related traffic noise increase, the Opening Year with Project ADT volumes were compared to the Existing and Opening Year No Project ADT volumes, as shown in Table 5.8-9, *Summary of Traffic Noise Increases*. As a result of the decrease in vehicle trips from demolition of the insurance building, the Project would result in a minimal increase in ADT volumes on most study roadway segments, resulting in a slight increase in traffic noise levels. Existing Greenbriar Lane, east of Associated Road, traffic noise levels are less than 55 dBA; an increase of up to 3 dBA, as shown in Table 5.8-8, would not exceed the 5 dBA in ambient noise environments of less than 60 dBA CNEL threshold. Therefore, the proposed Project would not result in significant traffic noise level increases, and this impact would be less than significant.

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Table 5.8-9 Summary of Traffic Noise Increases

Roadway	Segment		Average Daily Traffic Volumes			dBA CNEL	
	From	To	Existing no Project	Opening Year without Project	Opening Year with Project	Project Noise Increase	Cumulative Noise Increase
Imperial Hwy	SR-57 SB Ramps	to the West	76	76	76	<1	<1
Imperial Hwy	SR-57 SB Ramps	Associated Rd	75	75	75	<1	<1
Imperial Hwy	Associated Rd	Castlegate Ln/Placentia Ave	75	75	75	<1	<1
Imperial Hwy	Castlegate Ln/Placentia Ave	to the East	75	75	75	<1	<1
Greenbriar Ln	Associated Rd	Ravencrest Dr	54	54	54	<1	<1
Greenbriar Ln	Associated Rd	Project Dwy 1	51	51	54	3	3
Greenbriar Ln	Project Dwy 1	Project Dwy 2	51	51	53	2	2
E Birch St	Redbay Ave	to the West	71	71	71	<1	<1
E Birch St	Redbay Ave	Associated Rd	71	71	71	<1	<1
E Birch St	Associated Rd	to the East	71	71	71	<1	<1
Aurora Ave	E Birch St	to the North	60	60	60	<1	<1
Aurora Ave	E Birch St	to the South	51	51	52	1	1
Aurora Ave	Project Dwy 2	to the North	51	51	51	<1	<1
Associated Rd	E Birch St	to the North	58	58	58	<1	<1
Associated Rd	E Birch St	Greenbriar Ln	69	69	69	<1	<1
Associated Rd	Greenbriar Ln	Shopping Ctr Dwy	68	68	69	1	1
Associated Rd	Shopping Ctr Dwy	Imperial Hwy	68	69	69	<1	1
Associated Rd	Imperial Hwy	to the South	68	68	68	<1	<1
Castlegate Ln	Imperial Hwy	to the North	55	55	55	<1	<1
Placentia Ave	Imperial Hwy	to the South	69	69	69	<1	<1

Source: See Appendix D. Based on traffic volumes provided by RK Engineering Group in Appendix F2.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.8-3: The Project would not create groundborne vibration and groundborne noise short-term or long-term. [Threshold N-2]

Construction Vibration

Potential vibration impacts associated with development projects are usually related to the use of heavy construction equipment during the demolition and grading phases of construction. Construction can generate varying degrees of ground vibration depending on the construction procedures and equipment. Construction equipment generates vibration that spreads through the ground and diminishes with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural

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damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures. Pile driving is not proposed.

Vibration Annoyance

The City of Brea has established a vibration perceptibility threshold of 70 VdB, as discussed above in Section 5.8.1.2, *Regulatory Background*. Table 5.8-10, *Vibration Levels for Typical Construction Equipment (VdB)*, shows VdB levels at a reference distance of 25 feet and attenuated levels at the nearest sensitive receptors. As shown in Table 5.8-10, vibration decibels would attenuate to 68 VdB or less. Therefore, impacts would be less than significant.

Table 5.8-10 Vibration Levels for Typical Construction Equipment (VdB)

Construction Activity Phase	Levels in VdB			
	FTA Reference Level at 25 feet	Residences to north at 180 feet	Residences to east at 400 feet	Residences to south at 180 feet
Vibratory Roller	94	68	58	68
Hoe Ram	87	61	51	61
Large Bulldozer	87	61	51	61
Loaded Trucks	86	60	50	60
Jackhammer	79	53	43	53
Small Bulldozer	58	32	22	32

Source: FTA 2018. Calculations included in Appendix D.

Notes: Distances measured from the acoustical center of construction site to sensitive receptor property line. Vibration levels rounded up to the nearest whole number.

Architectural Damage

The FTA criteria for architectural damage varies based on the building category. The applicable FTA threshold for the surrounding off-site commercial structures is 0.30 in/sec PPV, and the applicable FTA threshold for residential uses is 0.20 in/sec PPV. At a distance greater than approximately 20 feet, construction-generated vibration levels at the commercial buildings would be less than the 0.30 in/sec PPV threshold, and at a distance greater than approximately 25 feet, vibration levels would be less than the 0.20 in/sec PPV threshold.

The nearest off-site commercial structure is the Eyebrow Beauty building, approximately 55 feet south of the Project site, and the nearest residential structures are approximately 70 feet north of the Project site. Table 5.8-11, *Vibration Impact Levels for Typical Construction Equipment (in/sec PPV)*, summarizes vibration levels at the various receptors. As shown in the table, vibration levels would not exceed the 0.30 and 0.20 in/sec PPV thresholds at the nearest commercial and residential receptors, respectively. Impacts would be less than significant.

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Table 5.8-11 Vibration Levels for Typical Construction Equipment (in/sec PPV)

Equipment	Levels in in/sec, PPV			
	Reference levels at 25 feet	Residential to north at 70 feet ¹	Residential to east at 250 feet ¹	Commercial to south at 55 feet ¹
Vibratory Roller	0.21	0.045	0.007	0.064
Hoe Ram	0.089	0.043	0.006	0.062
Large Bulldozer	0.089	0.019	0.003	0.027
Caisson Drilling	0.089	0.019	0.003	0.027
Loaded Trucks	0.076	0.016	0.002	0.023
Jackhammer	0.035	0.007	0.001	0.011
Small Bulldozer	0.003	0.001	< 0.001	0.001

Source: FTA 2018. Calculations included in Appendix D.

¹ As measured from the nearest edge of construction site to structure/building facade.

Operational Vibration

The proposed Project would not create or cause any significant vibration impacts due to Project operations. The Project would comply with the City of Brea threshold of 0.003 in/sec (70 VdB) for operational vibration at adjacent sensitive receptor property lines. This impact would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.8-4: The proximity of the Project site to an airport would not result in exposure of future resident and/or workers to airport-related noise. [Threshold N-3]

The nearest airport or airstrip to the proposed Project is Fullerton Municipal Airport, approximately 6 miles to the southwest. At this distance, the Project would not expose future residents or workers to excessive aircraft noise. There would be no impact.

Level of Significance Before Mitigation: No Impact.

5.8.5 Cumulative Impacts

Cumulative Traffic Noise

As shown in Table 5.8-8, *Summary of Traffic Noise Increases*, the cumulative traffic noise increase would be up to 3 dBA CNEL along Greenbriar Lane and up to 1 dBA CNEL for all other Project roadway segments. A 3 dBA CNEL increase along Greenbriar Lane would not be greater than the 5 dBA CNEL threshold, and the Project's contribution would be less than 1 dBA CNEL for all other roadway segments. Therefore, cumulative traffic noise impacts would be less than significant.

Cumulative Construction

If Project construction were to overlap with cumulative Project construction in the Project vicinity, noise could combine to result in significant cumulative impacts. There are three projects within a half mile of the proposed

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Project (see Table 4-1, *Location and Description of Cumulative Projects*). The Brea Plaza Shopping Center site is currently under construction (Brea Plaza Remodel) and an application has been submitted for a residential project (Brea Plaza Living). The Brea Plaza Shopping Center abuts the site to the south; the Brea Mall Mixed Use project is approximately 0.2 mile to the west and across SR-57; and Smart Parke Pet Daycare project is approximately 0.3 mile east across Imperial Highway. The timing of the Brea Plaza projects and the proposed Project's construction schedules are not anticipated to overlap. Construction of the 25,412-square-foot building and parking lot improvements are anticipated to be complete prior to the start of the proposed Project construction. The Brea Plaza Living project has the potential to be under construction at the same time as the proposed Project. . Construction noise is a localized noise source which decreases rapidly with an increase in distance and acoustic shielding provided by intervening building facades in an urban environment, limiting a direct line of sight between existing noise sensitive receptors and proposed construction activities. Potential overlap of construction of the proposed project and the Brea Plaza Living project would not expose noise sensitive uses to cumulative construction noise impacts due to the distance to the nearest noise sensitive receptor (over 500 feet) and intervening building facades providing acoustical shielding and reducing direct line of sight to construction activities. Therefore, the Project would not contribute to a significant cumulative construction noise impact.

5.8.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and PPPs, the following impacts would be less than significant: 5.8-1, 5.8-2, 5.8-3, and 5.8-4.

5.8.7 Mitigation Measures

No mitigation measures are required.

5.8.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.8.9 References

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5.9 POPULATION AND HOUSING

This section of the Draft Environmental Impact Report (DEIR) examines the potential for socioeconomic impacts of the proposed Greenbriar Residential Development Project (proposed Project) on the City of Brea, including changes in population, employment, and demand for housing, particularly housing cost/rent ranges defined as “affordable.” According to Section 15382 of the CEQA Guidelines, “An economic or social change by itself shall not be considered a significant impact on the environment.” Socioeconomic characteristics should be considered in an EIR only to the extent that they create impacts on the physical environment. Population and housing impacts include changes in population, employment, and demand for housing, particularly housing cost/rent ranges defined as “affordable.” Current website information and pertinent documents from the City of Brea and other appropriate agencies were used in preparation of this section. The analysis in this section is based, in part, upon information from:

- Southern California Association of Governments
- United States Census Bureau
- California Department of Finance
- Employment Development Department

5.9.1 Environmental Setting

5.9.1.1 REGULATORY BACKGROUND

State

California Housing Element Law

California planning and zoning law requires each city and county to adopt a general plan for future growth (California Government Code Section 65300). This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the Housing and Community Development Department (HCD) estimates the relative share of California’s projected population growth that would occur in each county based on California Department of Finance population projections and historical growth trends. These figures are compiled by HCD into a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, the HCD provides the RHNA to the council. The council assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares gives cities and counties the opportunity to comment on the proposed allocations. The HCD oversees the process to ensure that the councils of governments distribute their shares of the state’s projected housing need.

State law recognizes the vital role local governments play in the supply and affordability of housing. To that end, California Government Code requires that the housing element achieve legislative goals to:

- Identify adequate sites to facilitate and encourage the development, maintenance, and improvement of housing for households of all economic levels, including persons with disabilities.

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- Remove, as legally feasible and appropriate, governmental constraints to the production, maintenance, and improvement of housing for persons of all incomes, including those with disabilities.
- Assist in the development of adequate housing to meet the needs of low- and moderate-income households.
- Conserve and improve the condition of housing and neighborhoods, including existing affordable housing. Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability.
- Preserve for lower income households the publicly assisted multifamily housing developments in each community.

California housing element laws (California Government Code Sections 65580–65589) require that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community commensurate with local housing needs. The City of Brea General Plan Housing Element was updated/certified in 2022 for the 2021–2029 cycle and certified by HCD on September 8, 2022.

Housing Accountability Act

The Housing Accountability Act (HAA) requires that cities approve applications for residential development that are consistent with a city's general plan and zoning code development standards without reducing the proposed density. Examples of objective standards are those that are measurable and have clear criteria that are determined in advance, such as numerical setback, height limit, universal design, lot coverage requirement, or parking requirement. Under the HAA, an applicant is entitled to the full density allowed by the zoning and/or general plan provided the project complies with all objective general plan, zoning, and subdivision standards and provided that the full density proposed does not result in a specific, adverse impact on public health and safety that cannot be mitigated to less than significant.

Assembly Bill (AB) 678 amends the HAA by increasing the documentation and standard of proof required for a local agency to legally defend its denial of low- to moderate-income housing development projects. If the local agency considers the housing development project to be inconsistent, not in compliance, or not in conformity, this bill requires the local agency to give the applicant, within specific time periods, written documentation identifying the provision or provisions and an explanation of the reason or reasons it considers the housing development to be inconsistent, not in compliance, or not in conformity. If the local agency fails to provide this documentation, the housing development project is deemed consistent, compliant, and in conformity with the applicable plan, program, policy, ordinance, standard, requirement, or other similar provision.

Senate Bill 330

Senate Bill (SB) 330, the Housing Crisis Act of 2019, enacted in 2019, aimed to streamline housing development processes in California by limiting local governments' ability to impose restrictions that could hinder housing

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POPULATION AND HOUSING

production. SB 330 states an application is deemed complete if a preliminary application was submitted and it complied with the applicable general plan and zoning standards in effect at the time. Planning and zoning law requires a public hearing on a variance from the requirements of a zoning ordinance or a conditional use permit. However, this bill prohibits any city or county from conducting more than five hearings pursuant to these provisions if a housing development project complies with the applicable general plan and zoning standards in effect at the time the application is deemed complete. Additionally, this bill reduces the time within which a lead agency can approve or disapprove a project, from 120 days to 90 days.

Senate Bill 8, introduced in 2021, extended the provisions of Senate Bill 330 by moving its sunset date from January 1, 2025, to January 1, 2030. This extension allows the regulations designed to facilitate housing development to remain in effect for an additional five years.

Senate Bill 166: No Net Loss Law (California Government Code Section 65863)

The purpose of Government Code Section 65863 (No Net Loss Law), is to ensure development opportunities remain available throughout the planning period to accommodate a jurisdiction's RHNA, especially for lower- and moderate-income households. Summary of No Net Loss requirements includes the following (HCD 2019):

- A jurisdiction must maintain adequate sites to accommodate its remaining unmet RHNA by each income category at all times throughout the entire planning period.
- A jurisdiction may not take any action to reduce a parcel's residential density unless it makes findings that the remaining sites identified in its Housing Element sites inventory can accommodate the jurisdiction's remaining unmet RHNA by each income category, or if it identifies additional sites so that there is no net loss of residential unit capacity.
- If a jurisdiction approves the development of a parcel identified in its Housing Element sites inventory with fewer units than shown in the Housing Element, it must either make findings that the Housing Element's remaining sites have sufficient capacity to accommodate the remaining unmet RHNA by each income level or identify and make available sufficient sites to accommodate the remaining unmet RHNA for each income category.
- A jurisdiction may not disapprove a housing project on the basis that approval of the development would trigger the identification or zoning of additional adequate sites to accommodate the remaining RHNA.

Bonus Density Law (California Government Code Section 65915)

The State Density Bonus Law, codified in California Government Code Section 65915, is designed to encourage the development of affordable housing by offering developers certain incentives. The law allows developers to build more units than typically permitted by local zoning laws if they agree to include a specified percentage of affordable housing units in their projects. The amount of bonus density varies based on the percentage and type of affordable units provided.

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Regional

Southern California Association of Governments

Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. It serves as a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG develops, refines, and maintains SCAG's regional and small area socioeconomic forecasting/allocation models. SCAG is responsible for analyzing the region's transportation system, the future of growth in the region, and potential funding sources to address housing, transportation, and livability issues for the 18 million residents that call Southern California home. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents. The City of Brea is within the Orange County Council of Governments subregion of SCAG.

SCAG 2040-2050 Regional Transportation Plan / Sustainable Communities Strategy

On April 4, 2024, SCAG's Regional Council adopted the 2040-2050 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which places a greater emphasis than SCAG's previous RTP/SCS on sustainability and integrated planning. The 2024 RTP/SCS provides the goals and policies that guide growth in the region, including growth projections for the region's cities and counties. The County and the City are member agencies in SCAG along with Imperial, Los Angeles, Orange, Riverside, and Ventura counties and their associated cities. The 2024 RTP/SCS's vision encompasses a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2024 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards. This long-range plan, required by the state of California and the federal government, is updated by SCAG every four years as demographic, economic, and policy circumstances change. The 2024 RTP/SCS is a living, evolving blueprint for the region's future. In the 2024 RTP/SCS, SCAG provides growth forecasts for population, households, and employment for year 2050.

Local

Brea General Plan

Development of housing in the City is guided by the goals, objectives, and policies of the General Plan and Housing Element. The 2021-2029 Housing Element includes the following policies on population and land use:

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- **Policy HE-3.1 Variety of Housing Choices.** Provide site opportunities for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit that promotes walkability.
- **Policy HE-3.2 Housing in Brea Core.** Provide opportunities for mixed use and infill housing development opportunities in the Brea Core as part of the City’s ongoing revitalization strategy for the area.
- **Policy HE-3.4 Housing on Existing Commercial Sites.** Explore opportunities to integrate housing in underutilized commercial centers, and to reuse excess or obsolete commercial buildings for housing.
- **Policy HE-4.2 Flexible Development Guidelines.** Provide flexibility in development/design guidelines to accommodate new models and approaches to providing housing, such as transit-oriented development, live/work housing, micro units and flex space to allow housing to adapt to the needs of the occupants.
- **Policy HE-6.1 Smart Growth.** Preserve open space and environmental habits, while accommodating new growth in compact forms in a manner that de-emphasizes the automobile. Evaluate expanded locations for mixed use development, focusing on sites along future bus rapid transit (BRT) corridors.
- **Policy HE-6.4 Healthy Community.** Promote healthy living and physical activity through decisions in the location, site planning, and design of housing and mixed-use development.
- **Policy HE-6.5 Transportation Alternatives and Walkability.** Incorporate transit and other transportation alternatives including walking and bicycling into the design of new development, particularly in areas within a half-mile of designated transit stops and the City’s “Tracks at Brea” walking and biking trail system.
- **Policy HE-6.6 Jobs/Housing Balance.** Encourage a closer link between housing and jobs in the community, including housing opportunities affordable to Brea’s modest income workforce.

Brea Municipal Code

The City of Brea has an Affordable Housing Ordinance, Chapter 20.40 of the City’s Municipal Code, which provides a framework to ensure that new residential developments in Brea contribute to the creation of affordable housing units, with flexibility for developers through various alternatives, incentives, and enforcement mechanisms. The requirements apply to developers of residential projects with 10 or more units including new construction and condominium conversions. Smaller projects (less than 10 units) may also be subject to these requirements if they are part of a larger development. Residential projects must include affordable units, with the percentage and income level determined by Table 20.40.040.A, *Affordable Unit Requirements for Residential Projects*, in the City’s Municipal Code (e.g., 5 percent for extremely low-income units, 10 percent for very low-income, 15 percent for low-income, etc.). Developers can also meet the affordable housing ordinance through payment of an in-lieu fee, developing affordable units at a different location in Brea, donating land for affordable housing development, or rehabilitating and converting market-rate units into affordable housing.

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5.9.1.2 EXISTING CONDITIONS

Population

Table 5.9-1, *Population Trends in Brea*, shows the population trends and percentage change in the City from 2013 through 2023.

Table 5.9-1 Population Trends in Brea		
Year	Population	Percentage Change
2013	41,916	N/A
2014	42,967	2.51%
2015	43,883	2.13%
2016	44,247	0.83%
2017	44,938	1.56%
2018	45,036	0.22%
2019	46,067	2.29%
2020	47,188	2.43%
2021	47,088	-0.21%
2022	46,681	-0.86%
2023	47,886	2.58%

Source: DOF 2023, 2024.

Housing

Housing Growth Trends

Table 5.9-2, *Housing Growth Trends in Brea*, shows the rate of housing growth from 2013 to 2023 and how it has varied over the years.

Table 5.9-2 Housing Growth Trends in Brea		
Year	Housing Units	Percentage Change
2013	15,615	N/A
2014	16,044	2.75%
2015	16,412	2.29%
2016	16,604	1.17%
2017	16,934	1.99%
2018	17,127	1.14%
2019	17,572	2.60%
2020	17,881	1.76%
2021	17,923	0.23%
2022	17,997	0.41%
2023	18,693	3.87%

Source: DOF 2023, 2024.

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Regional Housing Needs Assessment

As shown in Table 5.9-3, *City of Brea 2021–2029 RHNA*, Brea’s RHNA allocation for the 2021–2029 planning period is 2,365 units. This number was calculated by SCAG based on the City’s share of the region’s employment growth, migration and immigration trends, and birth rates.

Table 5.9-3 City of Brea 2021-2029 RHNA

Income Category (% of County AMI ¹)	Number of Units	Percentage
Very Low ² (31% to 50%)	669	28%
Low (51% to 80%)	393	17%
Moderate (81% to 120%)	403	17%
Above Moderate (Over 120%)	900	38%
Total	2,365	100%

Source: Brea 2022.

¹ AMI = Area Median Income

² Local jurisdictions must consider Extremely-Low Income households as part of the Very-Low Income. The Brea Housing Element assumes 50 percent of the Very-Low Income housing needs for Extremely-Low Income households.

Employment

Employment Trends

The average annual employment rate and percentage changes are shown in Table 5.9-4, *Average Employment Trends in Brea*.

Table 5.9-4 Average Employment Trends in Brea

Year	Employment (persons)	Percent Change
2013	20,000	N/A
2014	20,400	2.00%
2015	21,000	2.94%
2016	21,500	2.38%
2017	21,700	0.93%
2018	22,500	3.69%
2019	22,400	-0.44%
2020	20,900	-6.70%
2021	21,500	2.87%
2022	22,500	4.65%
2023	22,500	0.00%

Source: EDD 2024.

Existing Employment

Table 5.9-5, *City of Brea Employment by Industry*, shows the City’s distribution of jobs by industry type. As shown, educational services, health care, and social assistance (26.27 percent); professional, scientific, management, and

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POPULATION AND HOUSING

administrative and waste management services (11.74 percent); manufacturing (10.79 percent) and retail trade (9.25 percent); make approximately 58 percent of the City's employment.

Table 5.9-5 City of Brea Employment by Industry

Industry/Occupation	Number	Percentage
Educational services, and health care and social assistance	6,328	26.27%
Professional, scientific, and management, and administrative and waste management services	2,828	11.74%
Manufacturing	2,600	10.79%
Retail trade	2,228	9.25%
Finance and insurance, and real estate and rental and leasing	2,127	8.83%
Arts, entertainment, and recreation, and accommodation and food services	2,086	8.66%
Construction	1,333	5.53%
Public administration	1,106	4.59%
Wholesale trade	1,019	4.23%
Transportation and warehousing, and utilities	975	4.05%
Other services, except public administration	887	3.68%
Information	544	2.26%
Agriculture, forestry, fishing and hunting, and mining	26	0.11%
Total	24,087	100%

Source: US Census Bureau 2022.

Growth Projections

Southern California Association of Governments

SCAG undertakes comprehensive regional planning with an emphasis on transportation. SCAG's 2024 RTP/SCS provides the most current projections of population, households, and total employment for Brea. Based on its share of California's and the region's employment growth, migration and immigration trends, and birth rates, SCAG projects that population, housing, and employment will grow at an increasing rate in Brea. These projections are summarized in Table 5.9-6, *SCAG Growth Projections for Brea*.

Table 5.9-6 SCAG Growth Projections for Brea

	2019	2050
Population	46,900	52,714 ¹
Employment	54,600	57,400
Households	17,100	19,900
Housing units ²	16,245	18,905
Jobs-housing ratio	3.36	3.03

Source: SCAG 2024.

¹ Population was calculated using household size (18,693) multiplied by the 2000 average household size of 2.82 for Brea used in the Housing Element (DOF 2024; Brea 2022).

² Housing units in SCAG projections are estimated based on number of households and a vacancy rate of 5 percent.

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Jobs-Housing Ratio

The jobs-housing ratio is a general measure of the number of jobs versus housing in a defined geographic area, without regard to economic constraints or individual preferences. The jobs-housing ratio as well as the type of job versus the price of housing have implications for mobility, air quality, and the distribution of tax revenues. A project's effect on the jobs-housing ratio is one indicator of how it will affect growth and quality of life in the project area. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A main focus of SCAG's regional planning efforts has been to improve this balance; however, jobs-housing goals and ratios are only advisory. There is no ideal jobs-housing ratio adopted in state, regional, or city policies. The American Planning Association, an authoritative resource for community planning best practices, makes the following recommendations for assessing jobs-housing balance (Weitz 2003).

- Jobs-housing ratio
 - Recommended target: 1.5 jobs per housing unit
 - Recommended range: 1.3 to 1.7 jobs per housing unit
- Jobs-employed resident ratio
 - Recommended target: 1 job per employed resident
 - Recommended range: 0.8 to 1.25 jobs per employed resident

As shown in Tables 5.9-2 and 5.9-4, there are currently 22,500 jobs and 18,693 housing units in the City. Therefore, the current jobs-housing ratio for the City is 1.20, below the recommended range. As shown in Table 5.9-6, SCAG's growth forecast indicates that Brea was a jobs-rich community with a jobs-housing ratio of 3.36 in 2019 and would continue to be a jobs-rich community, with a ratio of 3.03 in 2050.

5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- P-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- P-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

5.9.3 Plans, Programs, and Policies

No existing regulations are applicable to population and housing impacts of the proposed Project.

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POPULATION AND HOUSING

5.9.4 Environmental Impacts

5.9.4.1 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.9-1:	The proposed Project would not induce unplanned substantial population in Brea. [Threshold P-1]
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Construction

Construction of the proposed Project would require contractors and laborers. The City expects that general construction labor would be available from the local and regional labor pool and would not result in substantial population growth because the construction workers would commute from their current homes. The construction is assumed to last approximately two years, with a buildout year of 2028. Different construction workers would be needed for different phases of construction, and general construction labor would be available from the local and regional labor pool. Therefore, the proposed Project would not result in a long-term increase in employment from short-term construction activities. Construction of additional housing for construction workers would not be necessary, and no additional infrastructure construction would be provided. Therefore, the proposed Project would not directly or indirectly induce substantial population growth in the Project area during construction.

Operation

Population

As mentioned in Section 3.4.1, *Greenbriar Residential Development*, in Chapter 3, *Project Description*, the construction of 179 units would result in approximately 505 new residents.¹ The current population in Brea is 47,886, as shown in Table 5.9-1, and the Project would increase the City's population to 48,391 residents. The proposed Project's 505 residents would increase the population in the City by 1.04 percent and would represent 6.4 percent of the City's forecast housing growth of 7,825 units from 2019 to 2050 (see Table 5.9-6). In addition, the City's General Plan projected that the population in the City may increase to 50,483 at the General Plan buildout. Therefore, an increase of 505 residents from the existing population would be within the City's planned growth.

Housing

The proposed Project would provide more housing opportunities in the City. As shown in Table 5.9-2, there are 18,693 dwelling units in the City in 2023. The Project's 179 units would increase housing in the City by 0.95 percent and would represent 6.7 percent of the City's forecast housing growth of 2,660 units from 2019 to 2050 (see Table 5.9-6). In addition, the City's General Plan projected that the housing units in the City may

¹ Population was calculated using household size (19,900) multiplied by the 2018 average household size of 2.75 for Brea (DOF 2023).

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increase to 19,079 at the General Plan buildout. Therefore, an increase of 179 units from the existing housing units would be within the City's planned growth.

The proposed Project would be within SCAG's projected housing growth. Moreover, the state of California has a shortage of housing. In 2019, Governor Newsom signed several bills aimed to address the need for more housing, including the Housing Crisis Act of 2019 (Senate Bill 330). The proposed Project addresses the need for additional housing to accommodate population growth in the City to accommodate the RHNA.

Employment

The proposed Project is a residential development project, with no commercial uses. The proposed Project would not introduce new unplanned employment growth to the site.

Summary

The Project site is currently an underutilized commercial property, with an office building that has remained vacant since early 2020 due to the COVID-19 pandemic and declining demand for office space. The proposed Project would redevelop the underutilized site with housing that would provide new types of housing necessary to accommodate the demographic shifts in the City. Overall, the proposed Project would not induce substantial population growth. Although the proposed Project would increase the number of housing units, population, the projected increases are less than the regionally anticipated growth and would help alleviate the state's housing shortage by providing housing near Brea's commercial centers.

Level of Significance Before Mitigation: Impact 5.9-1 would be less than significant.

Impact 5.9-2: The proposed Project would not displace substantial housing units or people. [Threshold P-2]

Implementation of the proposed Project would not require the removal or relocation of any housing units. The Project site is currently an underutilized commercial property, with a 164,908-square-foot office building that has remained vacant since early 2020 due to the COVID-19 pandemic. Therefore, the proposed Project would not necessitate the construction of replacement housing elsewhere.

Level of Significance Before Mitigation: Impact 5.9-2 would be less than significant.

5.9.5 Cumulative Impacts

The area considered for cumulative impacts is the City of Brea. Impacts are analyzed using the General Plan projections from SCAG's 2024 RTP/SCS growth forecast and the City's General Plan buildout. Development of the proposed Project, in conjunction with related cumulative projects, is not expected to result in significant citywide impacts on population, housing, or employment because it aligns with the growth anticipated in these local and regional planning documents (e.g., Brea's General Plan, Brea's Housing Element, and SCAG's 2024 RTP/SCS). Additionally, related projects would be reviewed by the City and must adhere to established state and local development standards, regulations, and Policies to mitigate environmental effects associated with population growth. Once approved, the proposed Project would enhance the City's housing supply. Thus, the

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proposed Project, combined with related developments, would not result in cumulatively considerable impacts on population and housing.

5.9.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.9-1 and 5.9-2.

5.9.7 Mitigation Measures

No mitigation measures are required.

5.9.8 Level of Significance After Mitigation

No significant impacts related to population and housing were identified; therefore, no significant and unavoidable adverse impacts would occur.

5.9.9 References

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5.10 PUBLIC SERVICES

This section of the Draft Environmental Impact Report (DEIR) addresses the potential for implementation of the Greenbriar Residential Development Project (proposed Project) to impact public services including fire protection and emergency services, police protection, school services, and library services. Park services are addressed in Section 5.11, *Recreation*. Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in Section 5.13, *Utilities and Service Systems*. The information in this section is based on responses to service provider letters that can be found in Appendix E, Public Service Responses, of this DEIR.

5.10.1 Fire Protection and Emergency Services

5.10.1.1 ENVIRONMENTAL SETTING

Regulatory Background

International Fire Code

The International Fire Code (IFC) is a model code for regulating minimum fire-safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire- and life-safety regulations, with topics addressing fire-department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and various other topics. The IFC is issued by the International Code Council, which is an international organization of building officials.

State

California Fire Code

The California Fire Code (CFC) (California Code of Regulations, Title 24, Part 9) is based on the 2021 IFC and includes amendments from the State of California fully integrated into the code. The CFC contains fire safety-related building standards that are referenced in other parts of Title 24 of the California Code of Regulations. The CFC is updated once every three years; the 2022 CFC took effect on January 1, 2023.

California Health and Safety Code

Sections 13000 et seq. of the California Health and Safety Code include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Local

City of Brea Municipal Code

Section 16.01.010, Fire Code Adopted, of Brea's Fire Code (Municipal Code Chapter 16.04) states that the 2022 edition of the California Fire Code in its entirety, together with the amendments, additions, deletions, exceptions in Chapter 16.04, are the adopted Fire Code of the City.

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PUBLIC SERVICES

City of Brea General Plan

The City of Brea General Plan contains policies that support the City's fire and police services.

- **Policy PS-1.2.** Provide up-to-date technology to the Brea Police and Fire Department.
- **Policy PS-1.4.** Work with the Fire Department to determine and meet community needs for fire protection and related emergency services. Ensure that sufficient stations, personnel, and equipment are provided to meet growth needs in the City.
- **Policy PS-1.5.** Maintain a maximum 4- to 6-minute emergency response time for fire safety services. Maintain a 3-to-5-minute response time from emergency police response services. Require that all new development be able to meet established standards for such response.
- **Policy PS-1.6.** Impose special conditions as needed on development projects to ensure that adequate fire protection measures are in place and maintained.

Development Impact Fees

Dispatch Impact Fees

The City of Brea established these fees as necessary for providing upgrades to the police and fire dispatch systems, thus ensuring that new development is provided with appropriate public safety services (Brea 2024a). The revised fees became effective on May 18, 2024, based on the Impact Fee Nexus Study and the next inflationary adjustment is scheduled for July 1, 2025:

- Multifamily: \$3865/per dwelling unit
 - Single family: \$3865/per dwelling unit
 - Commercial: \$59/per square foot
 - Office: \$103/per square foot
- Industrial: \$445/per square foot

Fire Impact Fees

The purpose of the fire impact fee is to ensure that new development finances its fair share of fire protection facilities (Brea 2024a). The revised fees became effective on May 18, 2024, based on the Impact Fee Nexus Study and the next inflationary adjustment is scheduled for July 1, 2025:

- Multifamily: \$1,397/per dwelling unit
 - Single family: \$1,397/per dwelling unit
 - Commercial: \$639/1,000 square foot
 - Office: \$1,305/1,000 square foot
- Industrial \$494/1,000 square foot

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Fire Service Fees

Fire service connection charges apply to all new construction where fire service is to be installed (Brea 2024a). Fire service connection fees are buy-ins used to recover the cost of existing reservoir storage and water system capacity for private fire systems; the fees for fire service connection follow:

- 4-inch connection: \$4,632
- 6-inch connection: \$6,485
- 8-inch connection: \$8,431
- 10-inch connection: \$12,140
- 12-inch connection: \$12,140

Existing Conditions

Fire Stations, Equipment, Staffing, and Mutual Aid

The Brea Fire Department serves the City of Brea and is the primary fire department providing service to the proposed Project. Table 5.10-1, *Fire Stations and Equipment Serving the Proposed Project*, provides a list of fire stations responding to service requests in the vicinity of the Project. According to the Brea Fire Department, there are no existing deficiencies in the level of fire protection service currently provided to the area, including the surrounding Project site (Mielke 2024).

Table 5.10-1 Fire Station and Equipment Serving the Proposed Project

Station	Address	Equipment
City of Brea Fire Department		
Brea Fire Department – Station #1	555 North Berry Street, Brea	Type 1 – Advanced Life Support 4 personnel
Brea Fire Department – Station #2	200 North Brea Boulevard, Brea	Tiller Truck – Advanced Life Support 4 personnel Ambulance
Brea Fire Department – Station #3	2600 E Santa Fe Road, Brea	Type 1 – Advanced Life Support, 4 personnel Ambulance UTV
Brea Fire Department – Station #4	198 N. Olinda Place, Brea	Type 3 – Basic Life Support 3 personnel

Source: Mielke 2024.

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Response Times

As indicated in Policy PS-1.5 of the City of Brea General Plan, Brea Fire Department should maintain a maximum 4- to 6--minute emergency response time for fire safety services. The standard response time for the first arriving unit during emergencies is approximately 7.5 to 8.5 minutes, and for nonemergencies it is typically between 11 and 13 minutes (Mielke 2024).

Wildfire Hazard Zones

The northern, northeastern, and eastern portions of the City are in fire hazard severity zones mapped by the California Department of Forestry and Fire Prevention (CALFIRE 2024). However, the Project area itself is not in or near a wildfire hazard zone (see also Chapter 8, *Impacts Found Not to Be Significant*, for more wildfire analysis).

5.10.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.10.1.3 PLANS, PROGRAMS, AND POLICIES

Regulatory Requirement

- PPP PS-1 New buildings are required to meet the fire regulations outlined in California Health and Safety Code (Sections 13000 et seq.).
- PPP PS-2 The Project applicant is required to pay development impact fees (dispatch impact fees, fire impact fees, fire service fees).
- PPP PS-3 As part of the Project review process, the City of Brea Fire Department will require approval of Building Plan Check for Site Plan and Emergency Access. Additional design features to address the City of Brea Fire Department's requirements will be incorporated as conditions of approval for the Project.
- PPP PS-4 Development associated with the proposed project will be designed, built, and operated in accordance with the City of Brea's City Code Chapter 15.08, Building Code, and Chapter 16.04, Brea Fire Code.

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5.10.1.4 ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance; the applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-1: The proposed Project would introduce 179 new housing and 505 residents into the Brea Fire Department's service area, thereby increasing demand for fire protection and emergency services. [Threshold FP-1]

The proposed Project consists of 179 residential units, resulting in a population increase of 505 residents in the City.¹ Therefore, the proposed Project would increase the demand for fire protection facilities and personnel within the Brea Fire Department's service boundaries. The nearest fire station to the Project site is Fire Station #3 at 2600 E Santa Fe Road.

Brea Fire Department notes that the proposed Project would result in an increase in service calls, which may require more fire personnel. However, the proposed Project would not necessitate the construction of new facilities, such as a fire station, or expanded facilities that could physically impact the environment.

Brea Fire Department anticipates that the proposed Project may lead to an increase in emergency incidents and call volume. The department employs a systematic approach to assess staffing needs as new developments arise in the City. Brea Fire Department would evaluate service levels and make necessary adjustments to fire service facilities, personnel, and equipment, as needed, to meet the department's service standards. In addition, the proposed Project has calculated the minimum fire flow for the proposed Project according to Appendix B, Fire-Flow Requirements for Buildings, of the California Fire Code. The Brea Fire Department has reviewed and verified these calculations. The existing buildings on the Project site had established fire flow demands, which continue to apply while the structure remains vacant. Furthermore, the proposed development is within the planned growth outlined in the General Plan. Compliance with these regulations would reduce impacts regarding fire services.

The proposed Project would be required to participate in the development impact fee program and go through the project review process to ensure that the proposed Project is constructed under the applicable Fire Code and Health and Safety Code and that adequate fire services and infrastructure are available to accommodate the proposed Project. During the development review and permitting process, Brea Fire Department would review and approve building plans to ensure that adequate facilities within individual residential buildings and lots are provided to serve the needs of the Fire Department. The proposed Project is required to implement PPP PS-1 through PPP PS-4 to ensure adequate fire protection facilities are provided. Impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

¹ Population is based on 2.75 people per household.

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5.10.1.5 CUMULATIVE IMPACTS

The proposed Project, along with other cumulative projects in Brea, would result in increased fire protection demands within Brea Fire Department's service boundaries. The proposed Project and other development projects in the City would be required to implement PPP PS-1 through PPP PS-4, which include compliance with the California Health and Safety Code, the City of Brea Municipal Code and Fire Code; payment of development impact fee fees; and review and approval of building plans, emergency access plans, and fire master plan by Brea Fire Department to reduce impacts. Therefore, with implementation of PPP PS-1 through PPP PS-4, Brea Fire Department would be able to maintain adequate fire protection levels and response times in the City, and this cumulative impact would be considered less than significant.

5.10.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.10-1.

5.10.1.7 MITIGATION MEASURES

No mitigation measures are required.

5.10.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.10.2 Police Protection

5.10.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Local

City of Brea General Plan

The City of Brea General Plan provides policies that support the City's fire and police services.

- **Policy PS-1.1.** Work with the Police Department to determine and meet community needs for law enforcement.
- **Policy PS-1.2.** Provide up-to-date technology to the Brea Police and Fire Department.
- **Policy PS-1.3.** Continue to maintain and develop a community-based police strategy compatible with the needs and size of the community.
- **Policy PS-1.5.** Maintain a maximum 4- to 6-minute emergency response time for fire safety services. Maintain a 3- to 5-minute response time from emergency police response services. Require that all new development be able to meet established standards for such response.

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- **Policy PS-1.7.** Incorporate the tenets of Community Oriented Policing into the design of crime prevention and enforcement programs.
- **Policy PS-1.8.** Use technology to improve crime prevention efforts.

Dispatch Impact Fees

The City of Brea established these fees as necessary for providing upgrades to the police and fire dispatch systems, ensuring that new development is provided with appropriate public safety services (Brea 2024a). These listed dispatch impact fees are effective as of July 2025:

- Multifamily: \$65/per dwelling unit
- Single family: \$65/per dwelling unit
- Commercial: \$63/1,000 square foot
- Office: \$129/1,000 square foot
- Industrial: \$49/1,000 square foot

Existing Conditions

Law enforcement and police protection services are provided by the Brea Police Department (BPD) at 1 Civic Circle in the City of Brea. The BPD is divided into the Police Administration, Operations Division, and Support Services Division. The BPD also includes a K-9 Unit, Professional Standards Unit, SWAT Unit, Crime Suppression Unit, and Traffic Unit (Brea 2024b).

The BPD's minimum field coverage consists of four officers, a field supervisor, and a watch commander for each shift. There are currently 23 officers, 5 sergeants, and 3 lieutenants assigned to patrol, which represents nearly 60 percent of sworn officers. Officers patrol streets 24 hours a day, seven days a week. Patrol officers work a 3/12.5 schedule, which is three 12.5-hour shifts per week with one additional 10-hour day per month, and spend many of their days off testifying in court, in training, or covering additional shifts to maintain patrol's minimum staffing (Brea 2024c).

The BPD reports that there are no existing deficiencies in the level of police protection service currently provided to the area that includes the Project site (Rodriguez 2024).

Response Times

As indicated in Policy PS-1.5 of the City of Brea General Plan, the BPD seeks to maintain a maximum 3- to 5-minute emergency response time for police services. Calls for service are prioritized into several categories, with emergency calls being the most important.

The BPD reports that the average response time for emergency calls is 2 minutes and 45 seconds throughout the City, including the Project site. Nonemergency calls range from 5 to 10 minutes (Rodriguez 2024).

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5.10.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- PP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

5.10.2.3 PLANS, PROGRAMS, AND POLICIES

Regulatory Requirement

- PPP PS-5 The Project applicant is required to pay dispatch impact fees and all other development impact and/or special assessment fees as deemed applicable by the City of Brea.
- PPP PS-6 The Project applicant will provide strategically placed cameras at the Project site that will integrate with the Brea Police Department's Integrated Crime Center (ICC) cameras. The placement of the cameras will be coordinated with the Brea Police Department.

5.10.2.4 ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance; the applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-2: The proposed Project would introduce 179 new housing and 505 residents into the Brea Police Department service boundaries, thereby increasing demand for police protection facilities and personnel. [Threshold PP-1]

As shown on Figure 3-10, *Fencing and Walls*, the proposed Project would provide a perimeter wall on the south side of the Project site, eliminating one of the potential ingress points to the Project site. Though the southern wall could affect emergency response and deter preventive patrols, it would also minimize opportunistic burglaries, increase privacy, and act as a crime deterrent. In addition, the BPD plans to launch an Integrated Crime Center in the Spring of 2025 (Rodriguez 2024). A key feature of the Integrated Crime Center will be a network of strategically placed cameras throughout the City to enhance surveillance and public safety. The proposed Project would be required to implement PPP PS-6 and provide additional cameras, which would help bolster efforts to maintain a secure environment for the community.

The BPD at Brea Civic and Cultural Center provides police protection services to Brea, including the Project site. The BPD anticipates that the proposed Project would lead to an increase in calls typically linked to residential areas, including traffic and parking complaints, domestic violence incidents, and various disturbances (Rodriguez 2024). The BPD states that there would be adequate services for the proposed Project. The BPD employs a systematic approach to assess staffing needs as new developments arise in the City. Currently, the

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BPD does not foresee any negative impacts on police services from the proposed Project. The BPD states that the proposed Project would equate to the demand of one full-time police officer at an estimated cost of \$50,688.03 but would not necessitate an expansion of police station facilities or additional equipment (Rodriguez 2024). Although no physical expansion or construction of police facilities would occur, the proposed Project would also be required to pay dispatch impact fees (PPP PS-5).

The existing building on the project site has previously generated police demand, which remains applicable even while the structure is vacant. Furthermore, the proposed Project is within the planned growth outlined in the City's General Plan. Given the BPD's current capacity to provide adequate services and the dispatch impact fees mandated by the City, the proposed Project is not expected to lead to significant physical impacts that would necessitate additional or expanded police facilities. As a result, impacts are considered less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.10.2.5 CUMULATIVE IMPACTS

Implementation of the proposed Project in conjunction with other developments in the City would increase the overall police service demands for BPD. The BPD states that significant developments such as the Brea 265 Specific Plan and the expansion of the Brea Mall would create demand for additional personnel. However, the BPD is actively planning for this need to ensure staffing levels can adequately support future projects. Increased demand for additional staffing and equipment would be accommodated with applicable fees and tax payments. No significant cumulative impacts are expected to occur related to police protection facilities.

5.10.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.10-2.

5.10.2.7 MITIGATION MEASURES

No mitigation measures are required.

5.10.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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5.10.3 School Services

5.10.3.1 ENVIRONMENTAL SETTING

Regulatory Background

State

California State Assembly Bill 2926: School Facilities Act of 1986

To assist in providing school facilities to serve students generated by new development, Assembly Bill (AB) 2926 was enacted in 1986 and authorizes a levy of impact fees on new residential and commercial/industrial development. The bill was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of impact fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

California Senate Bill 50

Senate Bill (SB) 50, passed in 1998, provides a comprehensive school facilities financing and reform program and enables a statewide bond issue to be placed on the ballot. Under the provisions of SB 50, school districts are authorized to collect fees to offset the costs associated with increasing school capacity as a result of development and related population increases. The funding goes to acquiring school sites, constructing new school facilities, and modernizing existing school facilities. SB 50 establishes a process for determining the amount of fees developers would be charged to mitigate the impact of development on school districts from increased enrollment. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be “full and complete school facilities mitigation.”

Under this legislation, there are three levels of developer fees that may be imposed upon new development by the governing school district. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the remaining half. To qualify for Level II fees, the governing board of the school district must adopt a School Facilities Needs Analysis and meet other prerequisites in accordance with Section 65995.6 of the California Government Code. Level III fees apply if the state runs out of bond funds, allowing the governing school district to impose 100 percent of the cost of school facility or mitigation minus any local dedicated school monies on the developer.

Local

Development Impact Fees

The Brea Olinda Unified School District (BOUSD) has adopted a fee program, pursuant to SB 50, which is modified every 24 months, that levies statutory school impact fees per residential building square footage:

- Residential: \$5.17/square foot
- Commercial: \$0.84/square foot
- Industrial: \$0.84/square foot (BOUSD 2024a).

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Existing Conditions

Enrollment and Capacity

Enrollment and Capacity

The BOUSD serves approximately 6,000 students in six elementary schools, one junior high school, one high school, and one continuation high school (BOUSD 2024b). Table 5.10-2, *School Enrollment and Capacity*, provides the enrollment and capacity per school that would serve the Project site.

Table 5.10-2 School Enrollment and Capacity

School and Location	Enrollment (10-year average)	Total Capacity	Remaining Capacity
Country Hills Elementary School	548	612	69
Brea Junior High School	962	1,186	256
Brea Canyon High School	29	162	132
Brea Olinda High School	1,921	2,229	475

Source: Champion 2024.

5.10.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- SS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for school services.

5.10.3.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for school services impacts are identified below:

- PPP PS-7 Pursuant to AB 2926, new development is required to pay development impact fees to assist in providing school facilities to serve students generated by new development.
- PPP PS-8 Pursuant to SB 50, new development is required to offset the costs associated with increasing school capacity, where the funds collected go to acquiring school sites, constructing new school facilities, and modernizing existing school facilities.

5.10.3.4 ENVIRONMENTAL IMPACTS

The following impact analysis addresses the thresholds of significance; the applicable thresholds are identified in brackets after the impact statement.

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Impact 5.10-3: The proposed Project would generate 45 new students but would not significantly impact the school enrollment capacities of Brea Olinda Unified School District’s schools. [Threshold SS-1]

The Project site is within the attendance boundaries of Country Hills Elementary School, Brea Junior High School, Brea Canyon High School, and Brea Olinda High School (Champion 2024). Table 5.10-3, *Student Generation Summary*, shows the anticipated number of students generated by the proposed Project. Implementation of the proposed Project would generate approximately 25 elementary students, 7 junior high school students, and 13 high school students—a total of 45 additional students. As shown in Table 5.10-2, the existing school facilities are anticipated to have adequate capacity for the additional students generated by the proposed Project without having to build new or expanded school facilities. However, the proposed Project only represents a portion of the long-term enrollment growth anticipated within the BOUSD boundaries. The District has identified the need to proactively plan to accommodate the influx of new students from both the proposed Project and other future developments. This may involve reassessing resources, facilities, and staffing to ensure that the District continues to provide a high-quality educational experience for all students (Champion 2024).

Table 5.10-3 School Generation Summary

School Level	Student Generation Factor	Units	Total Students
Elementary	0.1407	179	25.2
Jr. High	0.0386		6.9
High	0.0746		13.4
Total			45.4

Source: Champion 2024.

The increased demand for school facilities would be accommodated through the payment of development fees. The funding program established by SB 50 has been found by the legislature to constitute “full and complete mitigation of the impacts” on the provision of adequate school facilities (Government Code Section 65995(h)). SB 50 sets forth a state school facilities construction program that includes restrictions on a local jurisdiction’s ability to demand mitigation of a project’s impacts on school facilities in excess of fees in Education Code Section 17620. Payment of impact fees as adopted by BOUSD and in compliance with SB 50 would reduce CEQA impacts to an acceptable level.

Level of Significance Before Mitigation: Less Than Significant.

5.10.3.5 CUMULATIVE IMPACTS

The 179 additional housing units allowed by the proposed Project would increase the demand on school facilities at Country Hills Elementary School, Brea Junior High School, Brea Canyon High School, and Brea Olinda High School, and other development projects in the BOUSD boundary would cumulatively impact BOUSD’s ability to provide adequate educational services. Compliance with the fee program established by SB 50 would ensure that adequate mitigation is provided. The program under SB 50 has been found by the

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legislature to constitute “full and complete mitigation of the impacts of any legislative or adjudicative act on the provision of adequate school facilities.” The fees authorized for collection by BOUSD are therefore deemed full and adequate mitigation of impacts on the district. Additionally, BOUSD has identified the need to proactively plan to accommodate the influx of new students by reassessing resources, facilities, and staffing to ensure that the District continues to provide a high-quality educational experience for all students (Champion 2024). Therefore, no significant cumulative impacts are expected to occur to school services.

5.10.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of the plans, programs, and policies, the following impact would be less than significant: 5.15-3.

5.10.3.7 MITIGATION MEASURES

No mitigation measures are required.

5.10.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.10.4 Library

5.10.4.1 ENVIRONMENTAL SETTING

Regulatory Background

Local Regulations

City of Brea General Plan

The General Plan contains the following goal and policies for providing library resources to the City:

Goal CS-4: Provide library resources that meet the educational, cultural, civic, business, and life-long learning needs of all residents. Retain a local library system that is community-oriented, provides knowledgeable, service-oriented staff, and offers access to information, books, and other materials in a variety of formats that use contemporary technology:

- **Policy CS-4.1.** Encourage the County to develop programs and services for adults, children, and new readers that meet future needs.
- **Policy CS-4.2.** Work with library staff to assess, select, organize, and maintain collections of materials and information sources of value to and desired by the community.
- **Policy CS-4.3.** Work with library staff to maintain technological services that meet the needs of residents, as well as reader advisory, reference and referral services, responsive to user needs.

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- **Policy CS-4.4.** Explore funding opportunities for the City to expand the existing County branch library and/or operate a local, independent library.

Existing Conditions

Brea Branch Library

The Brea Branch Library is part of the Orange County Public Library (OCPL) community library network, which includes 33 branches throughout Orange County. OCPL is a dependent special district governed by the Orange County Board of Supervisors. It is the third largest local library system in California.

The Brea Branch Library is located at 1 Civic Center Circle in Brea. It offers an assortment of materials and programs—including books, newspapers, magazines, videos and DVDs, music CDs, audiobooks, and digital services such as e-books, e-audiobooks, and subscription databases (Brea 2024d). Programming includes activities for all ages such as story times, craft programs, book clubs, individualized computer instruction, a writers group, and the annual Summer Reading Program. The library benefits from support and advocacy by the Friends of the Brea Library, an independent, nonprofit organization.

5.10.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- LS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.

5.10.4.3 PLANS, PROGRAMS, AND POLICIES

There are no existing PPPs applicable to the proposed Project for library services.

5.10.4.4 ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance; the applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-4: The proposed Project would not result in substantial impacts to library services. [Threshold LS-1]

The proposed Project is anticipated to increase the City's population by 505 residents.² Therefore, the proposed Project would increase the demand for library services in the OCPL system. Residents in Brea can use any library in the OCPL system if they are members. This analysis focuses on OCPL libraries in Brea. Orange County's service standard is 0.2 square feet of library space per capita, and it strives to locate facilities within a

² Population is based on 2.75 people per household.

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three-mile radius of the communities it serves (SCAG 2023; Brea 2003). Therefore, the increase in population would require additional library space of approximately 101 square feet.³ The required square footage would not warrant the construction of a new library or the expansion of the Brea Branch Library. Additionally, OCPL's service standard is 1.5 book volumes per capita for residential communities (Brea 2003); therefore, the increase in population would require an additional 758 book volumes.⁴ It should be noted that the OCPL also provides a wide range of electronic and digitized resources that do not require physical library space. Funding would be required to provide additional books to meet the service standard. Generally, impact fees are assessed on new development to help pay for public infrastructure required to accommodate the new development. Funding would be required to provide additional books to meet the service standard. Generally, impact fees are assessed on new development to help pay for public infrastructure required to accommodate the new development. Funding for library services comes primarily from the property tax revenue, as well as library fines and fees collected from patrons, and state, federal, or government aid. As development occurs, property tax revenue should grow proportionally with the property tax collections. Additionally, access to online resources, including eBooks and audiobooks, are available on the OCPL system. Therefore, the proposed Project would not have a substantial impact associated with the provision of new or physically altered governmental facilities; impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.10.4.5 CUMULATIVE IMPACTS

Implementation of the proposed Project in conjunction with the cumulative projects in the City of Brea would result in added library services demand in the current library system. However, as with the proposed Project, other development projects would also contribute to the property tax revenues that would fund the County's library system and would be required to pay library impact fees to offset its fair-share of the cost of providing additional library resources within the OCPL system. No significant cumulative impacts are anticipated related to library services.

5.10.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.10-4.

5.10.4.7 MITIGATION MEASURES

No impacts were identified and no mitigation measures are required.

5.10.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

³ 505 x 0.2 = 101

⁴ 1.5 book volumes x 505 residents = 758 book volumes.

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5.10.5 References

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5.11 RECREATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementing the Greenbriar Residential Development Project (proposed Project) to impact public parks and recreational facilities in the City of Brea. Cumulative impacts related to recreation would be within the City boundaries.

5.11.1 Environmental Setting

5.11.1.1 REGULATORY BACKGROUND

State

California Government Code

The Government Code (Sections 65560–65568) requires a general plan to include an open space element to address: the preservation of natural resources, managed production of resources, outdoor recreation, public health and safety, support of military installations, and protection of places of cultural or historical interest. Building permits, subdivision approvals, and zoning approvals must be consistent with the open space plan. The Public Resources Code (Section 5076) also requires general plans to consider demands for trail-oriented recreational use, demands in developing open-space programs, the feasibility of integrating its trail routes with appropriate segments of the state system. Cities may also create a separate parks and recreation element as part of or in addition to an open space and conservation element.

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971. Under the Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any nonpark use unless compensation, land, or both are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act

The Quimby Act (California Government Code Section 66477) authorizes cities and counties to require developers to dedicate land as parkland, pay in-lieu fees, or both as a condition of approval for a tentative or final tract map or parcel map for a residential subdivision. Revenue generated through the Quimby Act cannot be used for the operations or maintenance of existing park facilities. The Quimby Act also sets a statewide standard of three acres of parkland for every 1,000 residents unless the existing neighborhood and community park area exceeds that limit, in which case the city or county may establish a higher standard.

Mitigation Fee Act

The California Mitigation Fee Act (Government Code Sections 66000 et seq.) allows cities to impose fees on development projects to mitigate the project's impact on the city's ability to provide specified public facilities. To comply with the Mitigation Fee Act, a city must follow four primary requirements: 1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a

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development project or class of project and the public improvement being financed with the fee; 2) Segregate fee revenue from the general fund to avoid commingling capital facilities fees and general funds; 3) Make findings each fiscal year describing the continuing need for fees that have been in the possession of the city for five years or more and that have not been spent or committed to a project; and 4) Refund any fees with interest for developer deposits for which the findings noted above cannot be made.

Local

City of Brea Municipal Code

According to Chapter 2.24, Parks, Recreation, and Human Services Commission, Section 2.24.020, the commission shall:

- Coordinate all of the recreation, leisure time, and cultural activities of the City.
- Provide for the establishment and maintenance of sound recreation and parks programs.
- Ensure the efficient operation of all recreation and parks facilities within the City.
- Encourage a sound and well-rounded program of activities to service the recreational, park, cultural, leisure time, and other needs of people within the City.

City of Brea General Plan

The goals and policies of the City of Brea General Plan include providing a variety of parks and recreation facilities that meet the diverse needs of the community, protecting and preserving existing parks and recreation facilities, and maximizing the use of open space areas capable of supporting park-type activities.

Park Development Fees

Park Development Fees provide for the development of park and recreational facilities through subdivision regulations in an area where the need for residential use, shall, as a condition to the approval of a tentative map, parcel map, planned community, land development, or real estate development, dedicate lands or pay fees in lieu thereof, or a combination of both, for neighborhood and community park or recreational purposes. In-lieu fees shall be paid to the City before the issuance of building permits or the recordation of the subdivision map (Brea 2024a). The fees include the following.

- Single-family dwelling units: \$9,818 per unit
- Two-family dwelling units: \$9,818 per unit
- Multiple-family dwelling units: \$5,611 per unit
- Mobile home dwelling units: \$4,769 per unit

5.11.1.2 EXISTING CONDITIONS

Brea has 19 park and recreation facilities, including mini or pocket parks, a dog park, neighborhood parks, school parks, community parks, regional parks, Carbon Canyon Regional Park, Ted Craig Regional Park, hiking

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trails, and Birch Hills Golf Course (Brea 2024b). In addition, Chino Hills State Park encompasses 11,770 acres in the counties of Orange, Riverside, and San Bernardino, and an approximately 3,400-acre area of Chino Hills State Park, including a natural wilderness area with hiking, biking, and equestrian trails, is in Brea and its sphere of influence, occupying approximately 16 percent of Brea's total planning area.

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- R-1 Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- R-2 Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.11.3 Plans, Programs, and Policies

- PPP REC-1 The proposed Project is required to comply with Brea Municipal Code Section 18.64.080 that establishes the subdivision regulations for the provision of park and recreational facilities through land dedication, installation of improvements, payment of in-lieu fee thereof, or a combination. New development is required to fund park and recreational development and improvements through the payment of park development fees.

5.11.4 Environmental Impacts

5.11.4.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.11-1: The proposed Project would generate additional residents resulting in an increase in demand for parks and recreational services in the City; however, the proposed Project would not adversely affect the City's existing park and recreational facilities. [Threshold R-1]

The proposed Project would add 179 units, which would result in approximately 505 new residents to the City¹, creating demands for various recreational facilities such as neighborhood and regional parks. The increase in development would create a demand for an additional 2.5 acres of parkland².

Brea has a goal of 5 acres per 1,000 population for public parks and recreational facilities (Brea 2003a). According to the General Plan, the City designates 980 acres as parks and open space (Brea 2003a). Considering

¹ Population was calculated based on 2.75 persons per household (see Section 5.9, *Population and Housing*).

² 5 acres/1,000 persons = 0.005 acre/person
505 persons x 0.005 acres/person = 2.525 acres (Project need)

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the City's total population of 47,725 (DOF 2024), the City provides 20.53 acres of parkland and recreational facilities per 1,000 population, exceeding its goal.³ Though the City has adequate parkland based on the General Plan goals and current standard, the distribution of parks and/or amenities may be needed to serve the local area. Park, recreation, and human service needs should consider amenities, community needs, and demographics.

The closest park to the Project site is the Greenbriar Park, across Greenbriar Lane from the proposed Project. The proposed Project would provide 31,859 square feet of open space, with 8,383 square feet designated for a passive park in the eastern portion of the Project site, as shown in Figure 3-5, *Conceptual Site Plan*. In addition, if deemed necessary by the City, the proposed Project may be conditioned to pay park development fees. Therefore, with the excess of parklands in the City, the private and public recreational facilities proposed by the proposed Project, and the payment of park fees (if necessary), project implementation would result in a less than significant impact.

Level of Significance Before Mitigation: Impact 5.11-1 would be less than significant.

Impact 5.11-2: Project implementation would not result in environmental impacts to provide new and/or expanded recreational facilities. [Threshold R-2]

As stated in Impact 5.11-1, the proposed Project involves construction of 31,859 square feet of open space with 8,383 square feet designated for a passive park. Impacts from constructing these park/recreational facilities are addressed throughout the EIR (see Section 5.2, *Air Quality*, and Section 5.8, *Noise*, which describe the air quality and noise construction impacts as a result of the proposed Project), and no additional adverse physical impacts on the environment would occur. The Project would not require new and/or expanded facilities other than those already included as part of the proposed Project. In addition, the proposed Project may be conditioned to pay park development fees if deemed necessary by the City. Therefore, a less than significant impact would occur.

Level of Significance Before Mitigation: Impact 5.11-2 would be less than significant.

5.11.5 Cumulative Impacts

Growth within the City would increase demand for parks and recreational facilities. Other projects would also pay property, sales, and utility taxes and fees supporting the City's General Fund, part of which would be available for the operations and development of new parks and recreational facilities. Other projects that are found by the City to require increases in parklands would also be required to pay park development fees and/or provide recreation on-site. The City currently has an excess of parks and open space as well as recreational programs for its residents. Cumulative impacts would be less than significant after payment of taxes, impact fees, and development impact fees by other projects. Impacts of the proposed Project would not be cumulatively considerable.

³ 980 acres of parkland ÷ 47,725 /1,000 population = 20.53 acre per 1,000 population

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5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.11-1 and 5.11-2.

5.11.7 Mitigation Measures

No mitigation measures are required.

5.11.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.11.9 References

Brea, City of. 2003. City of Brea General Plan.

<https://www.ci.brea.ca.us/DocumentCenter/View/13951/Chapter-4---Community-Resources-2003>.

———. 2024a. Development Fees. <https://www.ci.brea.ca.us/DocumentCenter/View/13483/Development-Processing-Fees---UPDATED-722024?bidId=>.

———. 2024b. Parks. <https://www.ci.brea.ca.us/439/Parks>.

Department of Finance (DOF). 2024. Table E-5: Population and Housing Estimates for Cities, Counties, and the State, January 2021-2024, with 2020 Benchmark. <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/>.

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5.12 TRANSPORTATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Greenbriar Residential Development Project (proposed Project) to result in vehicle miles traveled (VMT) impacts under Senate Bill (SB) 743 based on VMT thresholds and methodology adopted by the City of Brea in October 2020 (Appendix F1). Appendix F2 of this DEIR also includes a transportation and traffic analysis based on transportation policies in the City of Brea.

- *Greenbriar Multifamily Residential Project Vehicle Miles Traveled (VMT) Screening Analysis*, RK Engineering Group, Inc., August 1, 2024
- *Greenbriar Multifamily Residential Project Revised Traffic Impact Study*, RK Engineering Group, Inc., November 19, 2024

Complete copies of these studies are included as Appendix F1 and Appendix F2, respectively, of this DEIR.

Terminology

The following are definitions for terms used throughout this section:

- **Congestion Management Plan (CMP).** A federally mandated program within metropolitan planning areas to address and manage congestion through the implementation of strategies not calling for major capital investments.
- **Highway Capacity Manual.** The manual provides methods for quantifying highway capacity, serving as a fundamental reference on concepts, performance measures, and analysis techniques for evaluating the multimodal operation of streets, highways, freeways, and off-street pathways. The methodology used to assess the operation of intersections is based on the Highway Capacity Manual.
- **Levels of Service.** Roadway capacity is generally limited by the ability to move vehicles through intersections. A level of service is a standard performance measurement to describe the operating characteristics of a street system in terms of the level of congestion or delay experienced by motorists. Service levels range from A through F, which relate to traffic conditions from best (uncongested, free-flowing conditions) to worst (total breakdown with stop-and-go operation).
- **Transit Priority Area (TPA).** A TPA is a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. A major transit stop refers to 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 service interval of 20 minutes or less during the morning and afternoon peak commute periods.¹ A high-quality transit corridor refers to a corridor with fixed route bus service intervals no longer than 20 minutes during peak commute hours.

¹ Assembly Bill 2553, signed September 2024, revised the definition of major transit stop to have a service interval frequency of 20 minutes (increased from 15 minutes).

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- **Transportation Uniform Mitigation Fee.** A program that ensures a fair share payment for increased traffic generated by new development projects.
- **Vehicles Miles Traveled (VMT).** The number of vehicle miles of travel is an indicator of the travel levels on the roadway system by motor vehicles. This estimate is based upon traffic volumes and trip lengths.
- **VMT per Service Population (VMT/SP).** Service population includes people who live (residents) and work (employees) in the study area. VMT/SP measures the transportation “efficiency” of a project or plan.

5.12.1 Environmental Setting

5.12.1.1 REGULATORY BACKGROUND

State Regulations

Senate Bill 743

On September 27, 2013, SB 743 was signed into law, starting a process that fundamentally changed transportation impact analysis as part of CEQA compliance. The legislature found that with the adoption of the SB 375, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce VMT and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32).

SB 743 eliminated auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. As part of the new CEQA Guidelines, the new criteria “shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses” (Public Resources Code Section 21099(b)(1)).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. The revised CEQA Guidelines establish new criteria for determining the significance of transportation impacts. Under the new Guidelines, VMT-related metric(s) that evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects were required beginning on July 1, 2020. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of LOS, but these metrics may no longer constitute the sole basis for determining transportation impacts under CEQA.

Regional Regulations

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the

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economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs.

2024 Regional Transportation Plan/Sustainable Community Strategy (Connect SoCal)

SB 375 requires each metropolitan planning organization to prepare a sustainable communities strategy (SCS) in its regional transportation plan (RTP). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a “Core Vision” that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

Orange County Transportation Authority Congestion Management Plan

The Orange County Transportation Authority (OCTA) is the subregional planning agency for Orange County. In June 1990, the Proposition 11 gas tax increase required California’s urbanized areas (areas with populations of 50,000 or more), to adopt a CMP. The CMP is intended to link transportation, land use, and air quality decisions and to address the impact of local growth on the regional transportation system. Compliance with CMP requirements ensures a city’s eligibility to compete for state gas tax funds for local transportation projects. The Orange County CMP was established in 1991, and the most recent CMP was adopted in 2017. The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System. Per the CMP guidelines, this number is based on the desire to analyze any impacts that comprise 3 percent or more of the existing CMP highway system facilities’ capacity. The CMP highway system includes specific roadways—including state highways and super streets (now known as smart streets)—and CMP arterial monitoring locations/intersections. Therefore, the CMP traffic impact analysis requirements relate only to the designated CMP highway system.

Local Regulations

City of Brea General Plan

The Circulation Element of the City of Brea General Plan provides goals and policies for efficient regional transportation facilities, the local circulation system, the public transportation system, and pedestrian and bicycle facilities (Brea 2003). Applicable policies from the 2003 General Plan include:

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- **Policy CD-10.1.** Work continually with Caltrans to improve access to and from State Route 57.
- **Policy CD-10.4.** Work with Caltrans, the Orange County Transportation Authority, and surrounding jurisdictions to provide adequate capacity on regional routes for through traffic and to minimize cut-through traffic on the local street system.
- **Policy CD-13.4.** Require new developments to provide for the use of alternative modes of transit via internal trails or travel ways—public or private—for pedestrians and vehicles other than cars. New developments shall include such features as well-designed sidewalks and parkways, bike lanes and paths, and dedicated bus turn-outs.

City of Brea Municipal Code

The Municipal Code includes regulations and standards that govern traffic, parking and loading, encroachments on the public right-of-way, and development in Brea. Title 10, Vehicles and Traffic, includes general traffic regulations, traffic-control devices, operation of vehicles and bicycles, pedestrian regulations, and truck routes and terminals regulations. Any modifications to the roadway networks, which includes driveways, curbs, and sidewalks, would be subject to approval by the City of Brea. Additionally, construction work within the right-of-way of any public roadway would require the issuance of a permit by the City of Brea.

City of Brea Development Impact Fees

In July 1995, the Brea City Council adopted Ordinance 966 to establish traffic impact fees for all new development in Brea. Based on a study conducted in 2011, the City Council adopted Resolution 2011-096 to update the impact fees; it came into effect on February 4, 2012. The traffic impact fee schedule is:

- Low Density Residential (up to 6 dwelling units [du] per acre): \$1,974/du
- Medium Density Residential (7 to 12 du per acre): \$1,453/du
- High Density Residential (13 or more du per acre): \$1,203/du
- Commercial, General, and Mixed Use: \$2.35/gross square foot
- Regional Commercial: \$2.24/gross square foot
- Office/Industrial: \$1.25/gross square foot
- All other uses: \$89/trip end

City of Brea VMT Thresholds

In accordance with SB 743, the City of Brea adopted thresholds for VMT on October 6, 2020. They are consistent with the OPR Technical Advisory. Brea's Transportation Impact Analysis Guidelines provides both screening criteria and VMT thresholds for projects that exceed the screening criteria and require a full VMT assessment.

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5.12.1.2 EXISTING CONDITIONS

Existing Roadway Network

Intersections

In collaboration with the City of Brea staff, nine key study intersections have been identified; these intersections provide regional and local access to the Project site and define the extent of the boundaries for the traffic circulation analysis. These intersections are listed here with their governing jurisdictions. Figure 5.12-1, *Existing Lane Geometry and Controls*, identifies the existing roadway conditions, number of through traffic lanes, and intersection controls for the study area roadways.

1. Redbay Avenue at Birch Street / Brea
2. Associated Road at Birch Street / Brea
3. Associated Road at Greenbriar Lane / Brea
4. Associated Road at Shopping Center Driveway No. 1 / Brea
5. SR-57 Southbound (NB) Ramps/Shopping Center Dwy No. 2 at Imperial Highway / Caltrans² and Brea
6. Associated Road at Imperial Highway /Caltrans, Brea, and Caltrans
7. Castlegate Lane/Placentia Avenue at Imperial Highway / Caltrans and Brea
8. Brea Glenbrook Club Driveway/Project Driveway No. 1 at Greenbriar Lane / Brea
9. Project Driveway No. 2 and Greenbriar Lane / Brea

Street System

The principle local network of streets serving the Project site includes Birch Street, Imperial Highway, and South Associated Road.

- **Birch Street** is a four-lane, divided roadway oriented east-west. The posted speed limit on Birch Street is 35 miles per hour (mph) west of State College Boulevard, 45 mph between State College Boulevard and South Associated Road, and 50 mph east of South Associated Road. On-street parking is not permitted along this roadway. Birch Street is designated a Primary Arterial in the City of Brea's Master Plan of Roadways. A traffic signal controls the study intersection of Birch Street at South Associated Road.
- **Imperial Highway** is a six-lane, divided roadway generally oriented east-west. The posted speed limit on Imperial Highway is 45 mph west of SR-57 and 50 mph east of SR-57. On-street parking is not permitted. Imperial Highway is designated a Smart Street in Brea's Master Plan of Roadways. Traffic signals control

² Orange County Congestion Management Program Intersection

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the study intersections of Imperial Highway at SR-57 NB Ramps, South Associated Road, and Castlegate Lane / Placentia Avenue.

- **South Associated Road** is a four-lane, divided roadway generally oriented north-south. The posted speed limit on South Associated Road is 40 mph. On-street parking is not permitted. South Associated Road is designated a Secondary Arterial in the City's Master Plan of Roadways. Traffic signals control the study intersections of South Associated Road at Birch Street, Greenbriar Lane, and Imperial Highway.

Existing Transit Facilities

Public transit bus service is provided in the Project area by OCTA. There are four bus stops within the Project area that are all served by OCTA Route 129, which runs from La Habra Circle via La Habra Boulevard and Brea Boulevard through the Brea Mall Area via Birch Street and Kramer Boulevard to Anaheim. The two bus stops located on Birch Street, west of Associated Road are within approximately a half mile from the Project site. The two bus stops located on Birch Street, east of Associated Road are approximately just over a half mile from the Project site. Route 129 operates on approximately 45-minute headways during weekdays and 60-minute headways on weekends.

Existing Collision History

Collision data has been reviewed for study intersections in the traffic study area over the course of the previous five years. The following intersections have experienced more than five collisions in the span of one year that were not due to driver impairment:

- **Intersection No. 5** – SR-57 NB Ramps/Shopping Center Dwy No. 2 at Imperial Highway
- **Intersection No. 6** – Associated Road at Imperial Highway

Table 5.12-1, Study *Intersection Collision Data*, shows the number and type of collisions for each intersection per year. Exhibit 9-1 through Exhibit 9-9 in Appendix F2, *Traffic Impact Study*, of the Draft EIR show the pattern and type of collisions per year for each intersection that includes more than five collisions in a year (i.e., Intersections No. 5 and No. 6). Intersections No. 5 and No. 6 have experienced a significant number of collisions throughout the last five years. Intersection No. 5 experienced 11 collisions in 2022 that are dispersed throughout the intersection; at most, there are only 2 collisions of the same type/movement. Intersection No. 6 experienced 13 collisions in 2020; however, similar to Intersection No. 5, these collisions were dispersed throughout the intersection and at most there were only 2 collisions of the same type/movement. The most common type of collision at both Intersections No. 5 and No. 6 are rear-end collisions. Collision data sourced from Statewide Integrated Traffic Records System and Transportation Integrated Mapping System are included in Appendix J of the Traffic Impact Study (see Appendix F2 of the DEIR).

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Table 5.12-1 Study Intersection Collision Data

No.	Intersection	All Reported Collisions						All Non-Driver-Impairment Collisions					
		Year					Total	Year					Total
		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023	
1	Redbay Avenue at Birch Street	1	0	1	1	1	4	1	0	0	1	1	3
2	Associated Road at Birch Street	7	1	4	1	2	15	5	1	3	1	2	12
3	Associated Road at Greenbriar Lane	1	1	1	0	0	3	1	0	1	0	0	2
4	Associated Road at Shopping Center Driveway No. 1	2	2	1	0	0	5	2	2	1	0	0	5
5	SR-57 NB Ramps/ Shopping Center Driveway No. 2 at Imperial Highway ¹	5	1	12	12	16	46	4	0	9	11	13	37
6	Associated Road at Imperial Highway	7	14	8	6	4	39	7	13	8	6	4	38
7	Castlegate Lane/Placentia Avenue at Imperial Highway	5	3	1	3	4	16	5	2	1	3	4	15
8	Brea Glenbrook Club Driveway / Project Driveway No. 1 at Greenbriar Lane	0	0	0	0	0	0	0	0	0	0	0	0
9	Project Driveway No. 2 and Greenbriar Lane	Does not currently exist.						Does not currently exist.					

Source: RK Engineering 2024 (Appendix F2)

Notes:

¹ Transportation Integrated Mapping System has been sourced solely for study Intersection No. 5 between 2019 and 2020 due to the ambiguity from the Statewide Integrated Traffic Records System data for this intersection and time period.

Existing Bicycle Facilities

The Bikeway Plan recognizes the needs of bicycle users and aims to create a complete and safe bicycle network throughout the City. The existing and proposed bikeways as identified in the Brea Bike Plan are shown in Figure 5.12-3, *Existing and Proposed Bikeways*. Proximate to the Project site are existing Class II bike lanes along Birch Street, east of State College Boulevard, and on South Associated Road as well as a Class I bike trail (Tracks at Brea Trail).

Existing Pedestrian Facilities

Pedestrian connectivity between Brea Plaza and adjacent uses are provided via the existing sidewalk system. Sidewalks are generally provided throughout the City along with crosswalks at most major intersections; in particular, sidewalks are provided along Imperial Highway and South Associated Road bordering the site. Furthermore, crosswalks are provided at each of the key study sections to provide connectivity across the streets that border the site.

5.12.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

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- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

5.12.2.1 CITY OF BREA SIGNIFICANCE THRESHOLDS

VMT Thresholds

As described in 5.12.1.1, *Regulatory Background*, under “Senate Bill 743,” as of July 1, 2020, auto delay (traffic congestion) can no longer be used as the criteria for transportation analysis under CEQA. Automobile traffic impacts have historically been analyzed with LOS methodologies based on roadway capacity metrics (volume/capacity). LOS was replaced with a new metric—VMT.

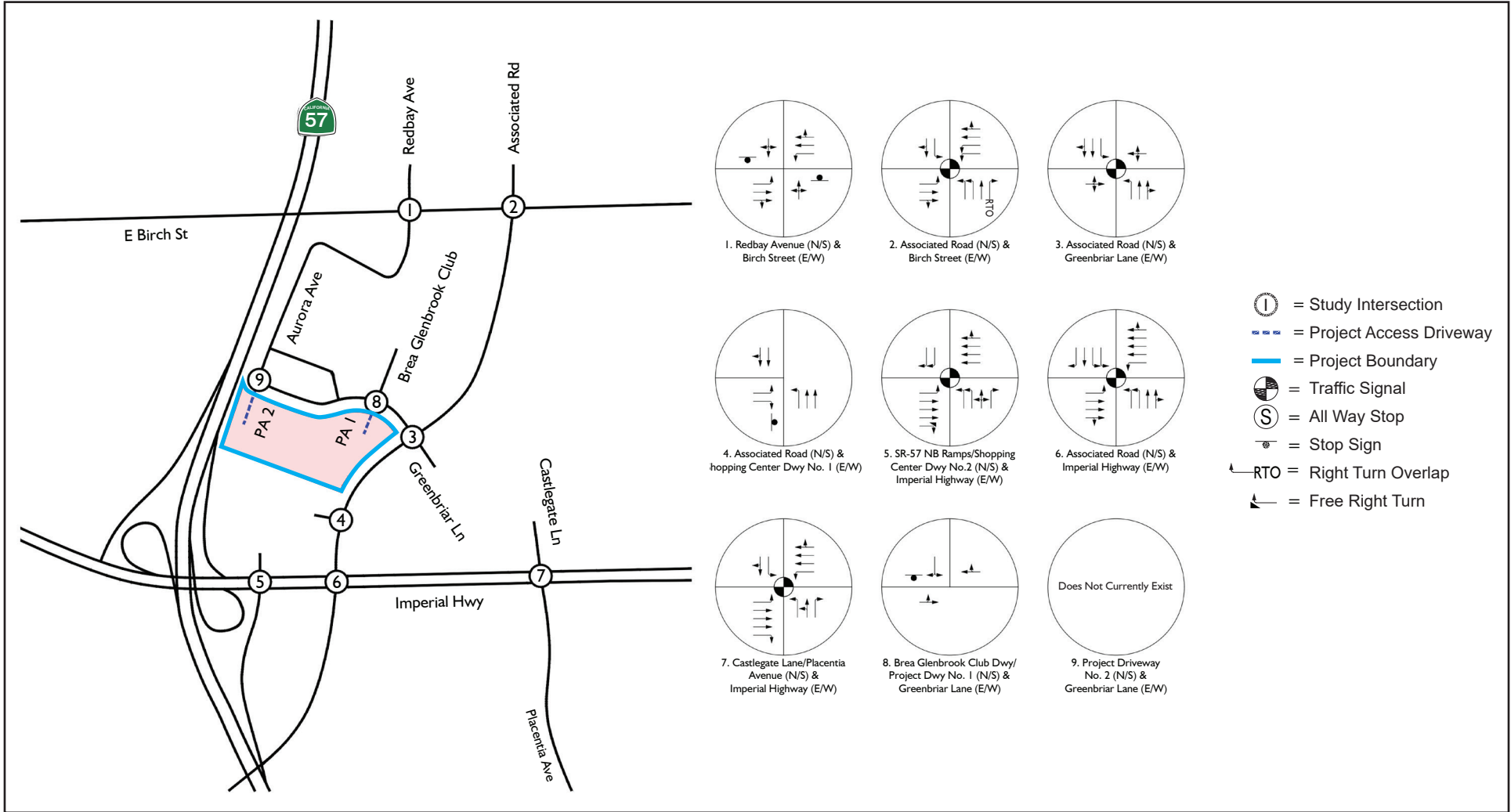
The City of Brea adopted significance thresholds and methodology to comply with SB 743 on October 6, 2020. For projects that exceed the screening criteria:

- **Project-Level Impacts** would result in a significant Project-generated VMT impact if the baseline, or cumulative, Project-generated VMT/SP exceeds the City of Brea General Plan Buildout VMT/SP.
- **Cumulative Impacts** under the no-Project condition shall reflect the adopted RTP/SCS, so if the Project is consistent with the SCAG RTP/SCS, its cumulative impacts on VMT shall be considered less than significant.

Multimodal Facility Impacts

A significant impact would occur to transit, bicycle, and/or pedestrian facilities if the Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, or otherwise decreases the performance or safety of such facilities.

Figure 5.12-1 - Existing Lane Geometry and Controls



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5.12.3 Plans, Programs, and Policies

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for transportation and traffic impacts are identified below.

- PPP TRAF-1 **Development Impact Fees.** The proposed Project is required to pay development impact fees to the City of Brea pursuant to the City's AB 1600 Transportation Improvement Nexus Program (Ordinance 996). Based on a transportation improvement nexus program study conducted in 2011, the City Council adopted Resolution 2011-096, which updated the impact fees, effective February 4, 2012. Fair-share fees offset or mitigate the cumulative traffic impacts caused by new development. The program ensures all future development in the City of Brea contributes on a fair-share basis.
- PPP TRAF-2 **Right-of-Way Improvements.** Modifications to the roadway network, including driveways, curbs, and sidewalks, are subject to approval of the City of Brea. Construction work within the right-of-way of a public roadway requires the issuance of a permit by the City of Brea.
- PPP TRAF-3 **Sight Distance Improvements.** The proposed Project is required to implement the following traffic improvements as a condition of approval at Brea Glenbrook Club Driveway/Project Driveway No. 1 at Greenbriar Lane (Intersection No. 8) and Project Driveway No. 2 and Greenbriar Lane (Intersection No. 9) to maintain clear line of sight for driver's exiting the Project site:
- Trim and maintain foliage continuously within the corner sight distance limited use area up to 2.5 feet in height to remain consistent with Caltrans Highway Design Manual.
 - Landscaping and/or hardscapes (i.e. monument signs) are required to be designed such that a driver's clear line of sight is not obstructed.

5.12.4 Environmental Impacts

5.12.4.1 METHODOLOGY

Trip generation represents the amount of traffic that is attracted and produced by a development. Trip generation rates from the latest Institute of Transportation Engineers (ITE) Trip Generation Manual (11th edition) were used to calculate the existing office building and proposed Project's trip generation. For the VMT analysis, the City's VMT thresholds and methodology are based on traffic associated with buildout of the City's General Plan land use designations; therefore, the difference between the existing land use and the proposed land use is used for the SB 743 VMT threshold determination (see Appendix F1). In comparison, existing trip credits for the vacant office buildings are not permitted for the non-CEQA transportation assessment since the existing office site has not been fully occupied for several years (see Appendix F2). The analysis for air quality, GHG emissions, energy, and noise in the EIR also does not consider trips generated by the vacant office building. Only the SB 743 analysis considers trips generated by the former Mercury Insurance building.

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As shown in Table 5.12-2, *Weekday Trip Generation Forecast*, and Table 5.12-3, *Weekend Trip Generation Forecast*, the proposed Project is forecast to generate approximately 1,296 weekday daily trips, which include approximately 86 weekday AM peak hour trips and approximately 103 weekday PM peak hour trips. Additionally, the proposed Project is forecast to generate approximately 1,577 Saturday daily trips.

Table 5.12-2 Weekday Trip Generation Forecast

Lance Use (ITE Code)	Weekday						Daily
	Weekday						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	
Single Family Attached (ITE Code 215)	22	64	86	62	41	103	1,296
General Office Building (ITE code 710)	221	30	251	40	197	237	1,788
Net Trip Generation	-199	34	-165	22	-156	-134	-492

Source: RK Engineering 2024 (Appendix F1).

Note: The level of service transportation analysis does not take into account trip generation for the vacant office building.

Table 5.12-3 Weekend Trip Generation Forecast

Lance Use (ITE Code)	Saturday				Sunday			
	Midday Peak Hour			Daily	Midday Peak Hour			Daily
	In	Out	Total		In	Out	Total	
Single Family Attached (ITE Code 215)	49	54	103	1,577	68	74	142	1,291
General Office Building (ITE code 710)	47	40	87	364	20	15	35	115
Net Trip Generation	2	14	16	1,213	48	59	107	1,176

Source: RK Engineering 2024 (Appendix F1).

Notes: The level of service transportation analysis does not take into account trip generation for the vacant office building.

5.12.4.2 IMPACT ANALYSIS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.12-1: The proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]

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General Plan

The City's transportation network includes roadways and pedestrian, bicycle, and public transit facilities to allow for the movement of persons and goods in the City. The policies of the City of Brea General Plan Circulation Element that are applicable to the proposed Project are:

- **Policy CD-10.1.** Work continually with Caltrans to improve access to and from State Route 57.
- **Policy CD-10.4.** Work with Caltrans, the Orange County Transportation Authority, and surrounding jurisdictions to provide adequate capacity on regional routes for through traffic and to minimize cut-through traffic on the local street system.
- **Policy CD-13.4.** Require new developments to provide for the use of alternative modes of transit via internal trails or travel ways—public or private—for pedestrians and vehicles other than cars. New developments shall include such features as well-designed sidewalks and parkways, bike lanes and paths, and dedicated bus turn-outs.

The proposed Project would provide adequate pedestrian connections from within the site to the existing sidewalks the Greenbriar Lane frontage. These existing sidewalks connect to the signalized intersection of Associate Road at Greenbriar Lane, which currently provides protected pedestrian crossings on all legs. These pedestrian facilities provide safe and efficient connectivity for pedestrians to nearby adjacent land uses (most notably commercial uses to the south and residential uses to the north and east) as well as other multimodal facilities (e.g., bus stops along Birch Street).

Furthermore, the proposed Project includes a pedestrian access point at the southeast corner of the site that would provide direct pedestrian access to the Brea Plaza Shopping Center. Additionally, Associated Road and Birch Street are both identified as Class II – Bike Lanes. Project residents would be able to easily connect to these existing bicycle facilities via Greenbriar Lane or Aurora Avenue/Redbay Avenue. The Project site is also within a mile of the Tracks at Brea, which is identified as an east/west corridor within the City of Brea General Plan.

Therefore, the proposed Project would comply with the policies of the General Plan's Circulation Element by providing amenities that would promote the use of active transportation in Brea. Impacts would be less than significant.

SCAG Connect SoCal Consistency

The proposed Project's consistency with the 2024 SCAG RTP/SCS, Connect SoCal, is detailed in Table 5.7-1, *SCAG's Connect SoCal Consistency Analysis*, of Section 5.7, *Land Use and Planning*. The goals of Connect SoCal are related to housing, transportation technologies, equity, and resilience. The proposed Project would redevelop the underutilized site with housing that would provide new types of housing necessary to accommodate the demographic shifts in the City within a TPA. Therefore, from a planning perspective, the proposed Project is slightly favorable, as it would provide housing units in proximity to commercial uses and

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employment opportunities (see Section 5.8, *Population and Housing*). Therefore, the proposed Project would be consistent with Connect SoCal. Impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.12-2: The proposed Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), regarding policies to reduce vehicle miles traveled. [Threshold T-2]

CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed after SB 743. It eliminates auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts:

Generally, VMT is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) ... [regarding roadway capacity], a project's effect on automobile delay shall not constitute a significant environmental impact.

The City of Brea has developed three types of screening criteria that can be applied to effectively screen projects from a full VMT assessment:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

Step 1: Transit Priority Area Screening.

Based on the City of Brea Transportation Impact Analysis Guidelines, projects in a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. Table 5.12-4, *Transit Priority Screening Analysis*, provides a consistency analysis with the TPA screening criteria exceptions. As shown in this table, all four appropriateness checks are satisfied.

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Table 5.12-4 Transit Priority Screening Analysis

TPA Screening Criteria	Consistency Analysis with TPA Screening Criteria
Has a Floor Area Ratio (FAR) greater than or equal to 0.75	Consistent. The proposed Project is expected to have a FAR greater than 0.75.
Includes less than or equal to parking for use by residents, customers, or employees of the project than required by the City	Consistent. The proposed Project is not expected to provide more parking than what the City Development Code mandates.
Is inconsistent with the applicable Sustainable Communities Strategy (SCS)	Consistent. The proposed Project is consistent with the SCS. As identified in Impact 5.12-1, the proposed would redevelop the underutilized site with housing that would provide new types of housing necessary to accommodate the demographic shifts in the City. Therefore, from a planning perspective, the proposed Project is slightly favorable, as it would provide housing units in proximity to commercial uses and employment opportunities and would be consistent with the goals of SCAG's SCS.
Does not replace affordable residential units with a smaller number of moderate- or high-income residential units	Consistent. The proposed Project is not replacing any existing affordable housing units.

Source: RK Engineering 2024a (Appendix F1)

To determine if the Project site is in a TPA, the North Orange County Collaborative VMT Traffic Study Screening Tool was utilized. Based on this tool, the Project site is in a TPA (see Appendix A of the VMT study in Appendix F1 of the Draft EIR). Per the direction of City of Brea staff, a TPA can be established based on both existing or planned service levels of 15 minutes or less³. Therefore, the proposed Project is determined to be situated within a TPA under Step 1.

Step 2 Low VMT Area Screening

Per the City of Brea Transportation Impact Analysis Guidelines, residential and office projects in a low VMT-generating area are presumed to have a less than significant impact absent substantial evidence to the contrary (see Table 5.12-3). To identify if the proposed Project is in a low-VMT-generating area, the City of Brea's Low-VMT Area Map was utilized (see Appendix B of Appendix F1 of the DEIR). The proposed Project is identified to not be in a low-VMT-generating zone. The Project site is in a "Higher than City Average" zone. Therefore, the proposed Project does not satisfy the screening criteria based on Step 2.

Step 3 Project Type Screening

Certain project types are eligible to screen from a project-level VMT assessment because they can be presumed to have a less than significant impact absent substantial evidence to the contrary because their uses are local serving in nature. These types of projects include:

- Local parks
- Local-serving retail uses less than 50,000 square feet
- Community institutions (public libraries, fire stations, local government)

³ Assembly Bill 2553, signed September 2024, revised the definition of major transit stop to have a service interval frequency of 20 minutes.

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- Affordable, supportive, or transitional housing
- Projects generating less than 110 daily vehicle trips

As indicated in the VMT Assessment (Appendix F1) and consistent with the OPR Technical Advisory and the City of Brea's Transportation Impact Analysis Guidelines, projects generating less than 110 daily vehicle trips would have a less than significant impact. As shown in Table 5.12-2, the proposed Project would generate 492 fewer daily weekday trips when compared to the current land use designation (RK Engineering 2024a). Since the proposed Project would generate a decrease in daily vehicle trips to and from the site, it can be assumed that the VMT would also be reduced; thus, the proposed Project would have no significant negative impact on the transportation system.

Therefore, in accordance with the City of Brea's Transportation Impact Analysis Guidelines, the proposed Project is exempt from a VMT assessment, and it is assumed that implementation of the proposed Project would not have the potential to result in a VMT impact. Therefore, impacts are less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.12-3: Project circulation improvements have been incorporated to adequately address potentially hazardous conditions (sharp curves, etc.), potential conflicting uses, and emergency access.
[Threshold T-3]

A site access evaluation was conducted to determine if there were potential conflicts associated with site access, including potential vehicle pedestrian conflicts.

Access to the proposed Project site would be provided via two full-access unsignalized driveways along Greenbriar Lane. Project Access Driveway No. 1, or "A" Drive, would be the future fourth (south) leg of the existing Brea Glenbrook Club Driveway/Greenbriar Lane intersection. Project Access Driveway No. 2, or "C" Drive, would be the future third (south) leg of the existing knuckle at Aurora Avenue and Greenbriar Lane. Project Access Driveways No. 1 and No. 2 would have the same driveway widths and lane geometry. The driveway would be 32 feet wide (i.e., two 16-foot-wide lanes with a 6-inch curb and gutter on both sides of the driveway) (see Exhibit 1-2 in Appendix F2). Project Access Driveway No. 1 would be signed as the primary entry and exit to the proposed Project site in an attempt to minimize traffic using Intersection No. 1 (Redbay Avenue and Birch Street). The shared access points between the Brea Shopping Plaza and the Project site would be eliminated; therefore, the proposed Project would eliminate cut-through traffic on the Brea Plaza site to the south. The proposed Project would provide pedestrian connectivity between the Project site and Brea Plaza via a pedestrian walkway on the southeast portion of the Project site.

Spacing Between Driveways and Intersections

The forecast queues for the turning movements at the two Project access points do not identify queuing deficiencies along Greenbriar Lane along the Project frontage (see Appendix F2). As such, there will be adequate spacing between the driveways and adjacent intersections. Therefore, impacts would be less than significant.

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Driveway Signalization

As identified in the traffic analysis, the proposed driveway intersections would operate at an acceptable level of service under opening year with-Project conditions. Intersection No. 9 (Project Driveway No. 2 and Greenbriar Lane) is also a three-legged intersection that is planned to only have one stop control, allowing for efficient circulation on the public roadway. Therefore, signalization would not be recommended since the level of service would be satisfactory with Project conditions.

Turn Conflicts/Restrictions

As part of the proposed Project, Greenbriar Lane would be realigned from the Brea Glenbrook Club Driveway to Associated Road. This realignment would eliminate an unnecessary intersection (previously serving the Mercury Insurance lot) and allow for more efficient travel along Greenbriar Lane. Project Access Driveway No. 1, or “A” Drive, will be the future fourth (south) leg of the existing Brea Glenbrook Club Driveway/Greenbriar Lane intersection. As such, there are no turning conflicts, and neither driveway is recommended to have any access restrictions. Additionally, based on review of the site plan from an on-site circulation standpoint, there would not be significant conflicts between vehicles or with pedestrian/bicycles. Adequate radii is provided at both Project Driveways No. 1 and No. 2 to facilitate waste management vehicle turning movements. Vehicles and service vehicles can navigate the site safely and efficiently. Therefore, no hazards related to site design are identified.

Sight Distance

An intersection sight distance analysis has been conducted for both driveways along Greenbriar Lane (see Appendix F2). As part of this analysis, a sight line is developed and a “limited use area” is created, which designates an area between the edge of the pavement and the driver’s line of sight. This area prohibits obstructions to maintain adequate sight distance at the intersection. The line of sight has been created utilizing the methodology for stopping sight distance to provide a more accurate representation of the sight distance. As such, according to the Orange County Highway Design Manual, the minimum stopping sight distance for a roadway classified as a local street is 150 feet for both horizontal and vertical curves. Additionally, per the Caltrans Highway Design Manual, the minimum stopping sight distance is based on the design speed of the major road, in which, the speed limit for Greenbriar Lane is 25 mph. With implementation of PPP TRAF-3, sight distance would be maintained and no impacts would occur.

Collision History

Table 5.12-1 in Section 5.12.1.2, *Existing Conditions*, identified the number and type of collisions for each intersection per year in the vicinity of the Project site. However, no Project-specific impacts have been identified, and impacts are less than significant.

Caltrans Queuing Analysis

A queuing analysis was conducted to evaluate the queue lengths at Intersection No. 5 (SR-57 northbound ramps/shopping center driveway No. 2 at Imperial Highway) and Intersection No. 6 (Associated Road at Imperial Highway) (see Appendix F2). As identified in the traffic analysis, adequate storage is provided for all

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reported turning movements under existing conditions, opening year without Project conditions, and opening year with Project conditions. Therefore, no hazards related to queuing are identified.

Emergency Access

Brea Fire Department Station #1 is 1.70 miles northwest of the Project site, and Station #2 is 1.05 miles northwest of the Project site. According to the Brea Fire Department, the standard goal for desired response time for emergency calls is 7.5 to 8.5 minutes and for non-emergencies it is 11 to 13 minutes (Mielke Pesqueira 2024). The surrounding roadways would continue to offer emergency access to the Project area and surrounding properties during and after construction. Moreover, the proposed Project would result in fewer trips than the former office use and would not result in inadequate emergency access, and impacts to adopted emergency response and evacuation plans are less than significant. Impacts to emergency services would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.12.5 Cumulative Impacts

The proposed Project would be consistent with adopted policies, plans, and programs regarding circulation, including public transit, bicycle, and pedestrian facilities. Cumulatively, the proposed Project would not worsen queuing or stacking at the nine study intersections. Site access is adequately designed and would not combine with other area traffic impacts to result in a significant cumulative impact on circulation or create hazardous conditions.

5.12.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts are less than significant: Impacts 5.12-1, 5.12-2, and 5.12-3.

5.12.7 Mitigation Measures

No significant impacts are identified, and no mitigation measures are warranted.

5.12.8 Level of Significance After Mitigation

No significant transportation impacts are identified.

5.12.9 References

Brea, City of. 2003. The City of Brea General Plan. <https://www.ci.brea.ca.us/179/General-Plan>.

———. 2020, October 6. Vehicle Miles Traveled (VMT) and VMT Threshold Adoption Implementing the Updates to the Guidelines for the California Environmental Quality Act (CEQA).

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Mielke, Dan (Deputy Fire Chief). 2024, September 26. Response to “Greenbriar Residential Development Fire Questionnaire.” Brea Fire Department. DEIR Appendix E.

Orange County Transportation Authority (OCTA). 2023, November. 2023 Orange County Congestion Management Program Report. <https://octa.net/programs-projects/programs/plans-and-studies/congestion-management-program/>.

RK Engineering Group Inc. 2024a. Greenbriar Multifamily Residential Project Vehicle Miles Traveled (VMT) Screening Analysis. DEIR Appendix F1.

———. 2024b. Greenbriar Multifamily Residential Project Revised Traffic Impact Study. DEIR Appendix F2.

Southern California Association of Governments (SCAG). 2024, April 4. Connect SoCal Plan: The 2024–2050 Regional Transportation Plan / Sustainable Communities Strategy of the Southern California Association of Governments. <https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx>.

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5.13 TRIBAL CULTURAL RESOURCES

Tribal Cultural Resources (TCR) include landscapes, sacred places, or objects with a cultural value to a California Native American tribe. This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the proposed Greenbriar Residential Development Project (proposed Project) to impact TCRs in Brea. Potential impacts to other cultural resources (i.e., prehistoric, historic, paleontological, and disturbance of human remains) are evaluated in Section 5.3, *Cultural and Paleontological Resources*.

The analysis in this section is based in part on the following information:

- *Cultural and Paleontological Resources Services for the Mercury Insurance Property*, Duke CRM, July 25, 2024

A complete copy of this study is included in Appendix C1 of this DEIR. Tribal consultation correspondence is included as Appendix C2.

5.13.1 Environmental Setting

5.13.1.1 REGULATORY BACKGROUND

Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (United States Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (United States Code, Title 25, Sections 3001 et seq.) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Indian tribes.

State Regulations

California Public Resources Code

Archaeological resources are protected pursuant to a wide variety of state policies and regulations under the California Public Resources Code (PRC). In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the PRC and CEQA.

California PRC Sections 5097.9 to 5097.991 protect Native American historical and cultural resources and sacred sites and identify the powers and duties of the NAHC. It also requires notification to descendants regarding Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

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California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that if human remains are discovered on the project area, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Register of Historical Resources

The California Register of Historic Resources is the state version of the National Register of Historic Resources program (see also Section 5.3, *Cultural and Paleontological Resources*). It was enacted in 1992 and became official January 1, 1993. The California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. According to subsection (c) of PRC Section 5024.1, a resource may be listed as a historical resource in the California Register if it meets any of the four National Register criteria.

California Senate Bill 18

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

Senate Bill 18 was signed into law in September 2004 and went into effect on March 1, 2005. It places new requirements upon local governments for developments within or near "traditional tribal cultural places" (TTCP). Per SB 18, the law requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Tribal Guidelines recommend that the NAHC provide written information as soon as possible but no later than 30 days after receiving a request to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation or it may not. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, they would be included in the project's EIR. If both the City of Brea and the tribe agree that adequate mitigation or preservation measures cannot be taken, neither party is obligated to take action.

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SB 18 is triggered before the adoption, revision, amendment, or update of a city's or county's general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, because state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code Section 65453). In addition, SB 18 provides a new definition of TTCP requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies, or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. (Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities.) SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

Assembly Bill 52

AB 52 took effect July 1, 2015, and requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources, which include heritage sites. Under AB 52, a tribal cultural resource is defined similar to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.

Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on TCRs and define mitigation to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it. The tribe then has 30 days after receiving the notification to respond if it wishes to engage in consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a tribal cultural resource, or a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Local Regulations

City of Brea General Plan

The Community Development chapter of the City of Brea General Plan provides goals and policies on the preservation of historic resources in the City.

5.13.1.2 EXISTING CONDITIONS

A sacred lands file search conducted by the NAHC for the Project area did not identify any sacred lands. The NAHC identified seven Tribes as potentially having local knowledge.

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- Gabrielino Band of Mission Indians – Kizh Nation
- Gabrielino/ Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California
- Gabrielino/ Tongva Nation
- Gabrielino/ Tongva Tribe
- Juaneño Band of Mission Indians Acjachemen Nation
- Santa Rosa Band of Cahuilla Indians

The City notified the tribal representatives on the City's AB 52 Tribal Consultation list and individuals identified on the NAHC's SB 18 Tribal Consultation list about the proposed Project and asked for information about potential resources at or near the Project area. Responses were received from the Gabrieleno Band of Mission Indians – Kizh Nation and the Gabrielino Tongva Indians of California.

5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.13.3 Plans, Programs, and Policies

- PPP TCR-1 Pursuant to California Health and Safety Code Section 7050.5, if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation. If the coroner determines that the remains are not subject to his or her authority and has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

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5.13.4 Environmental Impacts

5.13.4.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.13-1: The proposed Project would not cause a substantial adverse change in the significance of a historic tribal cultural resource. [Threshold TCR-1.i]

Historic Tribal Cultural Resources

As discussed in Section 5.3, *Cultural Resources*, of this Draft EIR, no resources under the NRHP and CRHR criteria have been recorded within the Project site. The existing building on the Project site was constructed in 1976; therefore, it is not of historic age and does not meet the definition of a historic resource pursuant to CEQA (Appendix C1). The closest locally designated historical resource (“Practice House”) is 0.6 mile to the west (Brea 2003). The proposed Project would not impact TCRs listed on any of the registers of historic resources.

The Project area is developed with an office building and surrounded by developed uses that include residential, commercial, and recreational uses. A Sacred Land Files request was submitted to the NAHC to inquire about the presence/absence of sacred or religious sites in the vicinity of the Project site. The NAHC’s Sacred Lands File record search received a negative result on May 14, 2024; thus, no tribal resources are known to exist on or near the Project site. Therefore, implementation of the proposed Project would not impact tribal cultural resources pursuant to Public Resources Code Section 21074(a)(1). No impact to historical resource would occur.

Level of Significance Before Mitigation: No Impact.

Impact 5.13-2: The proposed Project could impact undiscovered tribal cultural resources. [Threshold TCR-1.ii]

Prehistoric/Archeological Tribal Cultural Resources

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and Project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process.

Effective July 1, 2015, AB 52 added TCRs as a resource subject to review under CEQA. AB 52 requires meaningful consultation between lead agencies and California Native American tribes on potential impacts to TCRs, as defined in PRC Section 21074. A TCR is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either on or eligible for inclusion in the California Historic Register, or is a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC Sections 21074[a][1–2]).

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Sacred Lands File Search

The Project area is developed with an office building and associated structures, and surrounded by developed uses that include residential, commercial and recreational uses. The NAHC's Sacred Lands File record search received a negative result on May 14, 2024; thus, no tribal resources are known to exist on the Project site.

SB 18 and AB 52 Consultation

In accordance with SB 18 and AB 52, the City notified the local tribes identified by the NAHC and on the City's Tribal Consultation list about the proposed Project on June 27, 2024, to determine the potential for tribal cultural resources onsite and to determine if local knowledge of TCR is available about the Project area and surrounding area. The following tribes responded and requested consultation pursuant to AB 52 and SB 18:

- **Gabrielino Band of Mission Indians – Kizh Nation (Kizh Nation).** The Kizh Nation requested to consult with the City pursuant to AB 52. The City and Kizh Nation consulted over email. The Kizh Nation provided language for Mitigation Measure TCR-1.
- **Gabrielino Tongva Indians of California (GTIOC).** The GTIOC requested to consult with the City pursuant to AB 52. The City scheduled consultation with the GTIOC on July 23, 2024. Following the meeting the GTIOC provided a treatment plan for TCRs.

Based on the records search, the potential to uncover tribal cultural resources for the site is low because of previous disturbance associated with the Project site, which is currently developed with an office building, and the surrounding residential, recreational and commercial development. However, because the proposed Project would require utility trenching and other ground-disturbing activities for construction, there is potential to uncover TCRs during ground-disturbing activities.

Ground-disturbing activities, such as utility trenching and grading, may encounter undisturbed native soils, and it is possible that subsurface TCRs could be discovered. The disturbance of these TCRs could cause a substantial adverse change in the significance of the resource(s) if not mitigated.

Level of Significance Before Mitigation: Potentially Significant.

5.13.5 Cumulative Impacts

Cumulative impacts to TCRs would occur when the impacts of the proposed Project, in conjunction with other Projects and development in the City, result in multiple and/or cumulative impacts to TCRs in the area. The SLF did not identify any recorded TCR on or near the Project site. As with the proposed Project, each related cumulative project would be required to comply with AB 52 and PRC Section 21083.2(i), which addresses accidental discoveries of archaeological sites and resources, including tribal cultural resources. Therefore, any discoveries of TCRs caused by the Project or related projects would be mitigated to a less than significant level. Therefore, Project impacts would not be cumulatively considerable.

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5.13.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.13-1.

Without mitigation, the following impacts would be **potentially significant**:

Impact 5.13-2 Tribal cultural resources could be adversely impacted by ground disturbing activities associated with the proposed Project.

5.13.7 Mitigation Measures

Impact 5.13-2

See also Mitigation Measure CUL-1 in Section 5.3, *Cultural and Paleontological Resources*, for archaeological resources.

TCR-1 Prior to the commencement of any ground disturbing activity at the Project site, the Project Applicant shall retain a total of two Native American Monitors, each approved by the tribes that consulted on this Project pursuant to Assembly Bill AB52 (the “Tribe” or the “Consulting Tribe”), and in concurrence with the City of Brea as the CEQA lead agency. The Applicant shall coordinate with each of the Consulting Tribes to develop an executed contract to pay for tribal monitors to be present during ground-disturbing activities. Prior to the issuance of any permit necessary to commence a ground-disturbing activity, a copy of the executed contract shall be submitted to the City of Brea Community Development Department.

- The Tribal monitors will only be present during on-site and off-site portions of the area included as part of the Project grading or improvement permits during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribes as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Project area. The Tribal Monitors will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitors have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources.
- Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by Project activities shall be evaluated by the qualified archaeologist and Tribal monitors approved by the Consulting Tribes. If the resources are Native American in origin, the Consulting Tribes will retain it/them in

5. Environmental Analysis

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the form and/or manner the Tribes deems appropriate, for educational, cultural and/or historic purposes.

- If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease within 100 feet of discovery, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
- Work may continue on other parts of the Project Site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]).
- If a non-Native American resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource,” time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources.
- Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any qualifying historic archaeological resource deemed significant by a qualified archaeologist as a “historical resource” or “unique archaeological resource”, shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

5.13.8 Level of Significance After Mitigation

Impact 5.13-2

Mitigation Measures CUL-1 and TCR-1 would reduce potential impacts associated with tribal cultural resources to a level that is less than significant. Mitigation Measure TCR-1 would require a tribal monitor to be present if a cultural resource of Native American origin is discovered on-site. In accordance with Mitigation Measure CUL-1, non-Native American resources recovered would be deposited at a local museum or repository to ensure their preservation. Therefore, no significant unavoidable adverse impacts relating to tribal cultural resources remain.

5.13.9 References

Brea, City of. 2003. The City of Brea General Plan. <https://www.ci.brea.ca.us/179/General-Plan>.

Duke CRM. 2024, July 25. Cultural and Paleontological Resources Services for the Mercury Insurance Property. DEIR Appendix C1.

5. Environmental Analysis

5.14 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) addresses the potential for implementation of the Greenbriar Residential Development Project (proposed Project) to impact utilities and service systems in the City of Brea. Utilities and service systems include water supply and distribution systems; wastewater (sewage) conveyance and treatment; storm drainage systems; solid waste collection and disposal services; and other public utilities. Impacts to hydrology (e.g., flooding) and water quality can be found in Section 8.4, *Hydrology and Water Quality*. Impacts associated with wasteful or unnecessary use of energy can be found in Section 5.4, *Energy*. Cumulative impacts for utilities are based on the service area of the utilities: Orange County Sanitation District, City of Brea Public Works Department, Orange County Flood Control District, and Orange County Waste and Recycling. The analysis in this section is based in part on the following technical studies:

- *Preliminary Sewer System Hydraulic Analysis*, Hunsaker & Associates Irvine, July 2024
- *Preliminary Hydrology Analysis for Greenbriar Residential Development Project*, Hunsaker & Associates Irvine, July 2024
- *Preliminary/Conceptual Water Quality Management Plan*, Hunsaker & Associates Irvine, July 2024

Complete copies of these studies are included in this DEIR as Appendices G1, G2 and G3, respectively.

5.14.1 Wastewater Treatment and Collection

5.14.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act and National Pollution Elimination Discharge System

The federal Clean Water Act requires that wastewater be treated before it is discharged to Waters of the United States (US Code Title 33, Sections 1251 et seq.). Requirements for waste discharges from publicly owned treatment works to navigable waters are addressed in National Pollution Elimination Discharge Systems (NPDES) regulations under the Clean Water Act. NPDES permits for such discharges in the Project region are issued by the Santa Ana Regional Water Quality Control Board.

Regional

Impacts Fees

Orange County Sanitation District (OCSd) collects Capital Facilities Capacity Charges for the collection, treatment, and recycling or disposal of wastewater. The capital facilities fees per land use is as follows:

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- Single Family Residential (per unit)¹
 - 5 + bedrooms – \$8,879.00
 - 4 bedrooms – \$7,602.00
 - 3 bedrooms – \$6,388.00
 - 2 bedrooms – \$5,175.00
 - 1 bedroom – \$3,960.00
- Multifamily Residential (per unit)²
 - 4+ bedrooms – \$6,900.00
 - 3 bedrooms – \$5,686.00
 - 2 bedrooms – \$4,472.00
 - 1 bedroom – \$3,194.00 (OCSD 2024a)

Local

2021 Sewer Master Plan

The City of Brea's Sewer Master Plan evaluates the capacity of the entire system and identifies the capital improvement program that will provide the needed capacity in accordance with its criteria. Within the Sewer Master Plan the City identified the near-term future developments that are currently under various planning stages. Future model loads were also calculated and estimated, from unit flow factors and corresponding planning data from specific plans, developer studies, or the City's General Plan (Brea 2021a).

2016 Sewer System Management Plan

The Sewer System Management Plan was prepared in compliance with order 2006-0003-DWQ issued by the State Water Resources Control Board. The order requires every owner and operator of a publicly owned sewer system to develop and implement a system-specific sewer system management plan. This plan sets goals, the actions needed to reach them, and guidelines for various activities involved in managing, operating, maintaining, repairing, replacing, and expanding the sewer system. In 2021 there was an audit of the Sewer System Management Plan and recommendations were made for each section of the 2016 Sewer System Management Plan.

Impact Fees

The current fee schedule just indicates that all new developments have a \$383/per connection fee. The City of Brea requires sanitary sewer connection fees based on the fixtures installed:

¹ Bedroom additions are considered a change of use and a capital facilities capacity charge (CFCC) must be paid. Enclosed loft additions, bonus rooms, offices, workout rooms, media rooms, libraries, and any other enclosed addition that could potentially be used as a bedroom are included in this category. The classification of these additions will be reviewed and determined by OCSD staff (OCSD2024a).

² Multifamily Residential (MFR) units consist of multiple attached units that are not sold individually and receive one secured property tax bill, such as apartments. Multiple attached units that are not sold individually and are senior housing with individual living units that include a kitchen are considered MFR units (OCSD 2024a).

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- Bidet, dental units, drinking fountain, showers gang per head, sink (bar, floor), washbasin (lavatory): \$24 per fixture
- Bathtub, floor drain, laundry tub or washer, shower, sink (bar commercial/kitchen/service), urinal (pedestal/stall), wash basin (set, double lavatory): \$47 per fixture
- Interceptors (grease/oil/solids, sand, auto wash, etc.), laundry tub or washer (self-serve), receptors, sink (flushing rim), swimming pool: \$71 per fixture
- Urinal wall trough, water closet (toilet): \$94 per fixture
- Mobile home park (each pad): \$333 (Brea 2024a)

Existing Conditions

Wastewater Flows

The City's existing sewer collection system is made up of a network of gravity sewers and three sewer lift stations (Brea 2021a). The gravity system consists of approximately 135 miles of pipe and 3,400 manholes (Brea 2021a). Most of the gravity sewers are constructed of vitrified clay pipe with sizes ranging from 4 inches to 27 inches in diameter (Brea 2021a). The sewer system service area consists of 11 major sewersheds in which City sewers convey sewage generally south and/or west to an OCSD trunk sewer or an adjacent agency's sewer system (Brea 2021a).

In the Sewer Master Plan, a hydraulic model analysis was done for the entire sewer system and took into account existing pipes, manholes, lift stations, and connection points to regional facilities owned and operated by OCSD or other adjacent agency sewer systems. (Brea 2021a). The hydraulic model identified existing capacity deficiencies in a total of 861 feet of pipe in two locations (Brea 2021a):

- Randolph Avenue and Imperial Highway: 495 feet in five 10-inch diameter sewer pipes.
- Walling Avenue, between De Jur Street and Delay Street: 366 feet of one 8-inch diameter sewer pipe.

Table 5.14-1, *Existing Wastewater Flows by Drainage Region*, shows a summary of the calculated existing (2021) wastewater flows generated by each drainage region.

Table 5.14-1 Existing Wastewater Flows by Sewershed

Sewershed Number	Sewershed Name	Area (acres)	Average Dry Weather Flow (mgd)	Peak Dry Weather Flow (mgd)
1	Imperial	956	0.6684	1.2267
2	Fullerton	1,213	1.0542	1.8654
3	Brea	146	0.1805	0.3679
4	Laurel	159	0.1431	0.2971
5	Rolling Hills	1,110	0.8595	1.5460
6	Associated	723	0.4747	0.8953

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Table 5.14-1 Existing Wastewater Flows by Sewershed

Sewershed Number	Sewershed Name	Area (acres)	Average Dry Weather Flow (mgd)	Peak Dry Weather Flow (mgd)
7	Cypress	102	0.0859	0.1857
8	Kraemer	968	0.7331	1.2463
9	Valencia	111	0.0862	0.1863
10	Carbon Canyon	2,193	0.5130	0.8159
11	Rose	271	0.0859	0.1857
City Total		7,952	4.8845	8.8183

Source: Brea 2021a.
mgd = million gallons per day

According to the Sewer Master Plan, the following future development projects were reviewed during the course of the study: Central Park Village, La Floresta, Brea Place, Brea Plumbing, 295 Lilac Lane, 201 North Berry Street, Brandywine Homes, Self-Storage, Industrial Building, 240 North Madrona Avenue, Brea Imperial Center (In-N-Out), Mercury Apartment, Raising Canes, Brea Imperial Center–Fogo De Chao, Brea Mall Expansion, Brea 265, Hampton Inn (Tower Records Building), Brea Plaza, Breitburn Energy, and Bridge Energy (Brea 2021a). When the Sewer Master Plan was written, these projects were either under construction, approved for entitlement, or under entitlement review; however, some of the projects never came to fruition or completely changed project type since the Sewer Master Plan was written (Brea 2021a). Table 5.14-2, *Ultimate Wastewater Flows by Drainage Region*, summarizes the calculated ultimate wastewater flows expected to be generated by each drainage region.

Table 5.14-2 Ultimate Wastewater Flows by Sewershed

Region Number	Region Name	Near-Term Future Condition ¹		Future Condition ²	
		Average Dry Weather Flow (mgd)	Peak Dry Weather Flow (mgd)	Average Dry Weather Flow (mgd)	Peak Dry Weather Flow (mgd)
1	Imperial	0.6684	1.2267	0.6684	1.2267
2	Fullerton	1.1128	1.9606	2.1317	3.5655
3	Brea	0.2054	0.4143	0.2054	0.4143
4	Laurel	0.1431	0.2971	0.1431	0.2971
5	Rolling Hills	1.2629	2.2026	1.2629	2.2026
6	Associated	0.5159	0.9667	0.5159	0.9667
7	Cypress	0.0859	0.1857	0.0859	0.1857
8	Kraemer	0.8712	1.4793	0.8712	1.4793
9	Valencia	0.0979	0.2096	0.0979	0.2096
10	Carbon Canyon	0.6526	0.9747	2.4522	3.8925
11	Rose	0.3061	0.5979	0.3061	0.5979
City Total		5.9222	10.5152	8.7407	15.0379

Source: Brea 2021a.
mgd = million gallons per day

¹ "Near-Term Future Condition" model scenario includes the sewage flows from existing customers and the near-term future developments.

² "Future Condition" modeling scenario includes the sewage from the existing customers, the near-term future developments, and the future SOI and Carbon Canyon developments.

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According to the 2021 Sewer Master Plan, analyses of the collection system main-line sewers showed ultimate capacity deficiencies in 1,487 feet of pipe in two drainage regions:

- **State College Blvd and Imperial Hwy:** Two sewer pipes that are a combined 636 feet long and both 8 inches in diameter.
- **Birch St, Bluegrass St, Primrose Ave, and Starflower St:** Four sewer pipes that are a total of 851 feet long and 6, 8, and 10 inches in diameter.

The Project site is in Sewershed 6, Associated, and is not near any of the identified capacity-deficient locations (Brea 2021a).

Pump Stations

The City owns and maintains three pump stations in the Fullerton Drainage Region:

- **Briarwood Pump Station** is on Briarwood Drive in the southwest corner of the City. It is a submersible pump station that serves 11 homes. Three homes are on South Puente Street just north of Briarwood Drive, and eight homes are along Briarwood Drive just west of South Puente Street. The pumps are housed within a 5-foot-diameter sewer main. The sewage is discharged through a 4-inch-diameter cast-iron force main. The alarm system for this facility consists of a flashing red light that indicates a high level or pump failure. Local residents call Brea Police and Fire Dispatch to notify the City of an alarm at this station (Brea 2016).
- **Arovista Park Pump Station** is a submersible pump station built in 2005. It relieves a deficient 15-inch-diameter sewer in the Fullerton Drainage Region. It lifts the portion of the wastewater that exceeds the capacity of the existing 15-inch sewer along the west side of the Brea Creek Channel into a new 15-inch relief sewer at a higher elevation in Mulberry Avenue, Acacia Street, Walnut Avenue, and Juniper Street to a connection to OCSD's Fullerton-Brea Interceptor (Brea 2016).
- **La Floresta Station** is located in the southeast portion of the City and serves approximately 647 homes. It is equipped with two submersible vortex pumps that are housed in an 8-foot square by 28-foot deep wet well. Effluent from the lift station is discharged through a 6-inch force main. The lift station is equipped with an 80-kilowatt sound-attenuated diesel-driven generator and automatic transfer switch (Brea 2016).

Orange County Sanitation District

OCSD is a public agency that provides wastewater collection, treatment, and disposal services to the central and northwest areas of Orange County. OCSD serves approximately 2.6 million residential, commercial, and industrial sources (OCSD 2024b). The wastewater from OCSD's service area travels through 388 miles of regional sewers to one of two treatment facilities—Plant No. 1 in Fountain Valley or Plant No. 2 in Huntington Beach (OCSD 2023a). Combined, these stations treat a total of 180 million gallons per day (mgd) of wastewater (OCSD 2023a).

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OCSD is currently undergoing the Westside Pump Station Enhancement Project, which is a regional odor control effort to reduce the odors from the regional sewer system across the service area (OCSD 2023b).

5.14.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1 Would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- U-2 Would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- U-5 Would result in a determination by the wastewater treatment provider which serves or may serve the project that has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.14.1.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for utilities and service systems are identified below.

- PPP USS-1 The Project will pay the Sanitary Sewer Connection Fees and Impact Fees collected by the City of Brea, which contribute to maintenance and installation of sewer improvements in the OCSD in accordance with Section 3.32.040, Sewer Service Fees and Charges, of the Brea City Code. Additionally, the Project will pay capital facilities fees to OCSD.

5.14.1.4 ENVIRONMENTAL IMPACTS

Impact 5.14-1: Project-generated wastewater could be adequately treated by the wastewater service provider for the Project. [Thresholds U-1, U-2 (part), and U-5]

Sewer Infrastructure

No wastewater is currently being produced at the Project site because the existing office building is currently vacant. The proposed Project would increase wastewater flows compared to current conditions. However, historically the Project site did produce wastewater flows associated with its former use as an office building. The total estimated average dry weather sewer flow at the Project site with implementation of the proposed Project would be 0.038 mgd, as shown in Table 5.14-3, *Greenbriar Site Sewer Flow*. The estimated peak wet weather flow is 0.109 mgd. The existing sewer lines would be used to convey flows from the proposed buildings.

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Table 5.14-3 Greenbriar Site Sewer Flow

Units (Du)	Duty Factor (Gpd/Du)	Average Dry Weather Flow (Mgd)	Peak Wet Weather Flow (Mgd)
Proposed Residential Development Type			
179	210	0.038	0.109

Source: Hunsaker and Associates 2024c (see Appendix G1).
Notes: mgd: million gallons per day

The existing 8-inch sewer main at Greenbriar Lane would be used to convey flows from the proposed uses on-site. From there the sewer would connect to the existing 12-inch sewer main on Associated Road to combine with flows from the surrounding area.

The Preliminary Sewer System Hydraulic Analysis analyzed the sewer flow from the Mercury Insurance Complex when it was still operational and found that the proposed Project would contribute less sewer flow to the existing sewer mains than flows associated with the former Mercury Insurance Complex. Additionally, the existing sewer system's capacity and ability to accept additional flows from the proposed Project were calculated using the existing flows in the existing sewer system without accounting for the loss of flows from the removal of the Mercury Insurance Complex.

The flow under peak wet weather conditions, including flows from the proposed Project, resulted in a depth-to-pipe-diameter ratio of 0.66 in the existing 8-inch sewer main in Greenbriar Lane, which is below the 0.75 design limit (see Appendix G1). Therefore, all the existing sewer lines have adequate capacity to convey the proposed Project's wastewater flows in addition to existing flow, and impacts are less than significant.

OCSD Wastewater Treatment Capacity

The additional sewer flows from the proposed Project would be treated at OCSD's treatment plants, which treat a total of 180 mgd (OCSD 2023a). OCSD had previously treated flows from the former Mercury Insurance building and the projected flows for the proposed project are less than the Mercury Insurance building flows. The proposed Project's sewer flows would be less than 1 percent of the city's total average dry weather flow of 8.082 mgd and would represent less than 0.1 percent of the total daily flows of 180 mgd treated at OCSD's treatment plants. Therefore, there is adequate residual wastewater treatment capacity in the region for the wastewater generated by the proposed Project.

Furthermore, the City collects sewer charges to support the operations of the sewer system and needed capital improvements identified in the Sewer Master Plan. The Sewer Master Plan identified approximately \$19 million in citywide sewer improvements needed over the next 20 years (Brea 2021a). On behalf of the County of Orange, the City of Brea collects Sanitary Sewer Connection and Impact fees at the issuance of building permits, which the Project applicant would be required to pay, to upgrade and maintain the sewer system. Additionally, the Project applicant would pay Capital Facilities Fee Charges to OCSD. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

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5.14.1.5 CUMULATIVE IMPACTS

Wastewater Treatment Capacity Impacts

The area considered for cumulative impacts to sewage services is OCSD, which serves 2.6 million people. The proposed Project would be less than one percent of the City's total average dry weather flow of 8.082 mgd, and it is expected that with both treatment plants OCSD would have adequate wastewater treatment capacity for wastewater generation by cumulative developments in its service area. No significant cumulative impact is anticipated, and buildout of the proposed Project would not contribute to a significant cumulative impact.

Sewer Infrastructure

Implementation of individual projects would require project-specific analyses during final design to evaluate sewer capacities related to the individual project. For regional impacts to OCSD facilities, individual projects would pay Capital Facilities Fee Charges to OCSD; such fees would reduce cumulative impacts to sewers. Costs for installing and upgrading City of Brea sewers are paid from sewer service fees, and on-site improvements would be implemented as part of the proposed Project. Therefore, payment of OCSD and City sewer fees would also reduce cumulative impacts to sewers. Furthermore, the proposed Project would generate less wastewater than the former office use. No cumulatively considerable impact to sewers would occur, and proposed Project buildout would not contribute to such an impact.

5.14.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.14-1 would be less than significant.

5.14.1.7 MITIGATION MEASURES

No mitigation measures are required.

5.14.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.2 Water Supply and Distribution Systems

5.14.2.1 ENVIRONMENTAL SETTING

Regulatory Background

State

20 x 2020 Water Conservation Plan

The 20 x 2020 Water Conservation Plan was issued by the Department of Water Resources in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the Department of Water Resources

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to prepare a plan implementing urban water conservation requirements (20 x 2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to the 2005 baseline use.

Senate Bills 610 and 221

To assist water suppliers, cities, and counties in integrating water and land use planning, the state passed Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001), effective January 1, 2002. SB 610 and SB 221 improve the link between information of water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that promote more collaborative planning between local water suppliers, cities, and counties. Both require detailed information regarding water availability to be provided to city and county decision makers prior to approval of specified large development projects. This detailed information must be included in the administrative record as the evidentiary basis for an approval action by the city or county on such projects. The statutes recognized local control and decision making regarding the availability of water for projects and the approval of projects. Future projects subject to SB 610 and SB 221 are required to provide a water supply assessment. Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA, as defined in Water Code Section 10912[a]. Under SB 221, approval by a city or county of certain types of residential subdivision requires an affirmative verification of sufficient water supply. SB 221 is intended as a fail-safe to ensure collaboration on finding the needed water supplies to serve a new large subdivision before construction begins. Because the proposed mixed-use Project has less than 500 dwelling units and less than 250,000 square feet of commercial office space, a water supply assessment is not required.

Urban Water Management Planning Act

The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires preparation of a plan that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period, in 5-year increments.
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (SBX7-7), which amends the act and adds new water conservation provisions to the Water Code.

The Urban Water Management Plan Act states that every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 acre-feet of water per year (afy) should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. Both SB 610 and SB 221 identify the urban water management plan

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(UWMP) as a planning document that can be used by a water supplier to meet the standards in both statutes. Thorough and complete UWMPs are foundations for water suppliers to fulfill the specific requirements of these statutes, and they are important source documents for cities and counties as they update their general plans. Likewise, general plans are source documents as water suppliers update the UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent.

Principles Governing CEQA Analysis of Water Supply

In *Vineyard Area Citizens for Responsible Growth, Inc., v. City of Rancho Cordova* (February 1, 2007), the California Supreme Court articulated the following principles for analysis of future water supplies for projects subject to CEQA:

- To meet CEQA's informational purposes, the EIR must present sufficient facts to decision makers to evaluate the pros and cons of supplying the necessary amount of water to the project.
- CEQA analysis for large, multiphase projects must assume that all phases of the project will eventually be built, and the EIR must analyze, to the extent reasonably possible, the impacts of providing water to the entire project. Tiering cannot be used to defer water supply analysis until future phases of the project are built.
- CEQA analysis cannot rely on "paper water." The EIR must discuss why the identified water should reasonably be expected to be available. Future water supplies must be likely rather than speculative.
- When there is some uncertainty regarding future availability of water, an EIR should acknowledge the degree of uncertainty, include a discussion of possible alternative sources, and identify the environmental impacts of such alternative sources. Where a full discussion still leaves some uncertainty about long-term water supply, mitigation measures for curtailing future development in the event that intended sources become unavailable may become a part of the EIR's approach.
- The EIR does not need to show that water supplies are definitely ensured, because such a degree of certainty would be "unworkable, as it would require water planning to far outpace land use planning." The requisite degree of certainty of a project's water supply varies with the stage of project approval. CEQA does not require large projects, at the early planning phase, to provide a high degree of certainty regarding long-term future water supplies.
- The EIR analysis may rely on existing urban water management plans, as long as the project's demand was included in the water management plan's demand accounting.
- The ultimate question under CEQA is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project.

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Local

2021 Water Master Plan

The City of Brea's 2021 Water Master Plan focuses addressing planned developments and associated demands defined by zoning, the General Plan, and Traffic Analysis Zones (Brea 2021b). The general scope of services for the 2021 Water Master Plan included a supply analysis, demand analysis, and updated the City's hydraulic model. Following this, a complete list of potential capital improvement program projects was developed, cost benefit analysis performed, and projects prioritized (Brea 2021b).

City of Brea Urban Water Management Plan

2020 Urban Water Management Plan

The City of Brea's 2020 UWMP was adopted in June 2021, and provides an assessment of the present and future water supply sources and demands within the City's service area, and an update to the City's water resource needs, water use efficiency programs, water reliability assessment, and strategies to mitigate water shortage conditions (Brea 2021c). Water demand in the City of Brea is likely to increase 4.5 percent over the next five years. In the longer term, water demand is projected to increase 2.1 percent from 2025 through 2045. The projected potable water use for 2045 is 9,745 acre-feet (af). In fiscal year 2019-2020, the City relied on 99 percent imported water from California Domestic Water Company and 1 percent local groundwater. The UWMP projects that by 2045, the water supply portfolio will shift to 92.5 percent imported water from California Domestic Water Company, 6.5 percent imported water from Municipal Water District of Orange County (MWDOC), and 1 percent groundwater, which matches the projected demand. The City can purchase more MET water (regional wholesaler for Southern California and direct supplier of imported water to MWDOC) through MWDOC should the need arise. Brea's 2020 UWMP concluded there was an adequate and reliable supply of water to provide for existing demand and estimated growth through the year 2045 for normal years, single dry years, and multiple dry years due to diversified supply and conservation measures (Brea 2021c).

Water Shortage Contingency Plan

The 2020 UWMP also presents a new 2020 Water Shortage Contingency Plan (WSCP) designed to prepare for and respond to water shortages, that is, when the water supply available is insufficient to meet the normally expected customer water use at a given point in time. A water shortage may occur due to a number of reasons, such as drought, climate change, and catastrophic events. The City's WSCP is the operating manual that is used to prevent catastrophic service disruptions through proactive management. The WSCP includes standardized action levels along with implementation actions to identify and efficiently implement steps to manage a water shortage.

Per Water Code Section 10632 (a)(3)(A), the City must include the six standard water shortage levels from the normal reliability, as determined by an annual assessment of water demand and supply. The six standard water shortage levels (see Table 5.14-4, *Water Shortage Contingency Plan Levels*) correspond to progressively increasing estimated shortage conditions and align with the response actions the supplier would implement to meet the severity of the impending shortages.

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Table 5.14-4 Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions
0	0% (Normal)	A Level 0 Water Supply Shortage. Condition exists when the City of Brea notifies its water users that no supply reductions are anticipated in this year. The City of Brea proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and local City of Brea goals for water supply reliability. Permanent water waste prohibitions are in place as stipulated in the City of Brea's Water Shortage Contingency Response Ordinance 1221.
1	Up to 10%	A Level 1 Water Supply Shortage. Condition exists when the City of Brea notifies its water users that due to drought, supply reductions or the City wants to continue conserve to promote conservation then a consumer demand reduction of up to 10% is necessary to make more efficient use of water and respond to existing water conditions. The City of Brea shall implement the mandatory Level 1 conservation measures identified in this WSCP. The type of event that may prompt the City of Brea to declare a Level 1 Water Supply Shortage may include, among other factors, a finding that its wholesale water provider calls for extraordinary water conservation.
2	11% to 20%	A Level 2 Water Supply Shortage. Condition exists when the City of Brea notifies its water users that due to drought, supply reductions or the City wants to continue conserve to promote conservation then a consumer demand reduction of up to 20% is necessary to make more efficient use of water and respond to existing water conditions. The City of Brea shall implement the mandatory Level 2 conservation measures identified in this WSCP. The type of event that may prompt the City of Brea to declare a Level 2 Water Supply Shortage may include, among other factors, a finding that its wholesale water provider calls for extraordinary water conservation.
3	21% to 30%	A Level 3 Water Supply Shortage. Condition exists when the City of Brea declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 30% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City of Brea must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	31% to 40%	A Level 4 Water Supply Shortage. Condition exists when the City of Brea declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 40% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City of Brea must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	41% to 50%	A Level 5 Water Supply Shortage. Condition exists when the City of Brea declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City of Brea must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.

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Table 5.14-4 Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions
6	>50%	A Level 6 Water Supply Shortage. Condition exists when the City of Brea declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that greater than 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City of Brea must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.

Source: Brea 2021c.

Municipal Code

Water Conservation

Chapter 13.20, Water Management Program, of the City's Municipal Code establishes a water conservation and supply shortage program that would reduce water consumption in the City through conservation, enable effective water supply planning, ensure reasonable and beneficial use of water, prevent waste of water, and maximize the efficient use of water in the city to avoid and minimize the effect and hardship of water shortage to the greatest extent possible. The Municipal Code also establishes permanent water conservation standards intended to alter behavior related to water use efficiency for nonshortage conditions, and further establishes three phases of water supply shortage response actions to be implemented during times of declared water shortage or declared water shortage emergency, with increasing restrictions on water use in response to worsening drought or emergency conditions and decreasing supplies.

Water Impact Fees

In July 1995, the Brea City Council adopted Ordinance 967, establishing water impact fees for certain new development projects in Brea and annexed portions of its sphere of influence. In March 2003, the Brea City Council adopted an updated Water Master Plan. Water impact fees were modified according to the updated plan. The fees are necessary to ensure that adequate water infrastructure and facilities are provided to new development projects. The amount of fee per dwelling unit varies depending upon a project's geographical location and elevation.

All new development projects are subject to the Water Impact Fees, except:

- Alterations to an existing building.
- Reconstruction (within two years) when a building has been destroyed by fire, wind, earthquakes, vandalism, or other natural or man-made disasters.
- Additions to a single-family or multiple-family residence and construction of public schools.

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Therefore, the proposed Project is subject to the water impact fees prior to the issuance of any building permits. In some cases, a developer may be required to make certain water improvements in addition to or in lieu of paying water impact fees. In this case, however, the total cost of water improvements and/or fees would not exceed the development's fair share of providing the water infrastructure or facilities.

Water Connection Fees

Water connection fees are applicable to all new construction, with the charge payable at the time the building permit is issued. This shall apply to each dwelling unit, apartment, mobile home or trailer space, or commercial or industrial water user to be served from the same meter whether constructed at the same time or added onto the existing property.

- \$3,622 per 1-inch water meter
- \$12,161 per 2-inch water meter (Brea 2024b)

Fire Service Connection Fees

Fire Service Connection fees are applicable to all new construction where fire service is to be installed, with the charge payable at the time the Building Permit is issued by the City. Fire service connection fees are buy-in fees used to recover the cost of existing reservoir storage and water system capacity for private fire systems.

- \$4,632 for a 4" Connection
- \$6,485 for a 6" Connection
- \$8,431 for a 8" Connection
- \$12,140 for a 10" Connection
- \$12,140 for a 12" Connection (Brea 2024b).

Existing Conditions

The City of Brea purchases imported water from the Metropolitan Water District of Southern California (MET) and the California Domestic Water Company (CDWC) through its three MET connections that are metered using flow control valves and one CDWC connection that uses gravity to feed the system. Additionally, the City maintains five emergency interconnections with neighboring water purveyors.

The City operates 7 storage distribution reservoirs with a combined storage capacity of 69.5 million gallons, 5 booster pump stations with a total pumping capacity of approximately 14,800 gallons per minute (gpm), 97 pressure-reducing stations to regulate 18 pressure zones, an irrigation well, 4 connections with MET and CDWC, 5 emergency interconnections with neighboring water purveyors, and 228.3 miles of water mains with approximately 13,821 service connections (Brea 2021c).

In the past decade, the City's annual average water demand was 9,956 af (Brea 2021c). The City's total water demand in fiscal year 2019-2020 for potable water was 9,131 af, where residential water use accounted for 51.2

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percent; commercial, institutional, and industrial accounted for 28.7 percent; large landscape/irrigation accounted for 15 percent; and nonrevenue water and other uses accounted for 5 percent of the city's water demands (Brea 2021c). Table 5.14-5, *Water Supply and Demand Comparison*, shows the projected water supply and demand totals for normal, single dry, and multiple dry years from 2020 to 2045.

Table 5.14-5 Water Supply and Demand Comparison

	2025	2030	2035	2040	2045
Normal Year (afy)					
Supply Totals	9,543	9,695	9,691	9,725	9,745
Demand Totals	9,543	9,695	9,691	9,725	9,745
Single Dry Years (afy)					
Supply Totals	10,115	10,277	10,272	10,309	10,330
Demand Totals	10,115	10,277	10,272	10,309	10,330
Multiple Dry Years (afy) – First Year					
Supply Totals	9,766	10,147	10,276	10,279	10,313
Demand Totals	9,766	10,147	10,276	10,279	10,313
Multiple Dry Years (afy) – Second Year					
Supply Totals	9,854	10,180	10,275	10,287	10,317
Demand Totals	9,854	10,180	10,275	10,287	10,317
Multiple Dry Years (afy) – Third Year					
Supply Totals	9,941	10,212	10,274	10,294	10,322
Demand Totals	9,941	10,212	10,274	10,294	10,322
Multiple Dry Years (afy) – Fourth Year					
Supply Totals	10,028	10,244	10,273	10,302	10,326
Demand Totals	10,028	10,244	10,273	10,302	10,326
Multiple Dry Years (afy) – Fifth Year					
Supply Totals	10,115	10,277	10,272	10,309	10,330
Demand Totals	10,115	10,277	10,272	10,309	10,330

Source: Brea 2021c.
Notes: afy: acre-feet per year

5.14.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-2 Would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- U-4 Would not have sufficient water supplies available to serve the project from existing entitlements and resources, and new and/or expanded entitlements would be needed.

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5.14.2.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies (PPP), including applicable regulatory requirements and conditions of approval for utilities and service systems, are identified below.

- PPP USS-2 The Project will pay the water impact fees, water connection , and fire service connection fees collected by the City of Brea, which covers costs to purchase water supplies and to operate and maintain the water distribution system in accordance with Ordinance 967.
- PPP USS-3 Landscaping installed on-site shall conform to the California Green Building Standards Code and Water Efficient Landscape Ordinance requirements to increase landscape water efficiency.
- PPP USS-4 Plumbing fixtures installed on-site shall conform to California Green Building Standards Code requirements to increase water efficiency and reduce urban per capita water demand.
- PPP USS-5 The Project would comply with the City's water conservation program during a drought or emergency situation, in accordance with Chapter 13.20, Water Management Program, of the Brea City Code.

5.14.2.4 ENVIRONMENTAL IMPACTS

Methodology

Interior water use for the proposed Project is calculated based on the parameters provided in the Preliminary Sewer System Hydraulic Analysis (see Appendix G1). Typically, the amount of wastewater generated by a project is 90 percent of the indoor water use (King County 2014). Therefore, to determine the amount of indoor water used by the Project, the amount of wastewater generated by the Project was multiplied by a factor of 1.10. This is conservative because the wastewater generation factors from the Preliminary Sewer System Hydraulic Analysis do not account for a reduction in indoor water use for new construction that complies with CALGreen standards and water conservation features. Outdoor water use is based on the Water Efficient Landscape Worksheet that was completed for the proposed Project (Appendix G4).

Impact Analysis

Impact 5.14-2: Water supply and delivery systems are adequate to meet Project requirements. [Thresholds U-2 (part) and U-4]

The proposed Project would result in an increase in water demand. Water demand at the Project site is assumed to be zero because the existing office building is currently vacant. However, historically the Project site did have demand for potable water associated with its former use as an office building. Therefore, the discussion below provides a conservative analysis of the proposed Project's impacts on water supply and delivery systems.

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Water Supply and Demand

Table 5.14-6, *Existing and Proposed Water Use*, shows the existing and proposed indoor and outdoor water use for the Project site. As identified above, despite the fact that the Project site operated as the Mercury Insurance office building, existing water demand is zero. Therefore, the proposed Project would result in a net increase of 50 afy. This estimate is also conservative because it is based on sewer generation rates, which are used for infrastructure sizing and do not account for reductions in water use from new construction with low-flow plumbing fixtures and water conservation efforts. Additionally, the proposed Project would not generate a water demand equivalent to 500 residential units; and therefore, a Water Supply Assessment pursuant to SB 610 is not required.

Table 5.14-6 Existing and Proposed Water Use

	Existing Conditions		Proposed Conditions		Net Change	
	Gallons per day (gpd)	Acre-feet per year (afy)	Gallons per day (gpd)	AFY	Gallons per day (gpd)	Acre-feet per year (afy)
Indoor Water Use ¹	0	0	42,214	47.3	42,214	47.3
Outdoor Water Use ²	0	0	2,626	2.9	2,626	2.9
Total Water Use	0	0	44,840	50	44,840	50

¹ Interior water use is based on the Preliminary Sewer System Hydraulic Analysis (see Appendix G1). The proposed interior water use was calculated by multiplying the wastewater generated by 1.10, which assumes that 10 percent of indoor water use discharged to the sewer system is lost through inflow and infiltration before reaching the wastewater treatment plant (King County 2014).

² Outdoor water use is based on the Water Efficient Landscape Worksheet (Appendix G4)

As shown in Table 5.14-5, the City of Brea's UWMP forecasts an increase of 152 afy between 2025 and 2030 during a normal year. The year 2030 was chosen as a comparison due to the proposed Project's anticipated buildout in 2028. The increase of 50 afy would represent 33 percent of the anticipated increase in water demand forecasts for the City. As stated in the 2020 UWMP, the City is projected to meet all water demands through 2045 during normal, single dry, and multiple dry years, due to the diversified supply and conservation measures. (Brea 2021c). It should be noted that the 2020 UWMP assumes the Mercury Insurance building would remain in operation up until the year 2045. With this building out of operation the demand needs projected in the UWMP are conservative and do not account for a supply surplus associated with the Mercury Insurance building going out of operation. Therefore, the City would be able to meet the water demands of the proposed Project in addition to existing and cumulative demands. Impacts would be less than significant.

Water Infrastructure

The proposed Project would require the installation of new and expanded water pipes in order to accommodate the increase in density on-site. The proposed system would be constructed in accordance with the City's requirements for pipe sizing, flows, pressure, and flow duration (i.e., fire flow protection, see Section 5.9, *Public Services*). Furthermore, the City has established water rates to cover costs to purchase water supplies to operate and maintain the water distribution system. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

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5.14.2.5 CUMULATIVE IMPACTS

Water Supply and Demand

The City of Brea has adequate water supplies to support planned developments in the City. The available water supply would meet the projected demand for the City due to conservation measures and diversified supply. As indicated above, the city would be able to meet the water demands of the proposed Project in addition to existing and cumulative demands. Therefore, the proposed Project would not result in a significant impact to water supply and demand, individually or cumulatively.

Water Infrastructure

As described above, costs for installing and upgrading City of Brea water infrastructure are paid from water impact fees, water connection fees, and on-site improvements would be implemented as part of the proposed Project. These measures would ensure that the City's water distribution system would not be affected by the proposed Project. Similarly, other projects within the City of Brea would follow these measures to guarantee that the City of Brea has an adequate water distribution system. Additionally, the payment of City development impact fees would also reduce cumulative impacts to water infrastructure. Therefore, the proposed Project would not result in a significant impact to water infrastructure, individually or cumulatively.

5.14.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.14-2 would be less than significant.

5.14.2.7 MITIGATION MEASURES

No mitigation measures are required.

5.14.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.3 Storm Drainage Systems

5.14.3.1 ENVIRONMENTAL SETTING

Regulatory Background

Regional

Municipal Stormwater (MS4) Permit

The Project site lies within the jurisdiction of Santa Ana Regional Water Quality Control Board (Region 8) and is subject to the waste discharge requirements of the Orange County Municipal Separate Sewer (MS4) Permit (Order No. R8-2009-0030) NPDES Permit No. CAS618030, as amended by Order No. R8-2010-0062. The County of Orange, incorporated cities of Orange County, and the Orange County Flood Control District are

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co-permittees under the MS4 Permit. Pursuant to the MS4 Permit, the co-permittees were required to develop and implement a drainage area management plan as well as local implementation plans, which describe urban runoff management programs for the local jurisdictions. The City of Brea, as a permittee under the General MS4 permit, has legal authority for enforcing the terms of the permit in its jurisdiction.

The General MS4 Permit requires that new development or significant redevelopment projects use best management practices (BMP), including site design planning, source control, and treatment techniques, to ensure that the water quality of receiving waters is protected. These requirements are detailed in the Orange County Model Water Quality Management Plan (WQMP) and supplemental Technical Guidance Document, updated December 2013, which the City of Brea has incorporated into its project approval processes. Any new development project or significant redevelopment project (i.e., adding 5,000 or more square feet of impervious surface) is required to prepare a WQMP that specifies the BMPs and low-impact development measures that would be implemented to minimize the effects of the project on regional hydrology, runoff flow rates and/or velocities, and pollutant loads. Low-impact development is a stormwater management strategy that emphasizes conservation and use of existing site features integrated with stormwater controls that are designed to mimic natural hydrologic patterns, and minimizes runoff by reducing the elements of development that produce it.

The County of Orange regulates storm runoff and water quality as the principal permittee under the General MS4 Permit and the drainage area management plan. The City of Brea is a co-permittee under the General MS4 Permit and has legal authority for enforcing the terms of the permit in its jurisdiction. New developments and significant redevelopments are required to develop and implement appropriate project WQMPs, local implementation plans, and low-impact development BMPs into new development or redevelopment projects.

Stormwater Program: Trash Implementation Program

On April 7, 2015, the State Water Resources Control Board adopted an amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to control trash and Part 1, Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Together, they are collectively referred to as the “Trash Amendments.” The Trash Amendments include six elements: (1) water quality objectives, (2) applicability of amendments, (3) prohibition of discharge, (4) implementation provisions, (5) time schedule, and (6) monitoring and reporting requirements. Following adoption, the Trash Amendments were submitted to both the California Office of Administrative Law and the US Environmental Protection Agency (EPA) for review and approval. The Office of Administrative Law approved the Trash Amendments on December 2, 2015. The EPA approved the Trash Amendments on January 12, 2016.

The Trash Amendments apply to all Phase I and II permittees under the NPDES MS4 permits who retain regulatory authority over priority land uses. The State Water Resources Control Board Executive Director sent separate 13383 orders to traditional and nontraditional small MS4 permittees on June 1, 2017. Regional Water Quality Control Boards, as the permitting authority, issued to their Phase I permittees either Water Code 13383 or 13267 orders that contain region-specific requirements, which may differ from the State Water Resources Control Board orders.

The Trash Amendments apply to all surface waters of the state and prohibit the discharge of trash to surface waters of the State as well as the depositing of trash where it may be discharged into surface waters of the

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State. Priority land uses are developed sites that include high density residential (10 or more dwelling units/acre), industrial, commercial, mixed urban, public transportation stations and stops, alternative areas determined by the permittees, and other areas determined by the State.

Local

2013 Master Plan of Drainage

The Master Plan of Drainage identifies existing drainage-deficient facilities that are not in conformance with current design practices. These capacity-deficient facilities may contribute to localized flooding in the future. The Master Plan of Drainage recommends drainage improvements to reduce or eliminate existing deficiencies in the City's storm drain system. The recommended drainage improvements are ranked from higher to lower risk for failure or localized flooding and have budget level cost figures for each ranked segment.

City of Brea Municipal Code Chapter 13.32, Storm Water Drainage

This chapter establishes the prohibition on illicit connections and prohibited discharges, control of urban runoff, inspections of stormwater drains, enforcement of regulations pertaining to stormwater drainages, and permits for discharge.

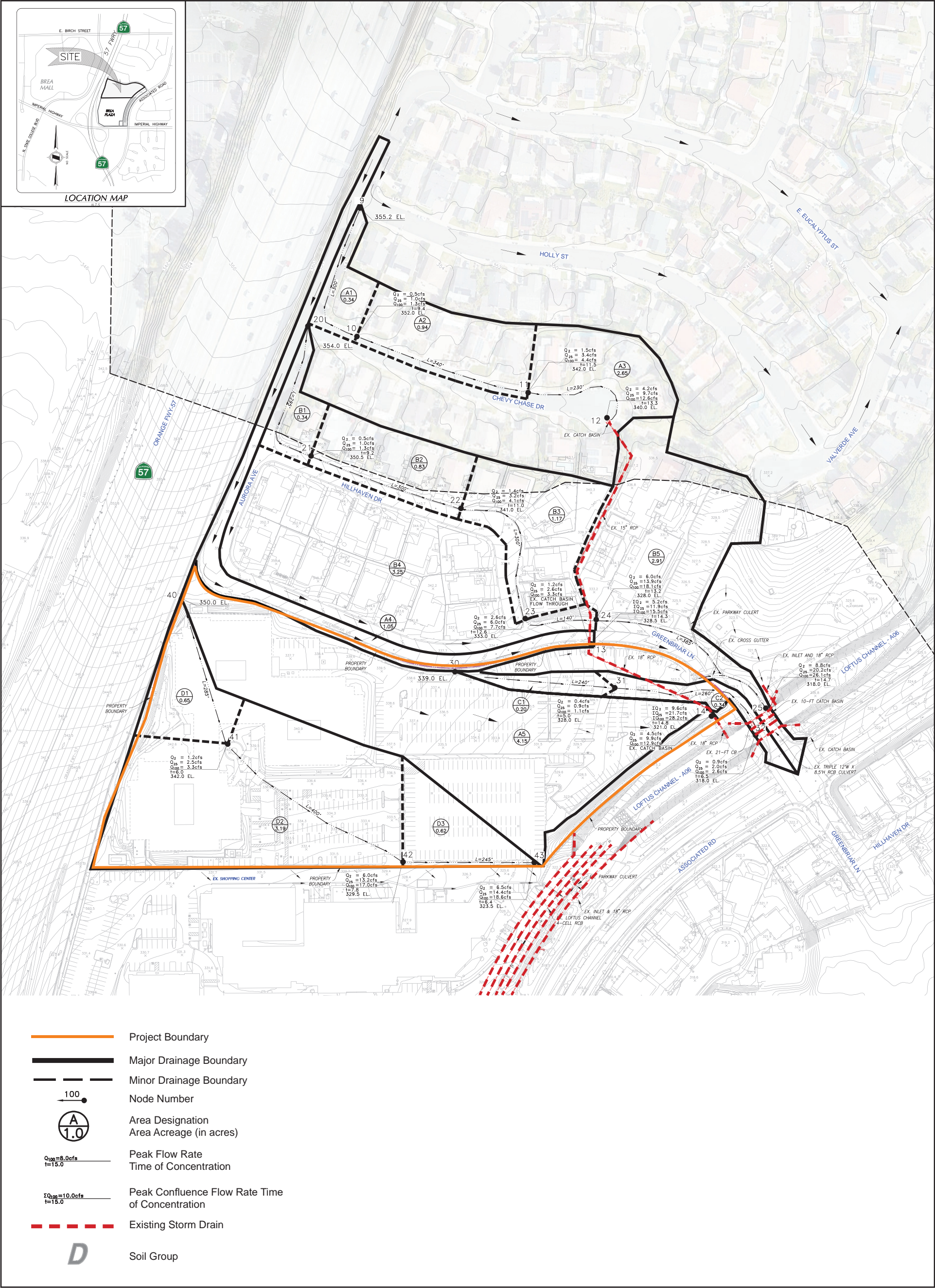
Existing Conditions

Five separate drainage areas (Orange County Watersheds) overlie the City and adjacent areas; storm runoff from these areas and the city flows into Orange County Flood Control District facilities of Coyote Creek, Imperial Creek, Brea Creek, Fullerton Creek, and Carbon Creek (Brea 2013). The Project site is in the Fullerton Creek Watershed (Brea 2013). Four of these regional drainage facilities convey runoff flows southwesterly to the Coyote Creek Channel (along the county's western boundary); the fifth regional drain, Carbon Creek, carries drainage south through the Carbon Canyon diversion channel to the Santa Ana River (Brea 2013). The City's storm drainage system is made up of 53.5 miles of pipes that range from 8 inches to 78 inches, and there are 1,076 sewer mains and junction structures (Brea 2013). According to the 2013 Master Plan of Drainage, 6.9 percent of the existing storm drainpipes have exceeded design capacity for conveying stormwater runoff produced by a 10-year design storm event (Brea 2013).

The Preliminary Hydrology Analysis analyzed four drainage areas that lead to the same outfall in the proximity of the proposed project. Each drainage area is described in more detail below and is shown on Figure 5.14-1, *Existing Hydrology*.

- **Drainage Area A.** This drainage area contains the northerly portion of the Project site and off-site areas. The northern portion of the site sheet-flows to the northeast corner of the project site to an existing catch basin. There are also off-site areas that contain the flows from Chevy Chase Drive and portions of Greenbriar Lane. The off-site area flows are conveyed via an existing 15-inch round reinforced concrete pipe (RCP) and 18-inch RCP. Drainage Area "A" discharges into an existing 18-inch pipe to Loftus Channel.

Figure 5.14-1 - Existing Hydrology



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- **Drainage Area B.** This drainage area contains the off-site areas along Greenbriar Lane and drains to the existing 10-foot catch basin on top of the triple reinforced concrete box (RCB) culvert which is located east of the proposed project.
- **Drainage Area C.** This drainage area contains the areas to the existing 21-foot catch basins on top of the triple RCB culvert which is located east of the proposed project.
- **Drainage Area D.** This drainage area contains the southern half the Project site; it sheet flows to the existing parkway culvert and ultimately to Loftus Channel via existing 18-inch pipe which is located east of the proposed project.

5.14.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-3 Would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.14.3.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies, including applicable regulatory requirements and conditions of approval for utilities and service systems are identified below.

- PPP USS-6 The Project will be constructed and operated in accordance with the Santa Ana Regional Water Quality Control Board Municipal Stormwater (MS4) Permit for Orange County. The MS4 Permit requires the proposed Project to prepare and implement a water quality management plan to:

- Control release of contaminants into storm drain systems.
- Educate the public about stormwater impacts.
- Detect and eliminate illicit discharges.
- Control runoff from construction sites.
- Implement BMPs and site-specific runoff controls and treatments.

5.14.3.4 ENVIRONMENTAL IMPACTS

Impact 5.14-3: Existing and proposed storm drainage systems are adequate to serve the drainage requirements of the proposed Project. [Threshold U-3]

The Project area is developed with an existing office building, parking structure, and surface parking. Under existing conditions, Project runoff, including off-site tributary areas, drain into Loftus Channel which is an engineered channel. The general drainage patterns of the proposed Project would remain consistent with the

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existing drainage patterns and would be collected and ultimately disposed to Loftus Channel. The Preliminary Hydrology Analysis analyzed three drainage areas for the proposed conditions. The details of each drainage area are described below and shown on Figure 5.14-2, *Proposed Hydrology*:

- **Drainage Area A.** Would contain the overall Project site with proposed on-site storm drains, inlets, and catch basins. Drainage would be transferred to the eastern portion of the Project site via a network of pipes that ties into a 30-inch RCP where it would connect a low flow diversion structure that would divert stormwater to a modular wetland system (MWS) for water quality treatment and connect to an existing 18-inch pipe which would discharge into Loftus Channel.

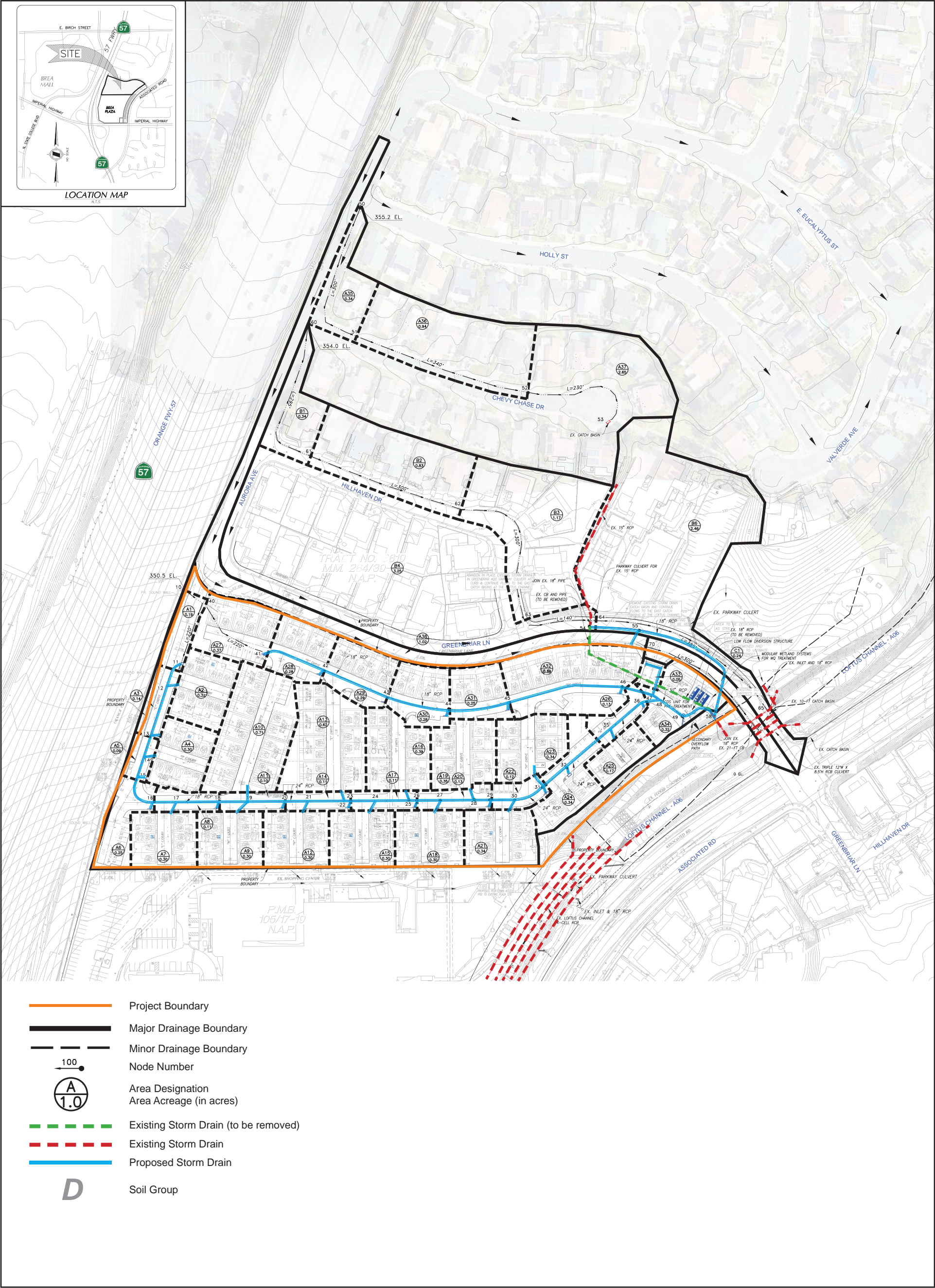
Additionally, this drainage area includes off-site areas from Chevy Chase Drive and portions of Greenbriar Lane. The proposed off-site storm drain would utilize an existing catch basin and 15-inch storm drain pipe located north of the project site where it would connect to a new 18-inch pipe along Greenbriar Lane and meet the proposed 30-inch RCP to drain into the existing 18-inch pipe, which would discharge into Loftus Channel.

- **Drainage Area B.** Would contain the off-site tributary north of the Project site and would utilize the existing 10-foot catch basin which is north of Greenbriar Lane and on top of the existing triple RCB culvert located to the east of the project site. The off-site existing 15-inch RCP has been revised to discharge to Greenbriar Lane via the via parkway culvert on the northeast of the project site.
- **Drainage Area C.** Would contain the off-site areas tributary along the south side of Greenbriar Lane and flows would go to the existing 21-foot catch basin, which is south of Greenbriar Lane and on top of the existing triple RCB culvert to the east of the project site.

As part of the proposed Project there would be no detention pipes or detention areas. The Project site is currently almost fully impervious, and the proposed project would increase the amount of pervious surface, thereby reducing stormwater runoff from the project site. To satisfy the WQMP requirements, a water quality diversion structure would be installed at the 18-inch pipe that would connect to three modular wetland systems (MSW) for treatment before flowing into the 18-inch pipe and discharging into Loftus Channel. Additionally:

- **Loftus Channel.** The Preliminary Hydrology Analysis concluded that the Loftus Channel reach along the Project site would have no negative impacts due to the additional peak flow rate from the proposed Project.
- **Greenbriar Lane.** The proposed flows to the existing 10-foot and 21-foot catch basins on top of the Loftus Channel box culvert are less than the existing levels. Currently, the existing flow rates for the 10-foot and 21-foot catch basins are 26.1 cubic feet per second (cfs) and 2.6 cfs respectively. Under the proposed Project, the 10-foot and 21-foot catch basins would have a flow rate of 24.7 cfs and 1.2 cfs respectively.
- **18-inch RCP.** Due to the Hydrology Analysis being a preliminary report, a detailed pressured flow hydraulic calculation was not performed. However, this calculation will be performed during the final engineering phase when the detailed designs are available (see Appendix G2).

Figure 5.14-2 - Proposed Hydrology



Source: Hunsaker & Associates 2024.

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Table 5.14-7, *Existing and Proposed Storm Drain Flows*, shows that there would be an overall decrease in storm drain flows compared to existing conditions.

Table 5.14-7 Existing and Proposed Storm Drain Flows

	2-Year cfs	25-Year cfs	100-Year cfs
Drainage Area A			
Existing	9.6	21.7	28.2
Proposed	16.6	37.4	48.5
Difference	7.0	15.7	20.3
Drainage Area B			
Existing	8.8	20.2	26.1
Proposed	8.3	19.1	24.7
Difference	-0.5	-1.1	-1.4
Drainage Area C			
Existing	0.9	2.0	2.6
Proposed	0.4	0.9	1.2
Difference	-0.5	-1.1	-1.4
Drainage Area D¹			
Existing	6.5	14.4	18.6
Proposed	-	-	-
Difference	-6.5	-14.4	-18.6
Overall	-0.50	-0.90	-1.10

Source: Hunsaker and Associates 2024a (see Appendix G2).

Notes: cfs: cubic feet per second

1 = Existing Drainage Area "D" was combined into the Project site drainage areas

For projects in north Orange County, hydrologic conditions of concerns are considered to exist if streams downstream from the project are determined to be potentially susceptible to hydromodification impact. While the Project site is within a hydrologic conditions of concern area, due to the proposed Project decreasing the amount of impervious area located within the Project site, and the proposed Project's storm drain flows would be less than the existing conditions. Therefore, the proposed Project would have a beneficial impact on stormwater flows and the proposed Project does not have hydromodification impacts to downstream receiving waters (see also Appendix G1). Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.14.3.5 CUMULATIVE IMPACTS

Cumulative impacts are considered for the five separate drainage areas (Orange County Watersheds) that overlie the city. Storm runoff from the city flows into OCFS facilities of Coyote Creek, Imperial Creek, Brea Creek, Fullerton Creek, and Carbon Creek. As identified above, the proposed Project would result in a decrease in stormwater flows, resulting in a beneficial impact. Other projects in the watershed may increase the amount of impervious surfaces in the watershed and therefore may increase flow rates and volumes of runoff entering

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storm drains in the region. Other projects in the watershed would be required by MS4 permits to be sized and designed to ensure on-site retention of volume of runoff produced from a 24-hour, 85th percentile storm event, which is similar to a two-year storm. Other impacts to storm drainage would be analyzed in separate CEQA processing for each cumulative project, including site-specific hydrology analyses, and mitigation measures would be required as appropriate to minimize significant impacts to storm drainage systems.

5.14.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.14-3 would be less than significant.

5.14.3.7 MITIGATION MEASURES

No mitigation measures are required.

5.14.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.4 Solid Waste

5.14.4.1 ENVIRONMENTAL SETTING

Regulatory Background

State

California Green Building Standards Code

Section 5.408 of the 2013 CALGreen Code (California Code of Regulations Title 24, Part 11) requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (Public Resources Code Sections 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

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AB 1327

The California Solid Waste Reuse and Recycling Access Act (Public Resources Code Sections 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Local

City of Brea Municipal Code Chapter 8.28, Solid Waste Collection and Salvage of Recyclable Materials

This chapter is intended to assist in the implementation of the City's Source Recovery and Recycling Element, which was prepared pursuant to the California Integrated Waste Management Act. This chapter provides various solid waste-related requirements, such as hours of collection, solid waste removal and collection, and recyclable material and green waste collection services.

City of Brea Municipal Code Chapter 8.29, Construction and Demolition Waste Management

The purpose of this chapter is to reduce landfill waste by requiring an applicant for every covered project to divert a minimum of 50 percent of the construction and demolition debris resulting from that project, in compliance with state and local statutory goals and policies, and to create a mechanism to secure compliance with the diversion requirements.

Existing Conditions

Solid Waste Collection

The City of Brea contracts with Republic Services for trash and recycling services. In 2019, the latest year for which data were available, 70,155 tons of solid waste was landfilled, and 8,676 tons of green waste was utilized as alternative daily cover³ (CalRecycle 2024a).

Landfills

Solid waste from the City of Brea is landfilled at Olinda Alpha Landfill in Brea, which is owned and operated by Orange County Waste and Recycling. Olinda Alpha Landfill has a daily maximum throughput of 8,000 tons

³ Alternative daily cover means cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.

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per day, a remaining capacity of 17,500,000 cubic yards, and an estimated cease date of December 31, 2036 (CalRecycle 2024b). The Frank R. Bowerman Sanitary landfill in Irvine would accommodate solid waste upon the closing of Olinda Alpha landfill. The Frank R. Bowerman has a daily maximum throughput of 11,500 tons per day, a remaining capacity of 205,000,000 cubic yards, and an estimated cease date of December 31, 2053 (CalRecycle 2024c).

Landfills are required to comply with existing landfill regulations from federal, state, and local regulatory agencies. They are subject to regular inspections from CalRecycle and local enforcement agencies, the Santa Ana Regional Water Quality Control Board, and the South Coast Air Quality Management District.

Solid Waste Diversion and Recycling

As of 2022, there are 47 solid waste diversion programs in Brea, including those for composting, household hazardous waste collection, public education programs, recycling, source reduction at businesses and schools, and special waste materials such as tires and concrete/ asphalt/rubble (CalRecycle 2024d).

Compliance with the diversion requirement in AB 939 is measured in part by comparing actual disposal rates with target disposal rates; disposal rates at or below target rates are consistent with AB 939. For 2022 the target disposal rates for Brea were 11.50 pounds per day (ppd) per resident and 10.10 ppd per employee; actual disposal rates in 2022—8.10 ppd per resident and 7.60 ppd per employee—were below target rates and thus were consistent with AB 939 (CalRecycle 2024e).

5.14.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-6 Would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- U-7 Would not comply with federal, state, and local statutes and regulations related to solid waste.

5.14.4.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies, including applicable regulatory requirements and conditions of approval for utilities and service systems, are identified below.

- PPP USS-7 California's Green Building Standards Code (CALGreen) requires the recycling and/or salvaging for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste generated during most "new construction" projects (CALGreen Sections 4.408 and 5.408). Construction contractors are required to submit a construction waste management plan that identifies the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the Project, or salvage for future use or sale and the amount (by weight or volume).

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PPP USS-8 The Project will abide by AB 341 and AB 1826. The Project will store and collect recyclable materials in compliance with AB 341. Green waste will be handled in accordance with AB 1826.

5.14.4.4 ENVIRONMENTAL IMPACTS

Impact 5.14-4: Existing and/or proposed facilities would be able to accommodate Project-generated solid waste and comply with related solid waste regulations. [Thresholds U-6 and U-7]

The buildings at the Project site are not operational; therefore, the proposed Project would generate an increase in solid waste disposal. However, historically the Project site did generate municipal solid waste associated with its former use as an office building. Therefore, the discussion below provides a conservative analysis of the proposed Project's impacts on solid waste disposal.

Table 5.14-8, *Greenbriar Residential Development Project Estimated Solid Waste Disposal*, provides an estimate of the solid waste generated under the proposed Project. The proposed Project would generate an increase of approximately 746.5 tons per year. The Olinda Alpha Landfill would accept waste from the proposed Project. The Olinda Alpha landfill has a maximum throughput of 8,000 tons per day (2,920,000 tons per year). The increase in solid waste generated from the proposed Project would represent less than 1 percent of the maximum daily throughput. The increase in solid waste disposal would be accommodated by the landfill's remaining capacity.

Table 5.14-8 Greenbriar Residential Development Project Estimated Solid Waste Disposal

	Total Solid Waste (lbs/day/person) ¹	Population ¹	Pounds per Day	Pounds per Year	Tons per Year
Proposed Project	8.1	505	4,090.5	1,493,032.5	746.51625
Total	--	--	--	--	746.51625

Source: CalRecycle 2024e.

¹ Assuming an average of 2.82 residents per unit, consistent with the household size reported in the City's 2021-2029 housing element, construction of 179 units would result in an increase of 505 residents.

The proposed Project would comply with solid waste disposal requirements, including requirements to divert solid waste to landfills through recycling. During construction, the proposed Project would comply with CALGreen, which requires recycling and/or salvaging for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste generated during most "new construction" projects (CALGreen Sections 4.408 and 5.408). During operations, the proposed Project would comply with AB 341 and AB 1826, which require multifamily residential land uses to have recycling and organic waste recycling.

Level of Significance Before Mitigation: Less Than Significant.

5.14.4.5 CUMULATIVE IMPACTS

Cumulative impacts are considered for Orange County, the service area for OC Waste and Recycling, which owns and operates the Olinda Alpha Landfill. The Olinda Alpha Landfill has a daily throughput of 8,000 tons

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per day, and a remaining capacity of 17,500,000 cubic yards, and an estimated cease date of December 31, 2036 (CalRecycle 2024b). Upon the closing of the Olinda Alpha Landfill, solid waste would be landfilled at Frank R. Bowerman Sanitary landfill. There is adequate landfill capacity to accommodate existing and future projects in the City at both these landfills. No significant cumulative impact to landfill capacity would occur, and the proposed Project would not contribute to a significant cumulative impact.

5.14.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.14-4.

5.14.4.7 MITIGATION MEASURES

No mitigation measures are required.

5.14.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.5 Energy Infrastructure

5.14.5.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The act contains provisions for increasing

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fuel economy standards for cars and light trucks while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

National Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration in the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. The regulations enacted under this act have been updated several times. The latest revision is dated May 2023 and includes additional safety regulations for gas transmission pipelines, including repair criteria, integrity management improvements, cathodic protection, and other inspection and maintenance procedures. The regulations are encoded in Code of Federal Regulations, Title 49, Part 192.

State

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest revision is dated January 2022.

California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The plan sets the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

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- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

California Energy Code

The State of California provides a minimum standard for energy conservation through the California Code of Regulations, Title 24, Part 6, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. The standards are updated on a three-year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In August 2021, the CEC adopted the 2022 California Energy Code, which went into effect on January 1, 2023. The 2025 Building Energy Efficiency Standards, which builds on the 2022 code, were adopted by the CEC in September 2024 and will become effective January 1, 2026. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic systems and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers. The code provides flexibility for design options, allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) function at their rated efficiency.

California Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. CALGreen (California Code of Regulations, Title 24, Part 11) was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce greenhouse gas emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The latest 2022 CALGreen code became effective on January 1, 2023.

The CALGreen code includes provisions to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, etc.

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CPUC Natural Gas Regulations

The CPUC regulates natural gas utility rates and services as well as the transportation of natural gas over the extensive transmission and distribution pipeline systems. The CPUC also regulates gas storage facilities. The Gas Safety and Reliability Branch of the CPUC ensures that natural gas pipeline systems are designed, constructed, operated, and maintained according to the safety standards set by the CPUC and the federal government. The regulations are provided in the CPUC General Order No. 112-E and the Natural Gas Pipeline Safety Act of 2011.

Local

City of Brea Sustainability Plan

The City of Brea Sustainability Plan: Leadership in Energy Efficiency was adopted in 2012. It presents resource efficiency goals, matched with policies and implementation steps to save energy, water, and other resources, while aligning the City of Brea for AB 32 compliance. The Sustainability Plan focuses on creating a sustainable future for the city and offers goals and policies that address energy efficiency and conservation for the residential, business, building, transportation, municipal, hospitality, and education sectors. The most relevant goal and policies are:

- **Build 1** Maximize cost-effective energy efficiency in new construction and existing facilities.
 - **Build 1.1.** Promote programs that support efficiency in new construction.
 - **Build 1.3.** Promote green building measures and renewable energy installations.

Existing Conditions

Electricity

The electricity supply for the City of Brea is provided by Southern California Edison (SCE). Total electricity consumption in SCE's service area was 107,876 gigawatt hours in 2022 (CEC 2024).

SCE has a green rate program that matches 50 or 100 percent of electricity usage. The current average mix of resources supplying SCE includes: coal (0 percent), nuclear (8.3 percent), biomass & waste (0.1 percent), geothermal (5.7 percent), solar (17.0 percent), wind (9.8 percent), natural gas (24.7 percent), eligible hydroelectric (0.5 percent), large hydroelectric (3.4 percent), unspecified sources (30.3 percent) and other (0.1 percent) (SCE 2024a).

SCE offers bill credits for smart thermostats and has a solar billing plan that is designed to help modernize solar rates to promote grid reliability, incentivize solar and battery storage, and help control electricity costs (SCE 2024b). Additionally, SCE offers time-of-use rate plans that manage energy cost by taking advantage of advantage of lower rates during off-peak and super off-peak periods (SCE 2024c).

SCE's projected average annual electricity demand growth (mid-demand forecast) between 2019 and 2035 is approximately 17.5 percent. Total mid-electricity consumption in SCE's service area was 106,216 gigawatt-hours per year in 2019 and is forecast to increase to 128,776 gigawatt-hours in 2035 (CEC 2022a).

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Natural Gas

The Southern California Gas Company (SoCalGas) provides natural gas to the Project site. SoCalGas's service area spans much of the southern half of California, from Imperial County on the southeast to San Luis Obispo County on the northwest, to part of Fresno County on the north, and to Riverside County and most of San Bernardino County on the east (CEC 2022b). SoCalGas's distribution network is composed of approximately 51,070 miles of gas mains across an approximately 20,000 square mile service territory (2022 CA Gas Report).

SoCalGas's projected natural gas demand growth (mid-demand forecast) between 2019 and 2035 is approximately 1.9 percent. Total consumption in SCE's service area was 7,527 million (MM) therms in 2019 and is forecast to increase to 7,672 MM therms in 2035 (CEC 2021).

5.14.5.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-8 Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

5.14.5.3 PLANS, PROGRAMS, AND POLICIES

Plans, programs, and policies, including applicable regulatory requirements and conditions of approval for utilities and service systems are identified below.

- PPP USS-9 New buildings are required to achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2022 Building Energy Efficiency Standards were effective starting on January 1, 2023. The 2025 Building Energy Efficiency Standards were adopted in September 2024 and will become effective on January 1, 2026. The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for residential buildings by 2020 and nonresidential buildings by 2030.

5.14.5.4 ENVIRONMENTAL IMPACTS

Impact 5.14-5: Existing energy infrastructure is adequate to meet Project requirements. [Thresholds U-9]

Energy

Electricity

Electrical service to the Project site would be provided by SCE through connections to existing off-site electrical lines and new on-site infrastructure. Section 5.4, Energy, Table 5.4-7, *Electricity Energy Consumption*, identifies total electricity use generated by the vacant office building and the proposed Project. As identified in Section 5.4, the projected electricity consumption for proposed 179 residences is 656,184 kWh per year which is a net

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decrease of 528,126 kWh per year when compared to the average electricity consumption of the existing, vacant, office building from the period 2021 to 2024. Furthermore, the proposed Project would include solar panels on the new buildings. Installation of solar panels would offset the proposed Project's demand for electricity. In addition, to facilitate the distribution of electrical service, the proposed project might bring electrical service from existing lines on the east side of Associated Road to the project site, however this would occur underground within existing paved streets and no impacts would occur. Hence, it is not anticipated that the proposed Project would warrant expansion of existing electrical facilities offsite to serve the Project site.

Natural Gas

As described in Chapter 5.4, *Energy*, without fuel switching, the Project site would use 1,988,125 thousand-British thermal units (kBtu) per year. The per capita natural gas consumption for the proposed Project would be 5,053 kBtu per year which is approximately 6,566 kBtu per year less than the County's average residential gas consumption per capita in 2022. SoCalGas is projected to supply 7,672 MM therms in 2035 (76,720,000 kBtu). The proposed Project would be less than half a percent of the projected forecast. Additionally, SoCalGas's facilities would be adequate to meet the proposed Project needs.

Summary

The proposed Project would be required to comply with the current and future updates to the California Energy Code and CALGreen, which would contribute to reducing energy demands. Additionally, the proposed Project would consume less energy than existing conditions which implies that the existing electricity facilities would be adequate to meet the proposed Project requirements. Expansion of natural gas infrastructure offsite is not anticipated. Furthermore, Mitigation Measure GHG-1 would require fuel-switching to electric appliances, which would substantially reduce the proposed Project's demand for natural gas. The proposed Project would be adequately served by existing infrastructure and would not require new or expanded infrastructure offsite to meet the proposed Project's needs. Impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

5.14.5.5 CUMULATIVE IMPACTS

Cumulative impacts are considered for Orange County, the service area for SCE and SoCalGas. The proposed Project would be less than one percent of the total electricity forecast for SCE in 2035, and it is expected that SCE would have adequate energy infrastructure for cumulative developments in its service area. Similarly, the proposed Project would be less than half a percent of the total natural gas forecast for SoCalGas in 2035.

No significant cumulative impact is anticipated, and buildout of the proposed Project would not contribute to a significant cumulative impact.

5.14.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.14-5.

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5.14.5.7 MITIGATION MEASURES

No mitigation measures are required.

5.14.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. As identified in this Draft EIR, mitigation measures would reduce the level of impacts to less than significant levels, and no significant and unavoidable impacts would remain.

6. Significant Unavoidable Adverse Impacts

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7. Alternatives to the Proposed Project

7.1 INTRODUCTION

7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines Section 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed Project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- “[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (15126.6[b])
- “The specific alternative of ‘no project’ shall also be evaluated along with its impact.” (15126.6[e][1])
- “The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (15126.6[e][2])
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” (15126.6[f])
- “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)” (15126.6[f][1]).
- “Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” (15126.6[f][2][A])

7. Alternatives to the Proposed Project

- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, “[i]f an alternative would cause...significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

7.1.2 Project Objectives

As described in Section 3.3, the following objectives have been established for the proposed Project and will aid decision makers in their review of the Project, the Project alternatives, and associated environmental impacts.

1. Revitalize the site by developing housing near other residential and commercial uses, thereby introducing new, high-quality residential uses in the City.
2. Redevelop the underutilized Project site by providing additional opportunities for residential growth on an infill parcel.
3. Improve the jobs-housing balance in the City by providing new housing within close proximity to jobs and services.
4. Provide additional housing opportunities in the City to meet its Regional Housing Needs Allocation.
5. Create a high-quality residential product that provides connectivity between the commercial uses at Brea Plaza and a transitional buffer for the existing residential neighborhood to foster a vibrant and interactive mixed-use environment.

7.1.3 Significant Impacts of the Project

As identified in Chapter 5, *Environmental Analysis*, implementation of existing regulations and mitigation measures would reduce all impacts to less than significant levels. No significant and unavoidable impacts would remain. However, without implementation of mitigation measures, the following impacts would be potentially significant.

7. Alternatives to the Proposed Project

Air Quality

- Construction of the proposed Project would exceed South Coast AQMD's threshold for VOC emissions and would cumulatively contribute to the nonattainment designations of the SoCAB.
- Construction of the proposed Project could expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants.

Cultural and Paleontological Resources

- Development of the proposed Project could result in the discovery of subsurface archaeological resources.
- Development of the proposed Project could result in the discovery of paleontological resources.

Greenhouse Gas Emissions

- Development pursuant to the proposed Project could potentially conflict with the state goals for carbon neutrality identified in the 2022 Scoping Plan.

Hazards and Hazardous Materials

- Demolition activities could potentially release asbestos-containing materials and lead.

Tribal Cultural Resources

- Tribal cultural resources could be adversely impacted by ground disturbing activities associated with the proposed Project.

7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

7.2.1 Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the Project or its location that are capable of avoiding or substantially lessening any significant effects of the Project. The key question and first step in the analysis is whether any of the significant effects of the Project would be avoided or substantially lessened by putting the Project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the Project need be considered for inclusion in the EIR (CEQA Guidelines Section 15126[5][B][1]). Key factors in evaluating the feasibility of potential off-site locations for EIR project alternatives include:

- If it is in the same jurisdiction.

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- Whether development as proposed would require a general plan amendment.
- Whether the project applicant could reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). (CEQA Guidelines Section 15126.6[f][1])

The Project applicant does not own or control other comparably sized and located properties in Brea. Though the Project requires the approval of a general plan amendment, zone change, development agreement, vesting tentative tract map, and precise development, objectives for the Project include providing residential uses on an infill parcel in proximity to residential and commercial uses.

In general, any development of the size and type proposed by the Project would have substantially the same impacts on aesthetics, air quality, cultural and paleontological resources, energy, greenhouse gas (GHG) emissions, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and service systems. These impacts were found to be less than significant or less than significant with mitigation incorporated.

It was determined, therefore, that it is unlikely that there is an alternative Project site that could potentially meet the objectives of the proposed Project and reduce significant impacts of the Project as proposed.

7.2.2 No Project/Vacant Site Alternative

This alternative assumes that no development would occur on the Project site and the existing office building and parking structure would be demolished. Given that the Project site is designated General Commercial, directly adjacent to residential and commercial uses, and within a highly urbanized portion of the City, it is unlikely that the landowner would spend the money to remove the structure and leave the Project site vacant and undeveloped. Additionally, this alternative would not meet any of the Project objectives, so it is considered infeasible and is rejected.

7.2.3 Existing General Plan/Zoning Alternative

This alternative assumes that the Project site would be redeveloped for land uses consistent with the Brea General Plan and Zoning. The Project site is currently zoned General Commercial (C-G) with a P-D Precise Development overlay and designated General Commercial. The C-G designation has a maximum floor area ratio (FAR) of 0.5. Therefore, the 9.7-acre site could be developed with a maximum of 211,266 square feet of commercial use. This alternative assumes that the existing Mercury Insurance building would be demolished, and underground storage tanks would be removed to accommodate the retail structures. The existing three-story parking structure could accommodate retail parking; and therefore, it is assumed that this structure would be retained but the existing parking lot would be reconfigured. Under this alternative, it is assumed that Greenbriar Lane would not be reconfigured but a traffic signal would be warranted at Greenbriar Lane to accommodate retail traffic.

Based on the Institute of Traffic Engineers (ITE) Trip Generation Manual, 11th Edition, a regional shopping center (Code 820 – Shopping Center) would generate a total of 7,037 weekday trips, 159 AM peak hour trips,

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and 510 PM peak hour trips¹. The proposed Project generates a total of 1,296 daily trips and 86 AM peak hour and 103 PM peak hour vehicle trips. Therefore, this alternative would result in an increase in 5,741 weekday trips, 73 AM peak hour trips, and 407 PM peak hour trips compared to the proposed Project.

The increase in vehicle trips would warrant a full VMT assessment, as this alternative would not screen out of the City's VMT thresholds. Given the commercial use, this alternative would likely result in an increase in VMT compared to City of Brea General Plan buildout VMT per service population (VMT/SP) and result in a new significant unavoidable transportation impact. In addition, this alternative would generate substantially higher mobile source emissions (over 400 percent) compared to the proposed Project. GHG emissions under this alternative would exceed the South Coast AQMD Working Group threshold of 3,000 MTCO₂e resulting in a new significant unavoidable GHG emissions impacts.

Therefore, this alternative is rejected because this alternative would not reduce the proposed Project's potentially significant impacts and would result in an increase in impacts, including new significant and unavoidable transportation and GHG impacts, compared to the proposed Project.

7.2.4 Single-Family Detached Land Use Alternative

This alternative assumes that the Project site would be developed as low-density residential with 50 detached single-family homes on 3,500-square-foot lots. While this alternative would create land uses that are more aligned with the residential neighborhoods surrounding the Project site to the north and east, this alternative is rejected and considered infeasible because it would not meet all of the Project objectives and would result in a substantial reduction in housing units compared to the proposed Project. Per Section 21159.26, Reductions in Housing Units as Mitigation Discouraged, of the CEQA Statutes, "A public agency may not reduce the proposed number of housing units as a mitigation measure or project alternative for a particular significant effect on the environment if it determines that there is another feasible specific mitigation measure or project alternative that would provide a comparable level of mitigation." Therefore, this alternative is rejected.

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

The following two alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the proposed Project but may avoid or substantially lessen any of the significant effects of the Project. These alternatives are analyzed in detail in the following sections.

- No Project (Office Land Use) Alternative
- Alternate Residential Design Alternative

An EIR must identify an "environmentally superior" alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed Project and determined to be environmentally superior, neutral, or inferior. The preferred land use

¹ Total trip generation includes pass-by reductions of 10 percent for AM, Midday, and daily trips, and 29 percent for PM trips.

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alternative (proposed Project) is analyzed in detail in Chapter 5 of this DEIR. This chapter provides a comparative analysis by impact for each of the alternatives. A conclusion with respect to an environmentally superior alternative is provided in Section 7.4.

The following statistical analysis provides a summary of general socioeconomic buildout projections determined by the three land use alternatives, including the proposed Project. It is important to note that these are not growth projections. That is, they do not anticipate what is likely to occur by a certain time horizon, but provide a buildout scenario that would only occur if all the areas of the city were to develop to the probable capacities yielded by the land use alternatives. The following statistics were developed as a tool to better understand the differences between the alternatives analyzed in the DEIR. Table 7-1, *Buildout Statistical Summary*, identifies citywide information regarding dwelling unit, population and employment projections, and the jobs-to-housing ratio for each of the alternatives.

Table 7-1 Buildout Statistical Summary

	Proposed Project	No Project (Office Land Use) Alternative	Alternate Residential Design Alternative
Dwelling Units	179	0	179
Population	505	0	505
Employment	0	575 ²	0
Jobs-to-Housing Ratio (Citywide) ¹	1.19	1.23	1.19

¹ There are 18,693 units (2023) and 22,500 employees in the City (2023); refer to Section 5.8, *Population and Housing*, of the DEIR.

² 287 square feet per employee for low-rise office (Natelson 2001). 164,908 square feet / 287 = 574.5 = 575 employees

7.3.1 NO PROJECT (OFFICE LAND USE) ALTERNATIVE

The No Project (Office Land Use) alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed Project is not approved (CEQA Guidelines, Section 15126.6(e)). Pursuant to CEQA, this alternative is based on current plans and consistent with available infrastructure and community services. Therefore, the No Project (Office Land Use) alternative assumes that the proposed Project would not be adopted, and no development would occur onsite. The Project site would remain as is—no demolition would occur, no residential development, and no increase in associated residents—and the existing 164,908-square-foot office building would be reused for office uses. Table 7-2, *No Project (Office Land Use) Alternative Buildout Statistical Summary*, compares the buildout statistical summary of the proposed Project with the No Project (Office Land Use) Alternative. As shown in this table, this alternative would result in an increase in employment and weekday vehicle trips compared to the Proposed Project.

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Table 7-2 No Project (Office Land Use) Alternative Buildout Statistical Summary

	Proposed Project	No Project (Office Land Use) Alternative	Difference
Dwelling Units	179	0	-179
Population	505	0	-505
Employment ²	0	575	+575
Jobs-to-Housing Ratio (Citywide) ¹	1.19	1.23	+0.04
Weekday Vehicle Trips ³	1,296	1,788	+492

¹ There are 18,693 units (2023) and 22,500 employees in the City (2023); refer to Section 5.8, *Population and Housing*, of the DEIR.

² 287 square feet per employee for low-rise office (Natelson 2001). 164,908 square feet / 287 = 574.5 = 575 employees.

³ See also Table 5.12-2, *Weekday Trip Generation Forecast*, in Section 5.12, *Transportation*.

7.3.1.1 AESTHETICS

Impacts associated with aesthetics include the degradation of scenic vistas, scenic resources, and increased light and glare. Under the No Project (Office Land Use) Alternative, no new development would occur on the Project site, and the existing buildings would be reused for office uses. Therefore, the existing visual character and resources near and on the Project site would be preserved in their current state, and no impact would occur to scenic vistas or scenic resources in the City. Given that no new development would occur, there would be no structures that are taller than the existing office building and parking structure onsite.

Although impacts to aesthetics are inherently subjective, the proposed Project would improve the Project site with new residential buildings that would be more compatible with the existing residential uses surrounding the Project site. Additionally, the proposed Project would improve the site with landscaping and a passive park. Therefore, it is concluded that the aesthetic impact for the No Project (Office Land Use) Alternative would be greater than the proposed Project. As with the proposed Project, aesthetic impacts would be considered less than significant.

7.3.1.2 AIR QUALITY

Under this alternative, there would be no new development, and therefore, no new construction activities and associated exhaust and fugitive dust emissions. This alternative would eliminate the Project's short-term construction impacts, and no construction mitigation measures would be required under this alternative.

During the operation phase, this alternative would generate slightly more emissions associated with building energy use and mobile source emissions compared to the proposed Project. This alternative generates 492 weekday vehicle trips more than the proposed Project, resulting in slightly higher emissions. Under this alternative, operational phase air quality impacts would be greater than the proposed Project but would not generate emissions that exceed the South Coast AQMD thresholds. However, operational impacts would be less than significant.

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7.3.1.3 CULTURAL AND PALEONTOLOGICAL RESOURCES

Under the No Project (Office Land Use) Alternative, no ground-disturbing activities would take place at the Project site. Accordingly, this alternative does not have the potential to impact archaeological and paleontological resources. With no development, there would be no damage to cultural and paleontological resources. Therefore, unlike with the proposed Project, no mitigation measures would be required for this alternative. Compared to the proposed Project, impacts of this alternative would be less, and no impacts would occur.

7.3.1.4 ENERGY

The No Project (Office Land Use) Alternative would not generate a temporary increase in energy and fuel demand during construction; therefore, no construction impacts would occur. However, this alternative would require 528,126 kwh per year more energy use than the proposed Project (see also Section 5.14, *Utilities and Service Systems*). Therefore, this alternative would result in greater impacts than the proposed Project but would not result in wasteful or inefficient use of energy resources. However, as with the proposed Project, impacts would be less than significant.

7.3.1.5 GREENHOUSE GAS EMISSIONS

This alternative would generate more emissions associated with building energy use and mobile source emissions compared to the proposed Project (see Section 5.12, *Transportation*, and Section 5.14, *Utilities and Service Systems*). This alternative generates 492 weekday vehicle trips more than the proposed Project, resulting in slightly higher emissions. However, this alternative would not generate emissions that exceed the South Coast AQMD Working Group thresholds for GHG emissions. Therefore, the No Project (Office Land Use) Alternative would generate greater impacts than the proposed Project, but impacts would be less than significant.

7.3.1.6 HAZARDS AND HAZARDOUS MATERIALS

Unlike the proposed Project, the No Project (Office Land Use) Alternative would not result in the demolition of the existing buildings onsite. Therefore, this alternative would eliminate the Project's potentially significant impacts associated with the release of hazards into the environment, and no mitigation measures would be required. Unlike with the proposed Project, because this alternative does not require construction, it would not be required to comply with construction-related regulations and measures, such as the NPDES, SWPPP, California Building Code, and California Fire Code. This alternative, as with the proposed Project, would not physically interfere with adopted emergency plans, expose people or structures to wildfires, or emit hazardous emissions within a quarter mile of schools. Overall, impacts of this alternative would be less than the proposed Project and less than significant.

7.3.1.7 LAND USE AND PLANNING

Unlike the proposed Project, the No Project (Office Land Use) Alternative would not require a general plan amendment, zone change, development agreement, vesting tentative tract map, and precise development. However, the proposed Project would not conflict with the General Plan policies or zoning in a way that could

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result in substantial physical impacts to the environment. Because retaining the site as the existing office uses does not require a general plan amendment, zone change, development agreement, vesting tentative tract map, and precise development, this alternative would eliminate impacts of the proposed Project. Overall, impacts of this alternative would be less than the proposed Project, and no impacts would occur.

7.3.1.8 NOISE

Under this alternative, there would be no new development, and therefore, no new construction activities and associated noise and vibration. Therefore, this alternative would eliminate the Project's short-term construction impacts. Compared to the proposed Project, this alternative would generate more traffic noise but would eliminate recreational and other stationary noise sources onsite. This alternative generates 492 weekday vehicle trips more than the proposed Project, which would not substantially affect traffic noise levels compared to that generated by the proposed Project because a doubling of traffic volumes is needed to result in discernable increase in noise levels. This alternative would have fewer stationary (e.g., individual HVAC units, landscape equipment, etc.) and recreational sources than the proposed Project. Overall, noise impacts under this alternative would be similar to that of the proposed Project, and impacts would be less than significant.

7.3.1.9 POPULATION AND HOUSING

The No Project (Office Land Use) Alternative would not increase residents onsite, but would result in an increase in employees. Like the proposed Project, the No Project (Office Land Use) Alternative does not displace housing or people. However, this alternative does not increase housing units in Brea or achieve the beneficial impacts of the proposed Project related to housing. Therefore, the No Project (Office Land Use) Alternative would have greater impacts than the proposed Project in terms of housing, but impacts would be less than significant.

7.3.1.10 PUBLIC SERVICES

The No Project (Office Land Use) Alternative would increase demand for fire, police, school, and library services and facilities in the City compared to existing conditions. In general, residential land uses generate a greater demand for these services than nonresidential land uses, so the proposed Project would increase service-based impacts by increasing residential land uses, but the No Project (Office Land Use) Alternative would not. This alternative would have less impacts on public services compared to the proposed Project.

7.3.1.11 RECREATION

With no new development under this alternative, the Project site would remain as is (office building, parking lot, and parking structure). The proposed Project's recreational impacts are less than significant, but the No Project (Office Land Use) alternative would eliminate those potential impacts to recreation in Brea.

7.3.1.12 TRANSPORTATION

As shown in Table 7-2, the No Project (Office Land Use) alternative would result in 492 more weekday vehicle trips compared to the Proposed Project (see also Table 5.12-2, *Weekday Trip Generation Forecast*). As a result, this

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alternative would have greater impacts compared to the proposed Project, but impacts would be less than significant.

7.3.1.13 TRIBAL CULTURAL RESOURCES

The Project site would remain in its existing conditions under this alternative. Therefore, no ground-disturbing activities would occur, and tribal cultural resources that may exist onsite would not be affected. This would eliminate the impacts of the proposed Project, which, however, would be less than significant with mitigation incorporated.

7.3.1.14 UTILITIES AND SERVICE SYSTEMS

No new development would occur on the Project site under this alternative. Based on utility bills for the former Mercury Insurance building, this alternative would use approximately 33,626 less gallons per day of total water than the proposed Project.² However, this alternative would result in an increase in sewer flows. The proposed Project has a beneficial impact on stormwater flows; and therefore, stormwater impacts of this alternative would be slightly higher but would be less than significant. However, the No Project (Office Land Use) Alternative would use approximately 2,056,199 kWh/year more energy than proposed Project.³ Overall, impacts of this alternative would be similar to that of the proposed Project and would be less than significant.

7.3.1.15 CONCLUSION

The No Project (Office Land Use) Alternative would avoid or lessen the proposed Project's impacts to cultural and paleontological resources, hazards and hazardous materials, land use and planning, public services, recreation, and tribal cultural resources. This alternative would result in greater impacts to aesthetics, air quality, energy, GHG emissions, population and housing, and transportation. Noise and utilities and service systems impacts would be similar to that of the proposed Project.

The No Project (Office Land Use) Alternative would retain the site in its current state, and it would be reused for office uses. Therefore, none of the Project objectives would be achieved under this alternative. This alternative would not provide any of the benefits that would accompany the implementation of the proposed Project, including revitalizing the site by developing housing near other residential and commercial uses, redeveloping an underutilized infill parcel by providing additional residential uses, improving the jobs-housing balance in the City, providing additional housing (including affordable housing) to meet the City's Regional Housing Needs Allocation, and providing residential uses within proximity to commercial uses.

² The No Project (Office Land Use) alternative would utilize 11,214 gallons per day while the proposed Project would utilize 44,840 gallons per day. Water demand for this alternative was derived from utility bills from December 2018 to November 2019 and was averaged over the 12 months. It should be noted that the water and wastewater numbers for the proposed Project are highly conservative since they depend on sewer generation rates associated with the design of the sewer lines. When determining sewer generation rates for sewer line design, a high factor of safety is used to account for the worse-case scenario and typically these rates do not reflect a much lower actual sewer generation rate.

³ The No Project (Office Land Use) Alternative would use approximately 2,712,383 kWh/year of energy while the proposed Project would use approximately 656,184 kWh/year. Electricity demand for this alternative was derived from utility bills provided by the applicant.

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7.3.2 ALTERNATE RESIDENTIAL DESIGN ALTERNATIVE

The Alternate Residential Design Alternative would entail up to 179 units in apartment buildings, which would be smaller in size than the units of the proposed Project. The multifamily residential buildings would be three to four stories walk-up structures with a density of approximately 40 units per acre. The site would include surface parking. The residential buildings would be positioned throughout the 9.7-acre site, with recreational amenities located in the center of the site. Access to the site would be similar to the proposed Project at Greenbriar Lane and Associated Road. As with the proposed Project, the existing 164,908-square-foot office building, parking structure, and parking lot would be demolished, and the general plan amendment, zone change, development agreement, and precise development would be required. A conditional use permit would also be required for this alternative to accommodate the multifamily units, per Chapter 20.11, *Permitted Land Uses*, of the Brea Municipal Code.

7.3.2.1 AESTHETICS

Impacts associated with aesthetics include the degradation of scenic vistas, scenic resources, and increased light and glare. Similar to the proposed Project, this alternative would not impact a scenic vista or scenic resources in the City. This alternative would allow for up to 179 apartment units on the Project site in structures up to four stories. As with the proposed Project, structures would be positioned throughout the site, including along Greenbriar Lane. The City's development standards and design guidelines would continue to apply, and the proposed buildings would be compatible with the existing and proposed buildings in the Project vicinity. Therefore, impacts would be similar compared to the proposed Project and less than significant.

7.3.2.2 AIR QUALITY

This alternative would result in similar construction impacts as that of the proposed Project. As with the proposed Project, short-term construction impacts would be less than significant with mitigation incorporated. During the operational phase, this alternative would generate slightly fewer vehicle trips (90 fewer weekday vehicle trips⁴), and building energy use is assumed to be slightly less as a result of smaller unit size. Therefore, this alternative would result in slightly less impacts compared to the proposed Project, and impacts would also be less than significant.

7.3.2.3 CULTURAL AND PALEONTOLOGICAL RESOURCES

Both this alternative and the proposed Project would require mitigation in the event cultural or paleontological resources are uncovered during grading. Therefore, impacts would be similar to the proposed Project and would be less than significant with mitigation incorporated.

7.3.2.4 ENERGY

This alternative would result in similar construction impacts as the proposed Project. This alternative would generate slightly fewer vehicle trips, and building energy use is assumed to be slightly less as a result of smaller

⁴ The proposed Project would generate 1,296 weekday trips whereas this alternative would generate 1,206 weekday trips (ITE Code 220 – Multifamily housing [low rise]).

7. Alternatives to the Proposed Project

unit size. Therefore, electricity and natural gas demand would be slightly less compared to the proposed Project. This alternative would result in less than significant impacts.

7.3.2.5 GREENHOUSE GAS EMISSIONS

During the operational phase, this alternative would result in slightly fewer vehicle trips (90 fewer weekday vehicle trips⁵) and VMT than the proposed Project because multifamily uses have lower trip generation rates than single-family attached uses. Building energy use is assumed to be slightly less as a result of smaller unit size under this alternative. Therefore, this alternative would result in slightly less impacts, and as with the proposed Project, impacts would be less than significant with mitigation incorporated.

7.3.2.6 HAZARDS AND HAZARDOUS MATERIALS

Because this alternative would require demolition of the existing buildings onsite, as with the proposed Project, this alternative could release ACMs or LBPs into the environment; therefore, mitigation measures would be required to reduce impacts to less than significant. As with the proposed Project, this alternative would be required to comply with all applicable regulations and measures, including the NPDES, SWPPP, BMPs, California Building Code, and California Fire Code, and would not physically interfere with adopted emergency plans, expose people or structures to wildfires, or emit hazardous emissions within a quarter mile of schools. Overall, impacts of this alternative would be similar to the proposed Project and less than significant with mitigation incorporated.

7.3.2.7 LAND USE AND PLANNING

Both the proposed Project and this alternative would require a general plan amendment, zone change, development agreement, and precise development. This alternative would also require a conditional use permit to accommodate the multifamily uses. No physical impacts to the environment were identified for the proposed Project. This alternative would have similar impacts as the proposed Project, which would remain less than significant.

7.3.2.8 NOISE

The proposed Project would have similar construction-phase impacts compared to the proposed Project. During the operational phase, this alternative would result in slightly fewer vehicle trips; and therefore, traffic noise would be slightly less than the proposed project but would not be discernable. As with the proposed Project, under this alternative, the recreational amenity uses would consist primarily of people walking and talking, which would not exceed existing traffic noise levels in the Project area. Because traffic noise would either need to double or be halved for there to be a noticeable change in noise, operational noise would be similar to the proposed Project (since this alternative would only result in a 90-trip reduction), and would remain less than significant.

⁵ The proposed Project would generate 1,296 weekday trips whereas this alternative would generate 1,206 weekday trips (ITE Code 220 – Multifamily housing [low rise]).

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7.3.2.9 POPULATION AND HOUSING

Similar to the proposed Project, this alternative would not displace housing or people. This alternative would generate the same number of residents. Overall, impacts would be similar and less than significant.

7.3.2.10 PUBLIC SERVICES

Residential uses generate a higher demand for emergency services (e.g., police, fire) and schools than nonresidential uses. This alternative would generate the same number of residents as the proposed Project. As with the proposed Project, this alternative would be required to pay development impact fees and comply with applicable regulations and standard conditions to ensure that impacts related to public services are less than significant. Overall, impacts would be similar and remain less than significant.

7.3.2.11 RECREATION

This alternative would result in an apartment building located adjacent to the Brea Plaza Shopping Center site, and the remainder of the site would be used for open space with passive recreational uses, thereby increasing recreational facilities compared to the proposed Project. The increase in open space with passive recreational uses onsite would offset impacts to other recreational facilities and neighborhood parks. Overall, impacts would be reduced compared to the proposed Project and remain less than significant.

7.3.2.12 TRANSPORTATION

During the operational phase, this alternative would result in slightly fewer vehicle trips (90 fewer weekday vehicle trips⁶) and VMT because apartment land uses have lower trip generation rates than single-family attached units. As with the proposed Project, this alternative would result in less than significant impacts.

7.3.2.13 TRIBAL CULTURAL RESOURCES

Implementation of this alternative could uncover tribal cultural resources during grading activities. Therefore, potential tribal cultural resources impacts would be similar to the proposed Project and would be less than significant with mitigation incorporated.

7.3.2.14 UTILITIES AND SERVICE SYSTEMS

This alternative would create a similar demand for water and would generate similar wastewater and solid waste compared to the proposed Project because the number of residents would be the same. Impacts to utilities and service systems would be the same as the proposed Project, and impacts would remain less than significant.

7.3.2.15 CONCLUSION

The Alternate Residential Design Alternative would slightly lessen the proposed Project's air quality, energy, GHG emissions, recreation, and transportation impacts. This alternative would result in similar construction impacts to air quality, energy, and noise, and would result in similar impacts to aesthetics, cultural and

⁶ The proposed Project would generate 1,296 weekday trips whereas this alternative would generate 1,206 weekday trips (ITE Code 220 – Multifamily housing [low rise]).

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paleontological resources, hazards and hazardous materials, land use and planning, noise, population and housing, public services, tribal cultural resources, and utilities and service systems.

The Alternative Residential Design Alternative would develop 179 apartment units as opposed to 179 attached single-family units, and would place the apartment building adjacent to the Brea Plaza Shopping Center site so the remainder of the Project site could be used for open space with recreational uses. Therefore, this alternative would meet all of the Project objectives.

7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the “environmentally superior alternative” and, in cases where the “No Project” Alternative is environmentally superior to the proposed Project, the environmentally superior development alternative must be identified. Therefore, the Alternate Residential Design alternative has been identified as “environmentally superior” to the proposed Project, as it would meet all of the Project objectives. As shown in Table 7-3, *Summary of Impacts of Alternatives Compared to the Proposed Project*, the Alternate Residential Design Alternative would slightly lessen the proposed Project’s air quality, energy, GHG emissions, recreation, and transportation impacts. Table 7-4, *Ability of Each Alternative to Meet the Project Objectives*, shows that this alternative meets all of the Project objectives.

Table 7-3 Summary of Impacts of Alternatives Compared to the Proposed Project

Topic	Proposed Project	No Project Alternative	Alternate Residential Design Alternative
Aesthetics	LTS	+	–
Air Quality			
Construction	LTS/M	–*	=
Operation	LTS	+	–
Cultural and Paleontological Resources	LTS/M	–*	=
Energy			
Construction	LTS	–*	=
Operation	LTS	+	–
GHG Emissions	LTS/M	+	–
Hazards and Hazardous Materials	LTS/M	–*	=
Land Use and Planning	LTS	–*	=
Noise			
Construction	LTS	–*	=
Operation	LTS	=	=
Population and Housing	LTS	+	=
Public Services	LTS	–	=
Recreation	LTS	–*	–

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Table 7-3 Summary of Impacts of Alternatives Compared to the Proposed Project

Topic	Proposed Project	No Project Alternative	Alternate Residential Design Alternative
Transportation	LTS	+	-
Tribal Cultural Resources	LTS/M	-*	=
Utilities and Service Systems	LTS	=	=

Notes: LTS = Less than Significant; LTS/M = Less than Significant with Mitigation Incorporated; S/U = Significant and Unavoidable

(*) The alternative would eliminate an impact of the proposed Project and impacts would be substantially reduced.

(=) The alternative would result in the same/similar impacts as the proposed Project.

(-) The alternative would result in less of an impact than the proposed Project.

(+) The alternative would result in greater impacts than the proposed Project.

Table 7-4 Ability of Each Alternative to Meet the Project Objectives

Objective	Proposed Project	No Project Alternative	Alternate Residential Design Alternative
Revitalize the site by developing housing near other residential and commercial uses, thereby introducing new, high-quality residential uses in the City.	Yes	No	Yes
Redevelop the underutilized Project site by providing additional opportunities for residential growth on an infill parcel.	Yes	No	Yes
Improve the jobs-housing balance in the City by providing new housing within close proximity to jobs and services.	Yes	No	Yes
Provide additional housing opportunities in the City to meet its Regional Housing Needs Allocation.	Yes	No	Yes
Create a high-quality residential product that provides connectivity between the commercial uses at Brea Plaza and a transitional buffer for the existing residential neighborhood to foster a vibrant and interactive mixed-use environment.	Yes	No	Yes

7.5 REFERENCES

Natelson Company, Inc. 2001, October 31. Employment Density Study Summary Report.

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8. Impacts Found Not to Be Significant

California Public Resources Code Section 21003 (f) states: “...it is the policy of the state that...[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment.” This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that “[a]n EIR [Environmental Impact Report] shall identify and focus on the significant environmental impacts of the proposed project” and Section 15143, which states that “[t]he EIR shall focus on the significant effects on the environment.” Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Draft EIR.

Impacts to agriculture and forestry resources, biological resources, geology and soils (except paleontological resources), hydrology and water quality, mineral resources, and wildfire were determined to be less than significant during scoping for the EIR. The following sections provide the thresholds of significance and a brief analysis supporting the determination of no impact or less than significant impacts. Threshold letters correspond to the lettering in Appendix G of the CEQA Guidelines.

8.1 AGRICULTURE AND FOREST RESOURCES

Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

No Impact. The Project site has no agricultural or farmland use on it, nor is there agricultural or farmland use in its immediate vicinity. No Project-related farmland conversion impact would occur. The Project site is zoned General Commercial (C-G) with a Precise Development overlay (P-D) (Brea 2024a). The Project site is developed with an office building, paved parking lot, a parking structure, and ornamental landscaping.

The Farmland Mapping and Monitoring Program produces maps and statistical data for analyzing impacts on California’s agricultural resources. Agricultural land is rated according to soil quality and irrigation status and is divided into five categories: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Unique Farmland, and Grazing Land. The best quality land is Prime Farmland (DOC 2024a). According to the Farmland Mapping and Monitoring Program, the Project site is mapped as ‘Urban and Built-up Land’ (DOC 2020). The proposed Project would be developed on a site that was previously developed with commercial uses, and surrounded by residential, recreational and commercial development. Therefore, the

8. Impacts Found Not to Be Significant

Project site is not mapped as important farmland by the California Department of Conservation (DOC 2020). The Project site is primarily surrounded by residential development. The proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project site is located on a site that has previously been developed with commercial uses, which has a zoning designation of General Commercial (C-G) with a P-D (Precise Development) overlay (Brea 2024a). The proposed Project would not conflict with agricultural zoning.

Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open-space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value (DOC 2024b). Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. Since the Project site is zoned for C-G with a P-D and is developed, there is no Williamson Act contract in effect on-site (Brea 2024a). No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Project development would not conflict with existing zoning for forest land, timberland, or timberland production. Forest land is defined as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits” (California Public Resources Code Section 12223 [g]). Timberland is defined as “land...which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees” (California Public Resources Code Section 4526). The Project site is zoned C-G (General Commercial Zone), with a P-D (Precise Development) overlay and is currently developed (Brea 2024a). Therefore, development of the proposed Project would not conflict with existing zoning for forestland or timberland. No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Vegetation on-site is limited to ornamental vegetation throughout the parking lot and landscaped areas. Development of the proposed Project would not require any changes to the existing environment that could result in the conversion of forest land to nonforest use. No impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. According to the California Important Farmland Finder, there is no important farmland on the Project site or in the surrounding vicinity (DOC 2020). Furthermore, the Project site and surrounding area is

8. Impacts Found Not to Be Significant

mapped as 'Urban and Built-up Land' and no forest land on or near the Project site. Development of the proposed Project would not result in any changes to the existing environment that could result in the conversion of farmland to nonagricultural uses or forest land to non-forest use. No impact would occur.

8.2 BIOLOGICAL RESOURCES

Plans, Programs, and Policies

Plans, programs, and policies (PPP) include applicable regulatory requirement and conditions of approval for aesthetic impacts.

PPP BIO-1 In compliance with the California Fish and Game Code, Migratory Bird Treaty Act (US Code, Title 16, Sections 703–712), birds and their active nests are protected; therefore, the trees on-site would be removed outside of the nesting season, either prior to February 15 or after August 15. If construction or other Project activities are scheduled to occur during the nesting bird and raptor season, a preconstruction nesting bird and raptor survey shall be conducted by a qualified avian biologist to ensure that active bird nests will not be disturbed or destroyed. If an active nest is identified, a qualified avian biologist shall establish an appropriately sized non-disturbance buffer around the nest using flagging or staking. Construction activities shall not occur within any non-disturbance buffer zones until the nest is deemed inactive by the qualified avian biologist.

Would the project:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Less Than Significant Impact. Special status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society. The Project site has been previously disturbed by the development of the former Mercury Insurance office building and associated structures.

Although, the proposed Project is within the Orange County Transportation Authority (OCTA) Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), the OCTA NCCP/HCP only pertains to OCTA wilderness reserves and does not apply to the Project site (CDFW 2024a; OCTA 2024). The Project site contains ornamental trees and ornamental landscaped areas. Any use of the site by sensitive species would be incidental foraging, which does not constitute habitat use. Additionally, the Project site and surrounding area are outside of any federally designated critical habitat (USFWS 2022). The Project site is already disturbed and developed and surrounded by urban development; the proposed Project would not impact any candidate, sensitive, or special status species. A less than significant impact would occur.

8. Impacts Found Not to Be Significant

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Less Than Significant Impact. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies, are known to provide habitat for sensitive animal or plant species or are known to be important wildlife corridors. As discussed in Section 8.2(a), the proposed Project is not within a NCCP/HCP area and not within any federally designated critical habitat (CDFW 2024a; OCTA 2024; USFWS 2022). Riparian habitats occur along the banks of rivers and streams. The National Wetlands Mapper maintained by the US Fish and Wildlife service identified Fullerton Creek, which bounds the Project site to the east, as a freshwater emergent wetland (USFWS 2024). As discussed in Section 8.5, *Hydrology and Water Quality*, the proposed Project would implement a variety of best management practices (BMP) to reduce dust and pollutants to receiving waters, including the adjacent wetland, to less than significant. The Project site is fully paved and developed with an office building and associated structures; no sensitive natural community or riparian habitat is present on-site. Therefore, a less than significant impact would occur.

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Less Than Significant Impact. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include playas, ponds, and wet meadows; lakes and reservoirs; rivers, streams, and canals; estuaries; and beaches and rocky shores (SCWRP 2024). The Project site is fully paved and developed with an office building and associated structures; no federally protected wetland habitat is present on-site (USFWS 2024). According to the National Wetlands Mapper, there is a 0.72-acre freshwater emergent wetland and pocket of riverine habitats on the eastern boundary of the Project site in Fullerton Creek (USFWS 2024). As discussed in Section 8.5, *Hydrology and Water Quality*, the proposed Project would implement a variety of BMPs to reduce dust and pollutants to receiving waters, including the adjacent wetland, to less than significant.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Less Than Significant Impact. There are several ornamental trees scattered throughout the parking lot and landscaped areas on-site and which could be used for nesting by birds protected under the California Fish and Game Code Sections 3503 et seq. California law, particularly relevant statutes in the Fish and Game Code (FGC), provide protections for birds and their active nests by prohibiting:

- Take of a bird, mammal, fish, reptile, or amphibian. (FGC Section 2000)
- Take, possess, or needlessly destroy the nest or eggs of any bird. (FGC Section 3503)

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- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird. (FGC Section 3503.5)
- Take or possess any of the 13 fully protected bird species listed in FGC Section 3511.
- Take any nongame bird (i.e., bird that is naturally occurring in California that is not a game bird, migratory game bird, or fully protected bird). (FGC Section 3800)
- Take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such bird, except as provided by rules or regulations adopted by the Secretary of the Interior under the Migratory Bird Treaty Act. (FGC Section 3513)
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the California Endangered Species Act unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW. (FGC Subsection 2050 et seq.)

In compliance with the California Fish and Game Code, birds and their active nests are protected; therefore, the trees on-site would be removed outside of the nesting season, either prior to February 15 or after August 15. However, in the event construction or other Project activities occur during nesting bird and raptor season, a preconstruction nesting bird and raptor survey shall be conducted by a qualified avian biologist to ensure that active bird nests will not be disturbed or destroyed; if an active nest is identified the qualified avian biologist would establish measures to ensure no impacts to nesting birds occur see PPP BIO-1 above. Impacts would be less than significant with compliance with the California Fish and Game Code.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The proposed Project would be required to comply with the City of Brea's Protected Trees Ordinance No. 1241. This ordinance requires that commercial properties, commercially zoned parcels, and parcels that are equal or greater than 20,000 square feet or more shall not damage, injury, or death to a protected tree and that trees removed be replaced, as specified in Section 20.74.050, *Protected Trees*, of the Municipal Code. The proposed Project would be required to adhere to the provisions of this ordinance for removal of protected trees. Street trees are also protected under the municipal code, Chapter 12.20. The trees on-site are on private property and are not street trees. Based on Arborist report for the Project site (see Appendix L), the on-site trees are not protected trees under Section 20.74.050, *Protected Trees*, of the Municipal Code. Additionally, the proposed Project would not conflict with biological resources protected within the General Plan, including but not limited to Goal CR-8, Preserve and maintain wildlife and animal movement corridors, because the Project site is not within identified wildlife corridors, as seen on Figure CR-3 of the General Plan, and contains limited connectivity opportunity (Brea 2003, CDFW 2024b). Therefore, no impact would occur.

8. Impacts Found Not to Be Significant

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As discussed in Section 8.2(a), the proposed Project is not within a NCCP/HCP area and not within any federally designated critical habitat (CDFW 2024a; OCTA 2024; USFWS 2022). The Project site does not contain sensitive biological resources, and there are no local policies protecting biological resources applicable to the site. No impact would occur.

8.3 GEOLOGY AND SOILS

Appendix G checklist question (f) regarding paleontological resources is addressed in Section 5.3, *Cultural Resources*. The analysis in this section is based in part on the following technical report, included as Appendix H of this Addendum:

- *Preliminary Geotechnical Evaluation and Design Recommendations for the Proposed Residential Development of 1698 and 1700 Greenbriar Lane, City of Brea, Orange County, California*, LGG Geotechnical, November 17, 2023.

Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

No Impact. The Project site is not in an Alquist-Priolo Earthquake Fault Zone for fault rupture hazards, and no faults were identified on the Project site (Appendix H). The nearest zoned fault is the Whittier fault of the Elsinore fault zone, is 1.80 miles north of the Project site (DOC 2024c). Since no active faults exist on-site, surface rupture would not occur. No impact would occur.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The Project site is not in an established Alquist-Priolo Earthquake Fault Zone. However, the Project site, like all areas in Southern California, is subject to ground movement associated with earthquakes along the active faults. The degree of ground shaking, and earthquake-induced damage is dependent on multiple factors, such as distances between the site and causative faults, earthquake magnitudes, and the on-site geology (Appendix H). The closest active fault is the Whittier fault of the Elsinore fault zone is 1.80 miles north of the Project site (DOC 2024c). Although seismic activity from this fault could potentially affect the Project site, the site is at no greater risk than the surrounding development and infrastructure.

Additionally, the proposed Project would be construction in accordance with the 2022 California Building Code (CBC)(California Code of Regulations, Title 24, Part 2), which provides minimum standards to

8. Impacts Found Not to Be Significant

protect property and public welfare by regulating design and construction to mitigate the effects of seismic shaking and adverse soil conditions. Compliance with the standards of the CBC and recommendations from the Preliminary Geotechnical Evaluation would reduce impacts from seismic ground shaking to a less than significant level.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions coexist: 1) shallow groundwater; 2) low density noncohesive (granular) soils; and 3) high-intensity ground motion. Studies indicate that saturated, loose, near-surface, cohesionless soils exhibit the highest liquefaction potential, while dry, dense, and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction, depending on their plasticity and moisture content. Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur because the sand particles tend to settle and densify as a result of a seismic event.

The Project site is not within a liquefaction hazard zone, and on-site soils are generally not susceptible to liquefaction due to the fine-grained nature of some of the on-site soils and the relatively dense nature of the coarse-grained soils (Appendix H). Additionally, the proposed Project would comply with the CBC, and recommendations from the Geotechnical Evaluation report, which would ensure that seismic-related ground failure impacts of the proposed Project would be less than significant.

iv) Landslides?

Less Than Significant Impact. Susceptibility of slopes to landslides and other slope failures depend on several factors that are usually present in combination—steep slopes, condition of rock and soil materials, presence of water, formational contacts, geologic shear zones, seismic activity, etc. According to the FEMA National Risk Index mapper, the Project site is within a census tract with relatively low landslide risk (FEMA 2024). Additionally, according to Figure 13 of the Brea General Plan Safety Element, the Project site is not within a landslide zone (Brea 2003). The Project site is developed and flat; therefore, it is unlikely that the site would be susceptible to landslide hazards. The proposed Project would be developed in accordance with the CBC, and recommendations from the Geotechnical Evaluation report, thus impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed, or dissolved and removed from one place and transported to another. The Project site contains relatively flat terrain, which decreases the Project's potential to accelerate erosion. Implementation of the proposed Project would require earthwork which includes grading for proper base and slope, and utility trenching.

8. Impacts Found Not to Be Significant

Additionally, the proposed Project does not contain any subterranean levels and would not require extensive excavation, which could expose more soils to erosion. In addition, because the proposed Project encompasses an area of more than one acre, it would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements. These include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that would describe minimum and advanced construction BMPs for erosion control at the site and implementation of those BMPs. Additionally, adherence with existing state and local laws regulating construction activities would minimize soil erosion, as would recommendations from the Preliminary Geotechnical Evaluation. Therefore, the proposed Project would not result in a substantial soil erosion or loss of topsoil, and a less than significant impact would occur.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. As discussed in Section 8.3(a)(iii) and 8.3(a)(iv), the Project site is not in a liquefaction zone or a landslide zone.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope toward a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements, and such movement typically damages pipelines, utilities, bridges, and structures. Due to the low potential for shallow liquefaction, the potential for lateral spreading is also considered low. Therefore, impacts from lateral spreading would be less than significant (Appendix H).

Subsidence of basins attributed to overdraft of groundwater aquifers or overpumping of petroleum reserves has been reported in various parts of southern California. According to the Brea General Plan, Brea today has oil fields with wells and associated petroleum and natural gas facilities (Brea 2003). The Project site is not in an identified areas of ground subsidence due to groundwater pumping or oil extraction (USGS 2024). The proposed Project would result in neither an overdraft of groundwater aquifers nor overpumping of petroleum reserves. Impacts to subsidence would be less than significant.

Additionally, compliance with the CBC would ensure that seismic-related ground failure impacts to the proposed Project would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Highly expansive soils swell when they absorb water and shrink as they dry and can cause structural damage to building foundations and roads. Based on the results of soil testing on the Project site, the soils on the Project site have a “medium” expansion potential (Appendix G). However, impacts of expansive soils would be reduced to less than significant with incorporation of the recommendations in the Preliminary Geotechnical Evaluation and CBC requirements. Therefore, impacts would be less than significant.

8. Impacts Found Not to Be Significant

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed Project would not require the installation or use of a septic tank or alternative wastewater disposal system. The proposed Project is in an urbanized area and would utilize the local sewer system. Therefore, no impacts would result from soil conditions in relation to septic tanks or other on-site water disposal systems.

8.4 HYDROLOGY AND WATER QUALITY

The analysis in this section is based in part on the following technical studies:

- *Preliminary Hydrology Analysis for Greenbriar Residential Development Project*, Hunsaker and Associates Irvine, July 2024
- *Preliminary/Conceptual Water Quality Management Plan*, Hunsaker and Associates Irvine, July 2024.

Complete copies of these studies are included in this DEIR as Appendices G2 and G3, respectively.

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The Project site is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). Site preparation and other soil-disturbing activities during construction of the Project could temporarily increase the amount of soil erosion and siltation entering the local stormwater drainage system.

Construction

Clearing, grading, and other construction activities associated with the Project have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality.

The Project site is 9.7 acres. Pursuant to Section 402 of the Clean Water Act, the US Environmental Protection Agency has established regulations under the NPDES program to control direct stormwater discharges. In California, the State Water Resources Control Board administers the NPDES permitting program and is responsible for developing permitting requirements. The NPDES program regulates pollutant discharges, including construction activities for sites larger than one acre. Since implementation of the proposed Project would disturb more than one acre, the proposed Project would be subject to the NPDES Construction General Permit (CGP) requirements (Order No. 2022-0057-DWQ). Projects obtain coverage by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) estimating sediment risk from construction activities to receiving waters and specifying BMPs that would be used by the proposed Project to minimize pollution of stormwater.

8. Impacts Found Not to Be Significant

The proposed Project's construction contractor would be required to prepare and implement a SWPPP and associated BMPs in compliance with the CGP during grading and construction. The SWPPP would specify BMPs that the construction contractor would implement to protect water quality by eliminating and/or minimizing stormwater pollution prior to and during grading and construction and show the placement of those BMPs. Project construction activities would also be implemented in accordance with the requirements of Chapter 15.24, Green Building Standards Code, of the Brea City Code of Ordinances, which adopts the 2022 California Green Building Standards Code with amendments.

Adherence to the BMPs in the SWPPP and the Brea City Code of Ordinances requirements would reduce, prevent, minimize, and/or treat pollutants and prevent degradation of downstream receiving waters. BMPs identified in the SWPPP would reduce or avoid contamination of stormwater with sediment and other pollutants such as trash and debris; oil, grease, fuels, and other toxic chemicals; paint, concrete, asphalt, bituminous materials, etc.; and nutrients. Based on the preceding, water quality and waste-discharge impacts from Project grading and construction activities would be less than significant and no mitigation measures are necessary.

Operation

Standards governing discharges to stormwater from the Project site during the operational phase are regulated by the Orange County Regional Municipal Stormwater (MS4) Permit Order No. R8-2009-0030, as amended by Order No. R8-2010-0062. Within the permit, low impact development (LID) BMPs are required to be considered before migration techniques.

LID is a stormwater management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site predevelopment hydrology by using site design techniques that store, infiltrate, evapotranspire, biofilter, or detain runoff close to its source. Source control BMPs reduce the potential for pollutants to enter runoff and are classified in two categories—structural and nonstructural. Structural source-control BMPs have a physical or structural component, such as inlet trash racks, trash bin covers, and an efficient irrigation system, to prevent pollutants from contacting stormwater runoff. Nonstructural source-control BMPs are procedures or practices used in project operation, such as stormwater training or trash management and litter control practices.

Drainage Pattern

The Project site is a fully developed property and has existing drainage onsite that convey flows from west to east. The existing infiltration rates are very low and are not feasible for infiltration (Appendix G3). The existing conditions are 90 percent impervious area and 10 percent pervious area. With implementation of the proposed, the Project site would consist of approximately 80 percent impervious surface area (e.g., buildings and asphalt parking) and approximately 20 percent pervious surface area (e.g., parkway and walkway landscaping, common landscaping, open space areas). Project development would be consistent with existing conditions in terms of the overall drainage pattern, continuing to flow to the east via new on-site drainage collection, conveyance, and treatment systems.

8. Impacts Found Not to Be Significant

LID and Water Quality Treatment BMPs

The proposed storm drain system is composed of multiple catch basins prior to discharging to the backbone storm drain system. Runoff is then conveyed easterly where it connects to a series of Modular Wetland System (MWS) units located at the northeastern corner of the Project site for treatment prior to discharging offsite to the Loftus Diversion Channel. To satisfy the Project's requirements for LID requirements and water quality treatment, on-site water quality runoff is addressed via three proprietary biotreatment BMPs (MWS or City-approved equivalent) (Appendix G3). These proprietary biotreatment BMPs are shown on Figure 8-1, *Water Quality Management Plan: BMP Site Plan*.

The preliminary WQMP (see Appendix G3) also details structural BMPs, such as providing storm drainage system stenciling and signage and using efficient irrigation systems as well as nonstructural BMPs, such as common area litter control, employee training, inspecting catch basins, and street sweeping.

Proposed Hydrology

As shown on Figure 5.14-1, *Existing Hydrology*, of Chapter 5.14, *Utilities and Services Systems*, the existing Project site includes Drainage Management Area A (DMA A). DMAs B, C, and D are off-site and include Chevy Chase Drive, Hill Haven Drive, and Greenbriar Lane. As shown on Figure 5.14-2, *Proposed Hydrology*, the proposed Project would reorganize the DMAs so that DMA D would be removed and redistributed between DMA A, B, and C. The WQMP calculated a required design flow rate of 0.22 cubic feet per sec (cfs) for on-site runoff, which would only be from DMA A; all other DMAs are off-site. The maximum flow rate for the proposed LID BMPs is approximately 2.076 cfs, which exceeds the required design flow rate of 0.22 cfs (Appendix G3).

Hydromodification Requirements

The WQMP calculated the runoff volume and peak discharge for the three DMAs for the two-year storm event and identified that with implementation of the proposed Project, runoff volume and peak discharge would be less than the existing conditions at the Project site. Therefore, the Project does not have hydromodification impacts to downstream receiving waters (Appendix G3). As demonstrated in the WQMP, the MWSs have been designed to ensure that hydrologic requirements per the MS4 have been met (Appendix G3). Project development would also comply with the requirements of Chapter 13.32, Storm Water Drainage, of the Brea City Code of Ordinances.

Summary

Based on the preceding, no significant water quality and waste-discharge impacts from Project operation activities would occur and no mitigation measures are necessary. The proposed Project would also be required to comply with applicable federal, state, and local regulations. Provided that the standard BMPs are implemented, the proposed Project would not substantially degrade water quality. A less than significant impact would occur.

8. Impacts Found Not to Be Significant

- a) **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Less Than Significant Impact. The Project site is in the Coastal Plain of Orange County subbasin (DWR 2024a). The Project does not propose groundwater wells that would extract groundwater from the aquifer, nor would the proposed Project affect recharge capabilities for the basin, as the site is fully developed with an existing office building. Additionally, the Project site is not in a shallow groundwater zone (see Appendix G3). Thus, a less than significant impact would occur.

- b) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

- i) **Result in a substantial erosion or siltation on- or off-site;**

Less Than Significant Impact. The proposed Project would not alter the course of a stream or river.

Construction

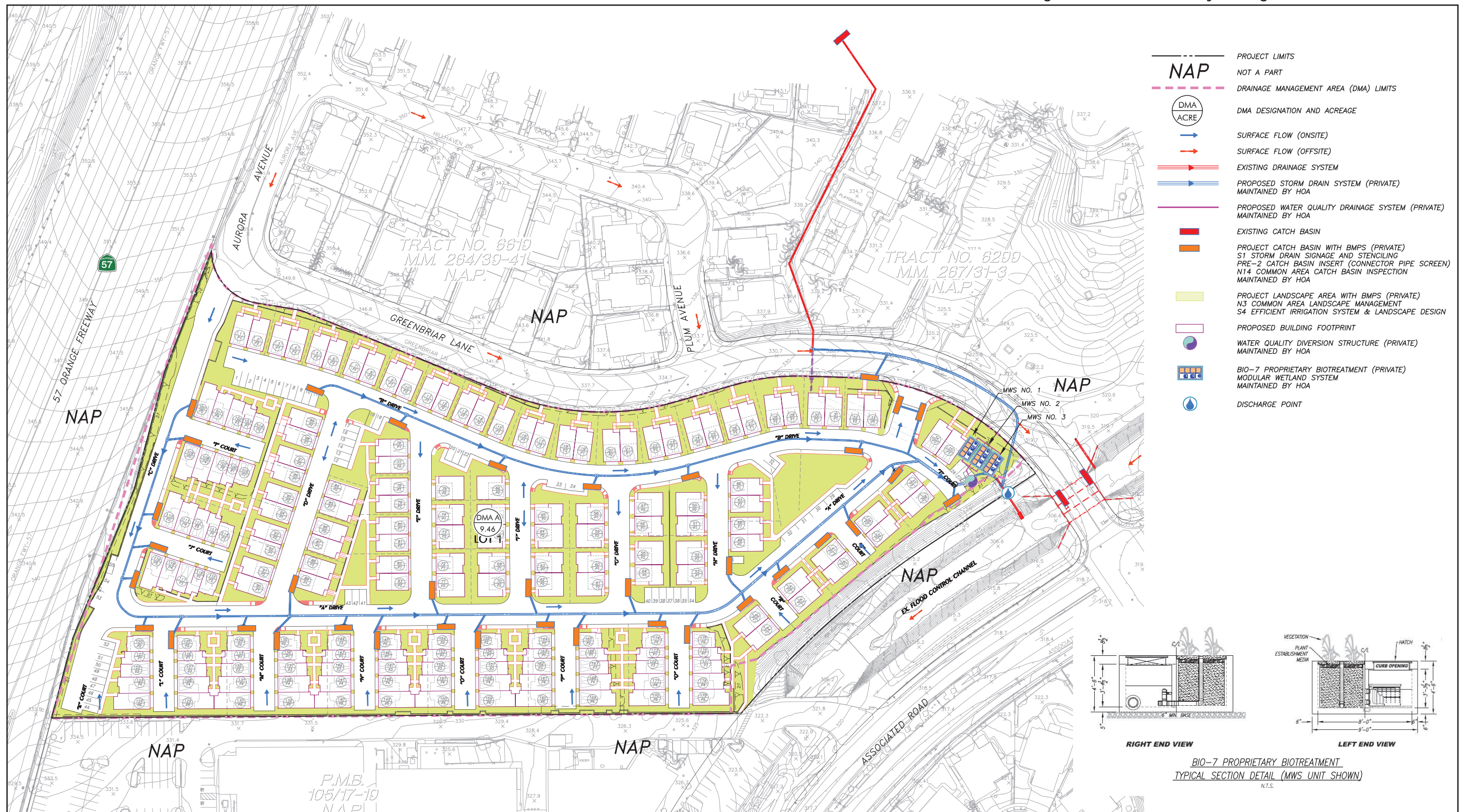
Construction of the proposed Project would increase the potential for erosion and siltation, the improvements would be constructed over a short period of time, and BMPs would be implemented to reduce erosion and siltation impacts. Additionally, surface water drainage would be controlled by building regulations, with the water directed to existing streets, flood control channels, and catch basins. Because the proposed Project is subject to NPDES requirements, the applicant is required to submit a SWPPP to reduce erosion and sedimentation of downstream watercourses during Project construction. The SWPPP would specify erosion- and sediment-control BMPs that the Project construction contractor would implement prior to and during grading and construction to minimize erosion and siltation impacts on- and off-site.

Operation

As stated in the preliminary WQMP, the drainage of the proposed Project would generally follow the existing flows, and the proposed storm drain system would discharge into the existing flood control channel to the east of the Project site. The on-site flows would be collected via a series of catch basins and conveyed to three modular wetlands systems for treatment before flowing into the existing 18-inch pipe and discharging into the existing flood control channel. The design flow rate for this system is 0.22 cfs, and the MWS systems for the proposed Project would have a design flow rate of 0.692 cfs per unit, which exceeds the required storage volume (see Appendix G3).

The Project would be implemented in accordance with the WQMP and abide by the requirements of the MS4 permit. Therefore, a less than significant impact to drainage would occur.

Figure 8-1 - Water Quality Management Plan BMP Site Plan



8. Impacts Found Not to Be Significant

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8. Impacts Found Not to Be Significant

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less Than Significant Impact. The Project site contains office buildings, surface parking, and a parking structure. The existing conditions are 90 percent impervious area and 10 percent pervious area. Under existing conditions, all runoff, including from off-site tributary areas, drains into Loftus Channel, which is an engineered channel. Under proposed conditions and upon Project completion, the Project site would be developed with 80 percent impervious and 20 percent pervious surfaces. The general drainage patterns of the proposed Project would remain consistent with the existing drainage patterns, and runoff would be collected and ultimately directed to Loftus Channel (see Appendix G2).

The Preliminary Hydrology Analysis analyzed three drainage management areas for the proposed conditions (DMAs A, B, and C). The details of each DMA are described below and shown on Figure 5.14-2, *Proposed Hydrology*:

- **DMA A** would contain the overall Project site with proposed on-site storm drains, inlets, and catch basins. Drainage would be transferred to the eastern portion of the Project site via a network of pipes that tie into a 30-inch reinforced concrete pipe (RCP) where it would connect to a low flow diversion structure that would divert stormwater to an MWS for water quality treatment and connect to an existing 18-inch pipe, which would discharge into Loftus Channel. Additionally, this drainage area includes off-site areas from Chevy Chase Drive and portions of Greenbriar Lane. The proposed off-site storm drain would utilize an existing catch basin and 15-inch storm drain pipe located north of the Project site where it would connect to a new 18-inch pipe along Greenbriar Lane and meet the proposed 30-inch RCP on the eastern edge of the Project site and drain into the existing 18-inch pipe to the east of the Project site, which would discharge into Loftus Channel.
- **DMA B** would contain the off-site tributary north of the Project site and would utilize the existing 10-foot catch basin, which is north of Greenbriar Lane and on top of the existing triple reinforced concrete box culvert to the east of the Project site. The off-site existing 15-inch RCP has been revised to discharge to Greenbriar Lane via parkway culvert to the north of the Project site.
- **DMA C** would contain the off-site areas tributary along the south side of Greenbriar Lane, and flows would go to the existing 21-foot catch basin, which is south of Greenbriar Lane and on top of the existing triple reinforced concrete box culvert to the east of the Project site.

As part of the proposed Project there would be no detention pipes or detention areas. To satisfy the WQMP requirements, a water quality diversion structure would be installed at the 18-inch pipe that would connect to three MWSs for treatment before flowing into the 18-inch pipe and discharging into Loftus Channel.

- **Loftus Channel.** The Preliminary Hydrology Analysis concluded that the Loftus Channel reach along the Project site will have no negative impacts resulting from the additional peak flow rate from the proposed Project.

8. Impacts Found Not to Be Significant

- **Greenbriar Lane.** The proposed flows to the existing 10-foot and 21-foot catch basins on top of the Loftus Channel box culvert are less than the existing levels. Currently, the existing flow rates for the 10-foot and 21-foot catch basins are 26.1 cfs and 2.6 cfs, respectively. Under the proposed Project, the 10-foot and 21-foot catch basins would have a flow rate of 24.7 cfs and 1.2 cfs respectively.
- **18-inch RCP.** Due to the Hydrology Analysis being a preliminary report, a detailed pressured flow hydraulic calculation was not performed. However, this calculation will be performed during the final engineering phase when the detailed designs are available (see Appendix G2).

For projects in north Orange County, hydrologic conditions of concerns are considered to exist if streams downstream from the project are determined to be potentially susceptible to hydromodification impact. While the Project site is within a hydrologic conditions of concern area, because the proposed Project would reduce the amount of impervious area in the site and the proposed Project's storm drain flows would be less than the existing conditions, the proposed Project does not have hydromodification impacts to downstream receiving waters (see Appendix G2).

Based on the preceding, post-development runoff would be adequately handled by the Project's drainage system and would not result in flooding on- or off-site. Therefore, impacts would be less than significant and no mitigation measures are necessary.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. Site design BMPs would minimize the impacts associated with impervious surfaces. Additionally, the overall combined proposed runoffs are less than the overall combined existing condition. Currently, the overall 2-year peak flow is approximately 25.8 cfs, 25-year peak flow is approximately 58.3 cfs, and 100-year flow rate is approximately 75.5 cfs. For the proposed Project, the total 2-year peak flow is approximately 25.3 cfs, 25-year peak flow is approximately 57.4 cfs, and 100-year flow rate is approximately 74.4 cfs with the same tributary area as existing conditions see Appendix G2). Because the proposed Project has a lower peak flow than the existing peak flow conditions at the site, the proposed Project would not exceed the capacity of existing or planned stormwater drainage systems. Impacts would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant. The Project site is developed with an existing office building. The proposed Project would take place within the footprint of the Project site, which is within Zone X (0.2 percent/500-year flood hazard) (Flood Insurance Rate Map ID #06059C0042J) (FEMA 2009). Since the likelihood of floods in the Project site is low, the proposed Project would have a less than significant impact on impeding or redirecting flood flows.

8. Impacts Found Not to Be Significant

c) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities, because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. Thirteen dams in the greater Los Angeles area moved or cracked during the 1994 Northridge earthquake but none were severely damaged. This low damage level was due in part to completion of the retrofitting of dams and reservoirs pursuant to the 1972 State Dam Safety Act. According to Figure PS-12, Location of Reservoirs and Dams and Flood Plain and Dam Inundations Areas, of the City of Brea General Plan, there is one dam breach inundation zone in Brea, but it is 1.8 miles east of the Project site (Brea 2003).

A tsunami is earthquake-induced flooding that is created from a large displacement of the ocean floor. The site is 18 miles northeast of the Pacific Ocean and is not in a tsunami inundation area. The Project is not at risk for tsunami impacts.

A mudflow is a landslide event in which debris, land mass, and soils are saturated during their displacement. The Project site is generally flat, with no slopes near the site that are capable of generating a mudflow. No mudflow impacts would occur.

Provided that the standard BMPs and those mentioned in the preliminary WQMP are implemented, the proposed Project would not substantially degrade water quality. Because impacts related to the occurrence of site inundation by seiche, tsunami, or mudflow are less than significant, the release of pollutants would be less than significant.

d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The proposed Project would not obstruct or conflict with the implementation of a water quality control plan or sustainable water management plan. The proposed Project would comply with the water quality and use requirements of these plans through the implementation of BMPs. Therefore, impacts would be less than significant.

8.5 MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. There are three mineral resource zones (MRZ):

- **MRZ-1.** Adequate information indicates that no significant mineral deposits are present or likely to be present.

8. Impacts Found Not to Be Significant

- **MRZ-2.** Adequate information indicates that significant mineral deposits are present or there is a high likelihood for their presence, and development should be controlled.
- **MRZ-3.** The significance of mineral deposits cannot be determined from the available data.

The Project site is in MRZ-1, where significant mineral deposits are unlikely or not present (DOC 1994). Mineral resource designations are intended to prevent incompatible land use development on areas determined to have significant mineral resource deposits. The Project site is developed with the an office building and surrounded by residential, recreational, and commercial uses. No mining activities currently exist on the Project site or in the surrounding areas (DOC 2024d). Therefore, no loss of known resources would result from Project implementation, and no impact would occur.

b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

No Impact. No mining sites are identified in the California Department of Conservation Mine Mapper or the City of Brea General Plan (DOC 2024d; Brea 2003). Therefore, development of the proposed Project would not cause a loss of availability of a mining site. No impact would occur.

8.6 WILDFIRE

The Project site is in an urban area and is not within a very high fire hazard severity zone (VHFHSZ); based on Figure 9, Fire Hazard Severity Zones, of the Brea General Plan – Safety Element, and Figure 3-5, *Very High Fire Hazard Severity Zones*, of the Local Hazards Mitigation Plan (LHMP), the Project site is not within a low, moderate, high or very high FHSZ (Brea 2021, 2024b). The Project site is within a local responsibility area (LRA). Additionally, according to the United State Forest Service the Project site is not within the Wildfire Urban Interface (WUI) (USFS 2023).

Would the project:

a) **Substantially impair an adopted emergency response plan or emergency evacuation plan?**

Less Than Significant Impact. The Brea Emergency Operations Plan (EOP) establishes a comprehensive framework of policy and guidance for emergency and disaster response operations. The type of emergency incident would determine staffing for the Emergency Operations Center and evacuation by Brea Fire, Brea Police Department, the Public Works, or a unified command (Brea 2020). The Brea Fire Department is tasked with overall emergency preparedness, and Brea Police Department is tasked with evacuation operations during a disaster.

The EOP and the Brea General Plan Safety Element do not identify evacuation routes. However, the Brea General Plan Safety Element outlines that all neighborhoods in the City have more than one emergency evacuation route, and Carbon Canyon Road and State Route 57 (SR-57) are critical for evacuation. The proposed Project is bounded by SR-57 but would not hinder access to the designated access route. Although the proposed Project would require circulation improvements to nearby roadways, as discussed in Section 5.12,

8. Impacts Found Not to Be Significant

Transportation, such impacts would be temporary, not create a hazard, nor significantly impact circulation and emergency routes. The proposed Project's construction and staging would occur within the boundaries of the Project site and not impact access to the designated evacuation route (SR-57). The proposed Project is not in and would not impact "areas of concern" designated in the Brea General Plan Safety Element Figure 10, Emergency Evacuation Access (Brea 2021).

Additionally, the City of Brea adopted an LHMP on October 2024. The plan documents the natural and artificial hazards and identifies reduction strategies to reduce the impact of future disasters (Brea 2024b). The natural and artificial hazards outlined in the LHMP were discussed in each respective section of this DEIR, such as the risk of Wildland fire, urban fire, and climate change considerations. Although, the LHMP does not outline additional evacuation routes, the proposed Project would adhere to goals outlined within the LHMP and would not impair the LHMP. Furthermore, the proposed Project would be designed in accordance with the CBC and California Fire Code (CFC). Project design plans would be reviewed by Brea Fire department and fire suppression equipment specific to construction would be maintained on-site. Additionally, Project construction would comply with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. There are three primary factors used in assessing wildfire hazards—topography, weather, and fuel. The Project site is flat and developed an office building and associated structures, formerly occupied by Mercury Insurance. The Brea General Plan Safety Element states that the City receives Santa Ana winds that can combine with the summer season, dry vegetation, and little seasonal rain to exacerbate wildfire risk (Brea 2021). However, due to the developed nature of the site, at Project completion site would consist of primarily impervious surfaces and ornamental landscaped areas with pervious surfaces. The proposed Project is not in a Fire Hazard Severity Zone (FHSZ) (Brea 2021). The proposed Project would be designed in accordance with the CBC and CFC. Fire suppression equipment specific to construction would be maintained on-site. Project construction would comply with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the proposed Project would not expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds, and other factors. Impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. The Project site is in an urban area and is served by existing utility infrastructure, including water and power. Development of the proposed Project would require the installation

8. Impacts Found Not to Be Significant

of new and expanded water pipes to accommodate the increase in density on-site (see Section 5.14, *Utilities and Service Systems*). Additionally, as discussed in Section 5.12, *Transportation*, the proposed Project would require circulation improvements to nearby roadways. However, such improvements would be temporary and, as substantiated in Section 8.7(c), the Project site is not in an FHSZ. The proposed Project would be designed and constructed in accordance with the CBC and the CFC. The Project site is in a highly urbanized portion of Brea; the proposed Project would not add infrastructure such as roads or overhead power lines in areas with wildland vegetation. Therefore, impacts of exacerbating fire risks to the environment would be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. The Project site is in a LRA and not in an FHSZ per Figure 9, Fire Hazard Severity Zones, of the Brea General Plan – Safety Element (Brea 2021). As discussed in Section 8.5(iv), a segment of the eastern portion of the Project site is within flood zone X (0.2 percent/500-year flood hazard) (Flood Insurance Rate Map ID #06059C0042J) with a low likelihood of floods (FEMA 2009). The Project site is not within flood zone AE and is not required to develop above base flood elevation. Furthermore, the Project site is not within a dam inundation zone (Brea 3003; DWR 2024b; USACE 2024). According to the FEMA National Risk Index mapper, the Project site is in a census tract with relatively low landslide risk, and it is not in a landslide zone identified by the City of Brea (FEMA 2024; Brea 2003). The Project site is developed and generally flat; therefore, it is unlikely that the site would be susceptible to landslide hazards. Based on the surface hydrology and soil, there is a low potential for the Project site to be at risk of post-fire slope instability or drainage changes. Therefore, the proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. A less than significant impact would occur.

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9. Significant Irreversible Changes Due to the Proposed Project

Section 15126.2(c) of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed Project should it be implemented.

Uses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

- The proposed Project would include construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources, human resources, and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. The proposed Project would also require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of the Project would limit the availability of such resources for future generations or for other uses during the life of the Project. However, the Project does not represent an uncommon construction project that uses an extraordinary amount of raw materials in comparison to other urban development projects of a similar scope and magnitude.
- An increased commitment of social services (e.g., emergency services, police, fire, schools, libraries) would be required.
- Population growth associated with the proposed Project would increase vehicle trips over the long-term. Emissions associated with such vehicle trips would contribute to the South Coast Air Basin's nonattainment designation for ozone (O₃) and particulate matter (PM_{2.5} and PM₁₀).
- The visual character of the Project site would be altered by the construction of the new structures and other various site improvements. This would result in a permanent change in the character of the Project site and on- and off-site views in the Project's vicinity.

Once the Project site is developed, it would not revert back to office uses. The proposed Project would commit future generations to these environmental changes.

9. Significant Irreversible Changes Due to the Proposed Project

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10. Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this Project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the Project area, or through changes in existing regulations pertaining to land development?
- Would this Project result in the need to expand one or more public services to maintain desired levels of service?
- Would this Project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this Project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this Project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this Project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the Project area, or through changes in existing regulations pertaining to land development?

The proposed Project is surrounded by urban development on all sides, with commercial uses to the west and south and residential uses to the north and east. As discussed in 5.14, *Utilities and Service Systems*, of the Draft EIR, extensions of existing utility facilities and off-site utility connections from surrounding development would provide a sufficient tie-in to the existing utility systems to accommodate the demands of this Project at full buildout.

10. Growth-Inducing Impacts of the Proposed Project

Would this Project result in the need to expand one or more public services to maintain desired levels of service?

The proposed Project would increase population and housing in the city. The Project is expected to increase demand for fire protection services, police and emergency services, school services, and library services, which would contribute to the need to expand facilities. However, as substantiated in Section 5.9, *Public Services*, existing programs and policies would ensure that the service capability will grow proportionate to the increase in uses, and no expansion or new public facilities would be required. Impacts would be less than significant.

Would this Project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

During Project construction, a number of design, engineering, and construction-related jobs would be created. This would be a temporary situation, lasting until Project construction is completed. Development of the proposed project would also result in creation of 179 units resulting in an increase in population of 505 people.¹ This would be a direct, growth-inducing effect of the proposed Project. As new residential units are developed and occupied, residents would seek shopping, entertainment, employment, home improvement, auto maintenance, and other goods and services in the surrounding area. This would represent an increased demand for such economic goods and services and could, therefore, encourage the creation of new businesses and/or the expansion of existing businesses that address these economic needs. Although the proposed Project would have a direct growth-inducing effect, growth generated by the proposed Project would not create a significant effect on the environment.

Would approval of this Project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The proposed Project would require the approval of discretionary actions; however, the proposed Project would not set a precedent for future Projects with similar characteristics.

The approval of these actions changes the existing restrictions on growth set by the Brea General Plan and Zoning Code. The proposed Project would not change the existing protocol for project approval and would not set a precedent that would make it more likely for other projects to gain approval of similar applications.

Additionally, standard conditions of approval are required; however, none represent a precedent-setting action. Moreover, no changes to any of the City's building safety standards (i.e., building, grading, plumbing, mechanical, electrical, fire codes) are proposed or required to implement the proposed Project. Therefore, the proposed Project would not involve a precedent-setting action that would encourage and/or facilitate other activities that could significantly affect the environment.

¹ Population is based on an average household size of 2.75.

11. Organizations and Persons Consulted

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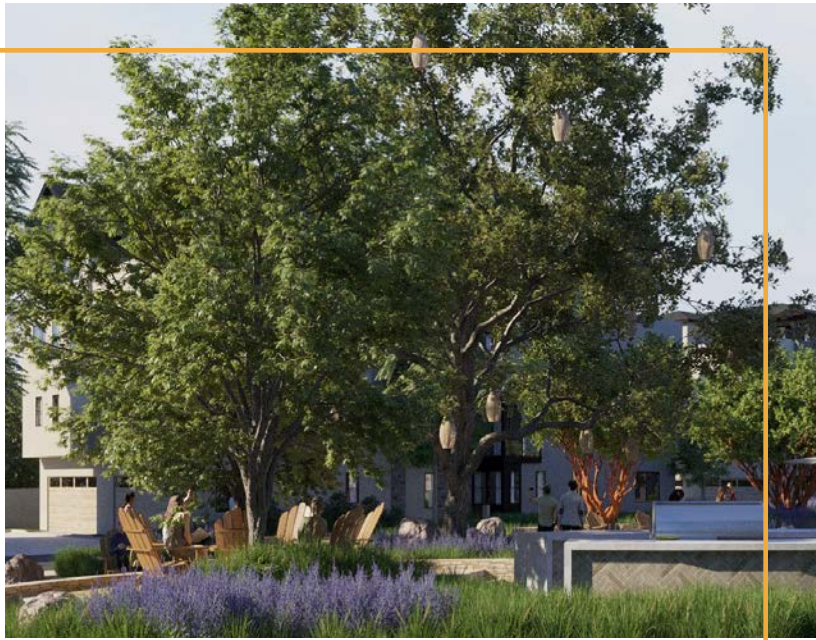
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