INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

THE NEIGHBORHOODS AT LUGONIA VILLAGE PROJECT

CITY OF REDLANDS

SAN BERNARDINO COUNTY, CALIFORNIA

LSA

December 2023

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THE NEIGHBORHOODS AT LUGONIA VILLAGE PROJECT

CITY OF REDLANDS

SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

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Project No. CRX2202

LSA

December 2023

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APPENDICES

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADT	average daily traffic
af	acre-feet
afy	acre-feet per year
AMTP	Archaeological Monitoring and Treatment Plan
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
bgs	below ground surface
BMP	Best Management Practice
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
cf	cubic feet
CFR	Code of Federal Regulations
CH_4	methane
CIRP	Inventory of Rare and Endangered Plants of California
City	City of Redlands

CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	Condition of Approval
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRMP	Cultural Resource Management Plan
DA	drainage area
dB	decibel
dBA	A-weighted decibel
DCV	Design Capture Volume
DIF	Development Impact Fee
DTSC	Department of Toxic Substances Control
du/ac	dwelling units per acre
EIR	Environmental Impact Report
EMFAC2021	CARB Emissions Factor 2021 Model
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESA	Environmentally Sensitive Area
EV/SD	East Valley Corridor Specific Plan/Special Development District
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas

GPA	General Plan Amendment
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HSC	Health and Safety Code
HVAC	heating, ventilation, and air conditioning
I-10	Interstate 10
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPaC	Information for Planning and Consultation
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
L_{dn}	day-night average noise level
LDR	Low-Density Residential
L_{eq}	equivalent continuous sound level
LID	Low Impact Development
L_{max}	maximum instantaneous noise level
L_{min}	minimum measured sound level
LOS	level(s) of service
LRA	Local Responsibility Area
LST	Localized Significance Threshold
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	Most Likely Descendant
MM	Mitigation Measure
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone

MS4	Municipal Separate Storm Sewer System
MT	metric ton(s)
MT CO_2e	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
ND	Negative Declaration
NO_2	nitrogen dioxide
NOI	Notice of Intent
Non-VHFHSZ	Non-Very High Fire Hazard Severity Zone
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
Pb	lead
PCC	plain cement concrete
PCE	passenger car equivalent
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
POTWs	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRDs	Permit Registration Documents
PRIMP	Paleontological Resources Impact Mitigation Program
Project, proposed Project	Neighborhoods at Lugonia Village Project
REC	recognized environmental condition
RFD	Redlands Fire Department
RHNA	Regional Housing Needs Assessment
RMS	root-mean-square

ROG	reactive organic gas
RPD	Redlands Police Department
RPS	Renewables Portfolio Standard
RSL	Regional Screening Level
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Redlands Unified School District
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
sf	square foot/feet
SGMA	Sustainable Groundwater Management Act
SLF	Sacred Lands File
SMARTS	Stormwater Multiple Application and Report Tracking System
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SO_x	sulfur oxides
SR-210	State Route 210
SR-330	State Route 330
SR-38	State Route 38
SRA	Source Receptor Area
SSC	Species of Special Concern
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
THPO	Tribal Historic Preservation Officer

TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VdB	vibration velocity decibels
VEC	vapor encroachment condition
VMT	vehicle miles traveled
VOC	volatile organic compound
WDID	Waste Discharge Identification Number
WDR	Waste Discharge Requirement
WL	Watch List
WQMP	Water Quality Management Plan

1.0 INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

Chapter 1.0 of this Initial Study (IS) describes the purpose, environmental authorization, the intended uses of the IS, documents incorporated by reference, and the processes and procedures governing the preparation of the environmental document. Pursuant to Section 15367 of the State of California *Guidelines for Implementation of the California Environmental Quality Act* (*CEQA Guidelines*), the City of Redlands (City) is the Lead Agency under the California Environmental Quality Act (CEQA). The City has primary responsibility for compliance with CEQA and consideration of the Neighborhoods at Lugonia Village Project (herein referred to as "Project" or "proposed Project").

The IS is organized as follows:

Chapter 1.0 *Introduction and Purpose* provides a discussion of the Initial Study's purpose, focus, and legal requirements.

Chapter 2.0 *Project Description* provides a detailed description of the proposed Project.

Chapter 3.0 *Initial Study Checklist* includes a checklist and accompanying analyses of the Project's effect on the environment. For each environmental issue, the analysis identifies the level of the Project's environmental impact.

Chapter 4.0 *References* details the references cited throughout the document.

Appendices Include the technical material prepared to support the analyses contained in the IS.

1.2 PURPOSE

CEQA requires that the proposed Project be reviewed to determine the environmental effects that would result if the Project were approved and implemented. The City is the Lead Agency and has the responsibility for preparing and adopting the associated environmental document prior to consideration of the approval of the proposed Project. The City has the authority to make decisions regarding discretionary actions relating to implementation of the proposed Project.

This IS has been prepared in accordance with the relevant provisions of CEQA (California Public Resources Code Section 21000 et seq.), the *CEQA Guidelines,*[1] and the rules, regulations, and procedures for implementing CEQA as adopted by the City. The objective of the IS is to inform City decision-makers, representatives of other affected/responsible agencies, the public, and interested parties of the potential environmental consequences of the Project.

As established in *CEQA Guidelines* Section 15063(c), the purposes of an IS are to:

- Provide the Lead Agency (City of Redlands) with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND);

[1] California Code of Regulations, Title 14, Chapter 3, Sections 15000 through 15387.

- Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for an ND or MND;
- Assist in the preparation of an EIR, if one is required;
- Facilitate environmental assessment early in the design of a project;
- Provide a factual basis for finding in an ND or MND that a project will not have a significant effect on the environment;
- Eliminate unnecessary EIRs; and
- Determine whether a previously prepared EIR could be used with the project.

1.3 INTENDED USE OF THIS INITIAL STUDY

The City formally initiated the environmental process for the proposed Project with the preparation of this IS. The IS screens out those impacts that would be less than significant and do not warrant mitigation, while identifying those issues that require further mitigation to reduce impacts to a less than significant level. As identified in the following analyses, Project impacts related to various environmental issues either do not occur, are less than significant (when measured against established significance thresholds), or have been rendered less than significant through implementation of mitigation measures. Based on these analytical conclusions, this IS supports adoption of an MND for the proposed Project.

CEQA[2] permits the incorporation by reference of all or portions of other documents that are generally available to the public. The IS has been prepared utilizing information from City planning and environmental documents, technical studies specifically prepared for the Project, and other publicly available data. The documents utilized in the IS are identified in Section 3.0 and are hereby incorporated by reference. These documents are available for review at the City of Redlands, Planning Division.

1.4 PUBLIC REVIEW OF THE INITIAL STUDY

The IS and a Notice of Intent (NOI) to adopt an MND will be distributed to responsible and trustee agencies, other affected agencies, and other parties for a 30-day public review period. Written comments regarding this IS should be addressed to:

Ryan Murphy, Senior Planner
City of Redlands
35 Cajon Street, Suite 20
P.O. Box 3005
Redlands, CA 92373
rmurphy@cityofredlands.org

After the 30-day public review period, consideration of comments raised during the public review period will be taken into account and addressed prior to adoption of the MND by the City.

[2] *CEQA Guidelines* Section 15150.

2.0 PROJECT DESCRIPTION

This chapter describes the proposed Neighborhoods at Lugonia Village Project (Project) submitted by Redlands Summit LLC (Applicant) that is evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND). The proposed Project includes the development of an approximately 24.4-acre property (Project site) northwest of West Lugonia Avenue and Karon Street that consists of three undeveloped parcels (Assessor Parcel Numbers 0167-171-04-0000, 0167-171-05-0000, and 0167-171-06-0000). The Project site is located on the northwest corner of West Lugonia Avenue and Karon Street in the northern portion of the City of Redlands (City). The Applicant proposes to develop the Project site with 451 apartment units, 72 townhomes, and 18 single-family detached homes, for a total of 541 units.

Pursuant to Section 15124(c) of the *CEQA Guidelines*, this chapter includes a description of the proposed Project's location, objectives, and technical and environmental characteristics, which is followed by a summary of the intended uses of the IS/MND, a list of required permits and other approvals required to implement the Project, and a list of related environmental review and consultation requirements required by federal, State, and local laws, regulations, or policies.

2.1 PROJECT LOCATION

The following describes the precise location and boundaries of the Project site, including its geographic context, and provides a brief overview of the existing land uses within and in the vicinity of the Project site.

2.1.1 Regional Location and Access

The approximately 24.4-acre Project site is located on the northwest corner of West Lugonia Avenue and Karon Street in the northern area of the City of Redlands, San Bernardino County, California. The Project site is generally bounded by West Lugonia Avenue to the south, Karon Street to the east, a dirt road to the north, and fallow agricultural land to the west. **Figure 1: Regional Location** shows the location of the Project site within the region.

The Project site is located approximately 0.2 mile east of State Route 210 (SR-210) and approximately 0.4 mile north of Interstate 10 (I-10). The City of Loma Linda is located southwest of Redlands, the City of Highland is located to the north, and the City of San Bernardino is located to the west. The City of Yucaipa is located to the east over the foothills of the San Bernardino Mountains. The San Bernardino International Airport is located approximately 2.4 miles northwest of the Project site, west of SR-210.

Regional access to the Project site is provided by I-10 and SR-210. The Project site is directly accessible via West Lugonia Avenue and Karon Street.

2.1.2 Site Characteristics and Current Site Conditions

The Project site is currently undeveloped, generally rectangular in shape, and generally flat. Conditions on the site generally consist of disturbed vegetation, a few palm trees, and power utility poles. An open concrete irrigation canal runs parallel to the Project site's northern boundary, and the remnants of a second north-south irrigation canal cuts through the Project site. A dirt road along the northern boundary of the Project site provides a connection from Pennsylvania Avenue to Tennessee Street, west of the

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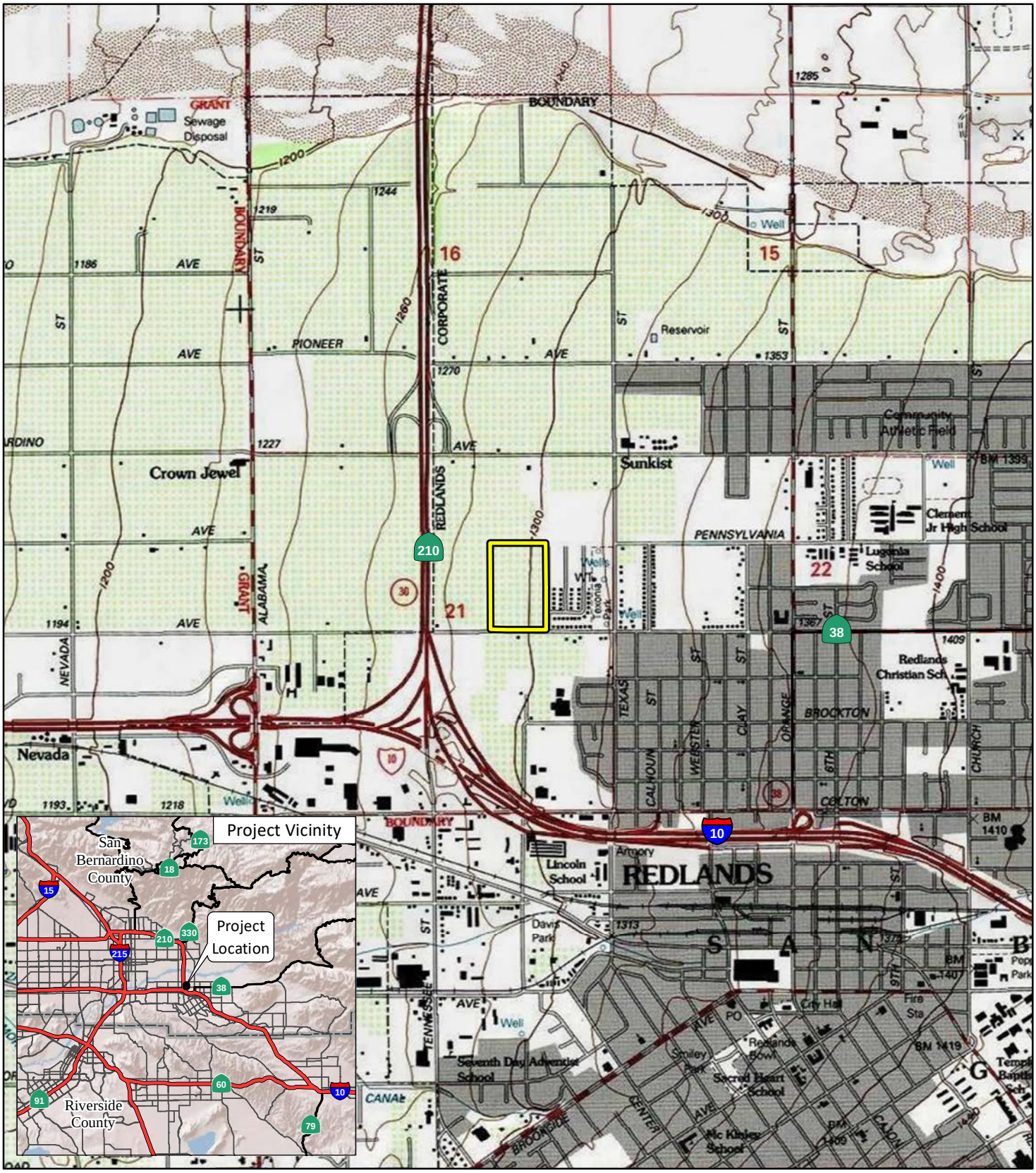

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LEGEND

Project Site

FIGURE 1

N

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The Neighborhoods at Lugonia Village

Regional Location

SOURCE: USGS 7.5' Quad - Redlands (1988), CA

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Project site. An informal dirt walking path is located along the Project site's southern boundary, adjacent to West Lugonia Street. **Figure 2: Project Location** depicts an aerial view of the Project site.

2.1.3 General Plan and Zoning

The Project site's current zoning designation is East Valley Corridor Specific Plan/Special Development District (EV/SD). The purpose of the East Valley Corridor Specific Plan is to plan for large undeveloped areas along I-10 to facilitate future industrial, commercial, and residential development in an orderly and aesthetic manner, provide a strong job base to support the local economy, and to ensure high-quality development through design guidelines and standards. The intent of the Special Development District is to provide an alternative, more flexible site planning process which encourages creative and imaginative planning of administrative, professional, commercial or industrial, or mixed-use development within the framework of a single comprehensive plan. Single-family dwelling units on parcels of 20 acres or more are permitted as interim uses under the current EV/SD zoning. The EV/SD zoning does not permit, conditionally permit, or permit as an accessory use, higher residential densities. A zoning change from EV/SD to R-3 Multiple Family Residential will be required to permit the proposed densities of the proposed Project's apartment complex and townhomes (27.2 units per gross acre), and a zoning change from EV/SD to R-1 Single Family Residential along Karon Street will be required to permit the proposed densities of the single-family detached residences (5.33 dwelling units per gross acre).

The City's General Plan currently designates most of the Project site as Commercial, which may permit residential and mixed uses consistent with the underlying zoning district. The Project site is also partly designated as Parks/Golf Courses and Low Density Residential, the latter of which allows for the development of detached single-family dwellings at densities up to 6 dwelling units per acre on slopes up to 15 percent. The portion of the Project site designated as Low Density Residential is located directly adjacent to Karon Street. A General Plan Amendment (GPA) to change the designation from Commercial and Parks/Golf Courses to High Density Residential will be required to permit the proposed higher housing densities of the proposed Project's apartment complex and townhomes.[3] Development within the City, including the Project site, is regulated by the City of Redlands's Citywide Design Guidelines (Design Guidelines).

2.1.4 Surrounding Land Uses

The Project site is bordered by West Lugonia Avenue to the south, Karon Street and an existing residential community to the east, a dirt road and fallow agricultural land to the north, and fallow agricultural land to the west followed by Tennessee Street and SR-210. **Table A: Surrounding Land Uses and Setting** summarizes the existing land uses, General Plan designations, and zoning designations on the Project site and surrounding properties.

[3] No proposed development project with density levels in excess of 18 dwelling units to the acre or a structure in excess of 35 feet in height shall be approved unless specific mandatory findings are made, and the development project is approved by four-fifths vote of the total authorized membership of the City Council. (*Redlands General Plan 2035*. Page 4-10.)

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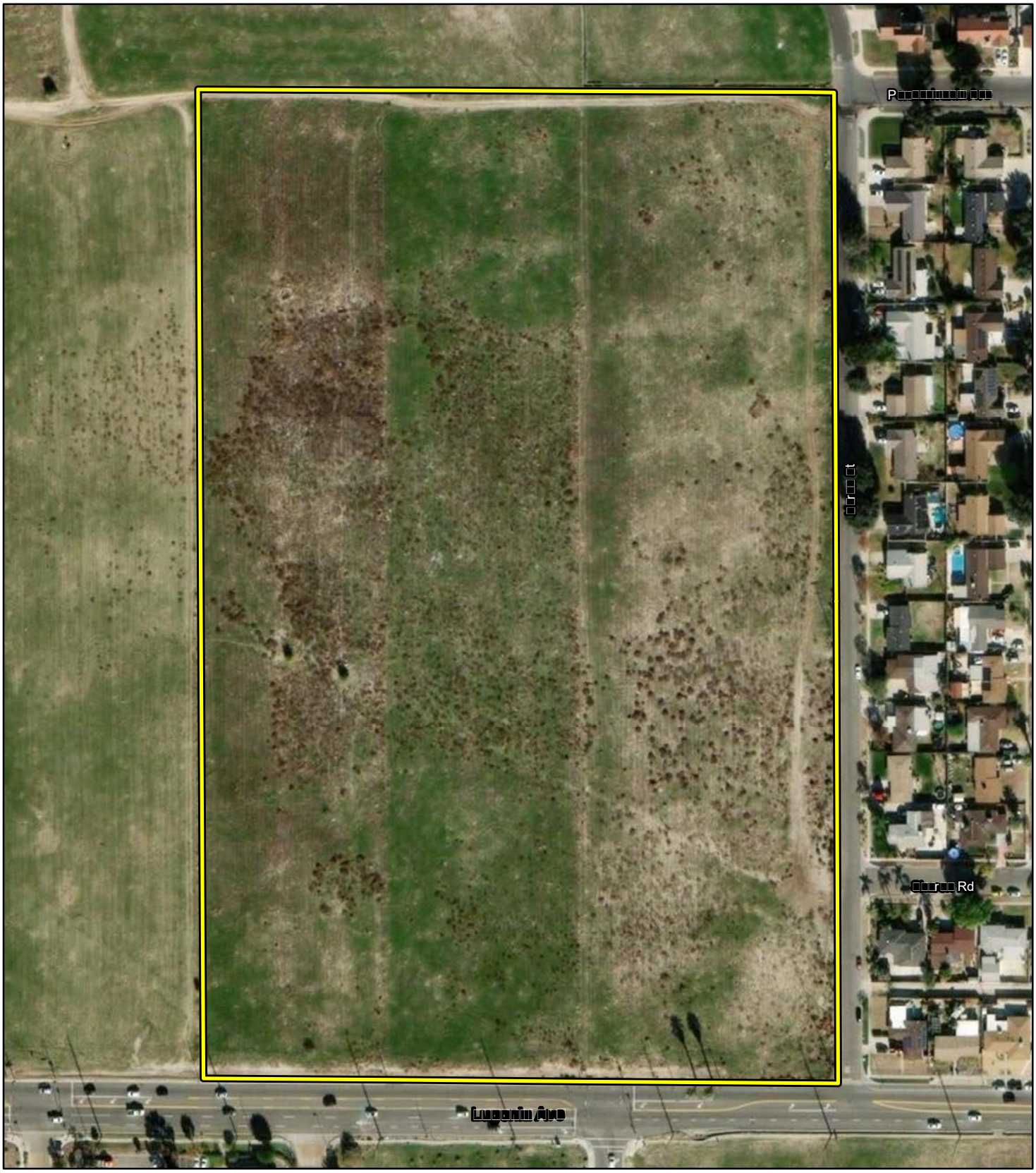

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LEGEND

Project Site

FIGURE 2

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SOURCE: Maxar Imagery (2023)

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The Neighborhoods at Lugonia Village

Project Location

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Table A: Surrounding Land Uses and Setting

Direction	Existing Land Use	General Plan Designation		Zoning Designation	
Project Site	Undeveloped, Vacant	**Existing**	**Proposed**	**Existing**	**Proposed**
		Commercial (C), Parks/Golf Courses (PG), Low Density Residential (LDR)	High Density Residential (HDR) and Low Density Residential (LDR)	East Valley Corridor Specific Plan/Special Development (EV/SD)	Multiple Family Residential District (R-3) and Single-Family Residential (R-1)
North	Undeveloped, Vacant	Commercial (C)		Concept Plan 4 (CP4)	
East	Single-Family Residential	Low Density Residential (LDR)		Single Family Residential District (R-1)	
South	Commercial, Undeveloped, Vacant	Commercial (C)		East Valley Corridor Specific Plan/ General Commercial (EV/CG), Agricultural District 1 (A-1)	
West	Undeveloped, Vacant	Commercial (C)		East Valley Specific Plan/Special Development (EV/SD)	

Source: City of Redlands. April 11, 2022. Redlands General Plan Land Use Map. https://www.cityofredlands.org/sites/main/files/file-attachments/generalplan2035.pdf?1649693557 (accessed October 27, 2023).
Source: City of Redlands. April 11, 2022. City of Redlands – Zoning Map. https://www.cityofredlands.org/sites/main/files/file-attachments/zoning.pdf?1649714270 (accessed October 27, 2023).

2.2 PROPOSED PROJECT

2.2.1 Overall Development Concept

The proposed Project includes the subdivision of the Project site into three parcels in order to facilitate the development of an apartment complex neighborhood, a townhome neighborhood (collectively, the apartment complex and townhomes are referred to as Neighborhood A), and a neighborhood of single-family detached homes (Neighborhood B) on the Project site. The detached single-family homes would be located on Parcel 1, the townhomes neighborhood would be located on Parcel 2, and the apartment complex neighborhood would be located on Parcel 3. **Figure 3: Tentative Parcel Map** shows the proposed subdivision of the Project site. The proposed Project also includes the approval of a Tentative Tract Map, shown in **Figure 4: Tentative Tract Map**, for the 18 single-family residential parcels along Karon Street as well as a neighborhood park at the southwest corner of Pennsylvania Avenue and Karon Street.

The proposed Project includes the construction of 451 apartment units, 72 townhome units, and 18 single family residences, for a total of 541 residential units. Of the 451 apartment units, 27 would be very low-income units. The remaining apartment, townhome, and single-family residential units are expected to be sold at market rate (the above-moderate income level). The apartment complex and townhome neighborhood would have a proposed density of 27.2 dwelling units per acre (du/ac), and the neighborhood or single-family dwellings would have a proposed density of 5.33 du/ac. **Figure 5: Master Site Plan** provides the proposed boundaries of the apartment units, townhomes units, and single-family residences. The proposed Project would also include a small parklet at the northeastern corner of the Project site.

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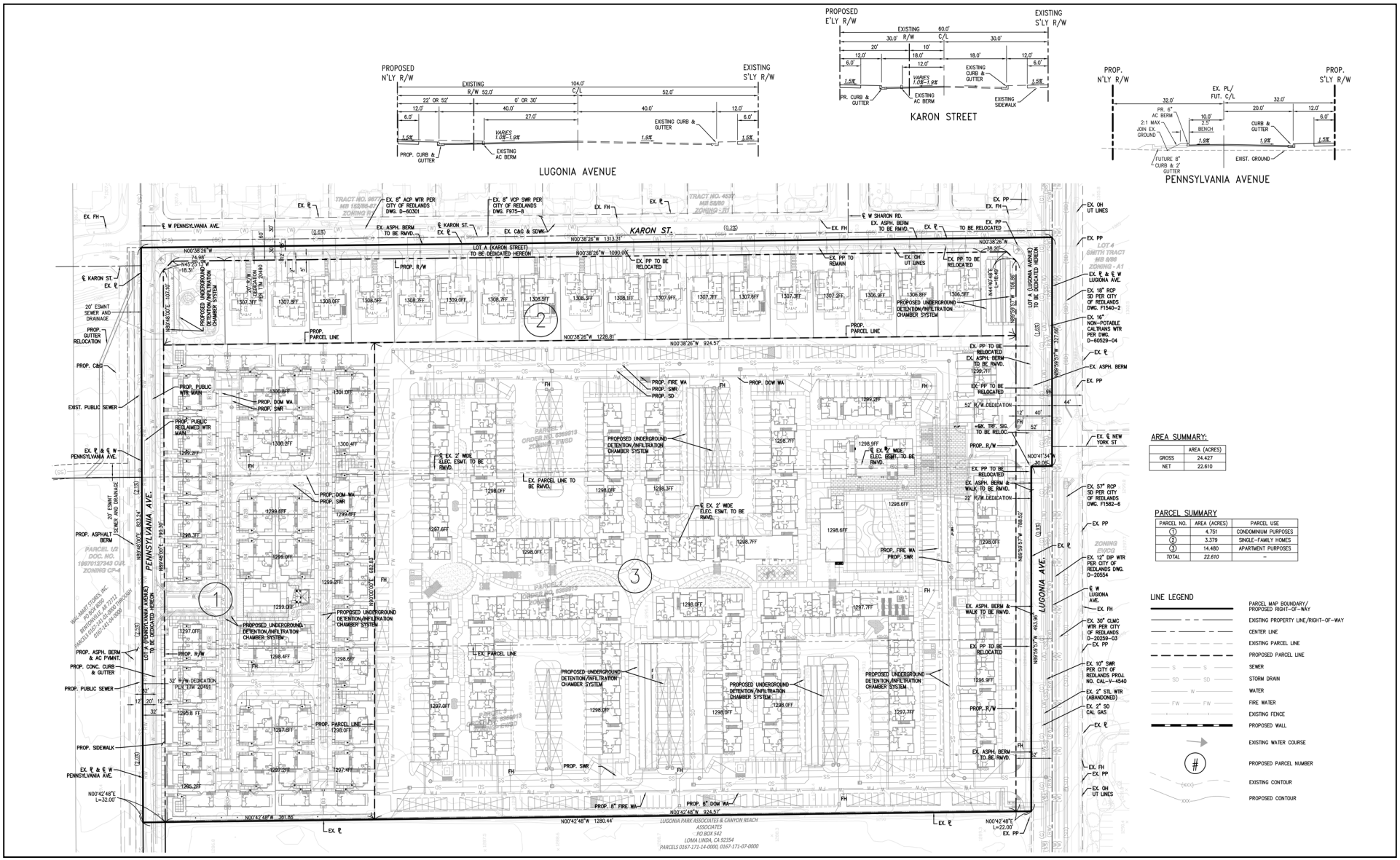

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FIGURE 3

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SOURCE: AO Group

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The Neighborhoods at Lugonia Village

Tentative Parcel Map

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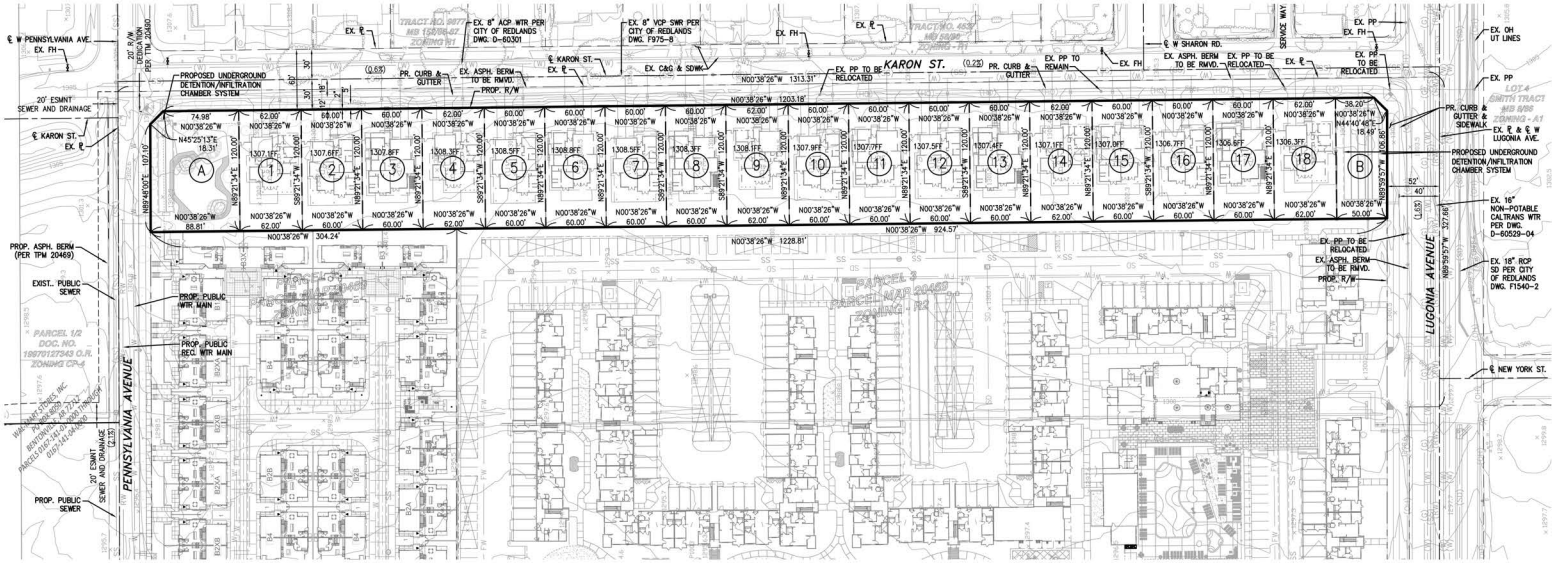
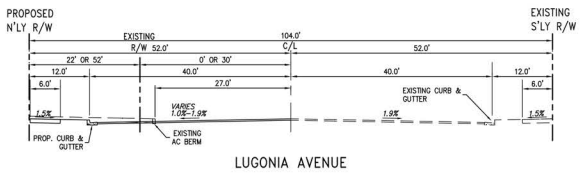


LOT SUMMARY

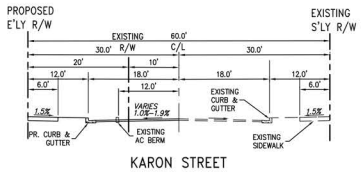
LOT NO.	AREA (SQ.-FT.)	AREA (ACRES)	LOT USE
1	7,440	0.171	SINGLE-FAMILY HOME
2	7,200	0.165	SINGLE-FAMILY HOME
3	7,200	0.165	SINGLE-FAMILY HOME
4	7,440	0.171	SINGLE-FAMILY HOME
5	7,200	0.165	SINGLE-FAMILY HOME
6	7,200	0.165	SINGLE-FAMILY HOME
7	7,200	0.165	SINGLE-FAMILY HOME
8	7,200	0.165	SINGLE-FAMILY HOME
9	7,440	0.171	SINGLE-FAMILY HOME
10	7,200	0.165	SINGLE-FAMILY HOME
11	7,200	0.165	SINGLE-FAMILY HOME
12	7,200	0.165	SINGLE-FAMILY HOME
13	7,200	0.165	SINGLE-FAMILY HOME
14	7,440	0.171	SINGLE-FAMILY HOME
15	7,200	0.165	SINGLE-FAMILY HOME
16	7,200	0.165	SINGLE-FAMILY HOME
17	7,200	0.165	SINGLE-FAMILY HOME
18	7,440	0.171	SINGLE-FAMILY HOME
A	10,518	0.241	SINGLE-FAMILY HOME
B	5,995	0.138	SINGLE-FAMILY HOME
TOTAL	130,800	3.379	–

LINE LEGEND

PARCEL MAP BOUNDARY/ PROPOSED RIGHT-OF-WAY
PROPOSED PROPERTY LINE/RIGHT-OF-WAY
EXISTING PROPERTY LINE/RIGHT-OF-WAY
CENTER LINE
EXISTING PARCEL LINE
PROPOSED LOT LINE
SEWER
STORM DRAIN
WATER
FIRE WATER
EXISTING FENCE
PROPOSED WALL
EXISTING WATER COURSE
PROPOSED PARCEL NUMBER
EXISTING CONTOUR
PROPOSED CONTOUR



LUGONIA AVENUE



KARON STREET

LSA

FIGURE 4

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SOURCE: DRC Engineering

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The Neighborhoods at Lugonia Village

Tentative Tract Map

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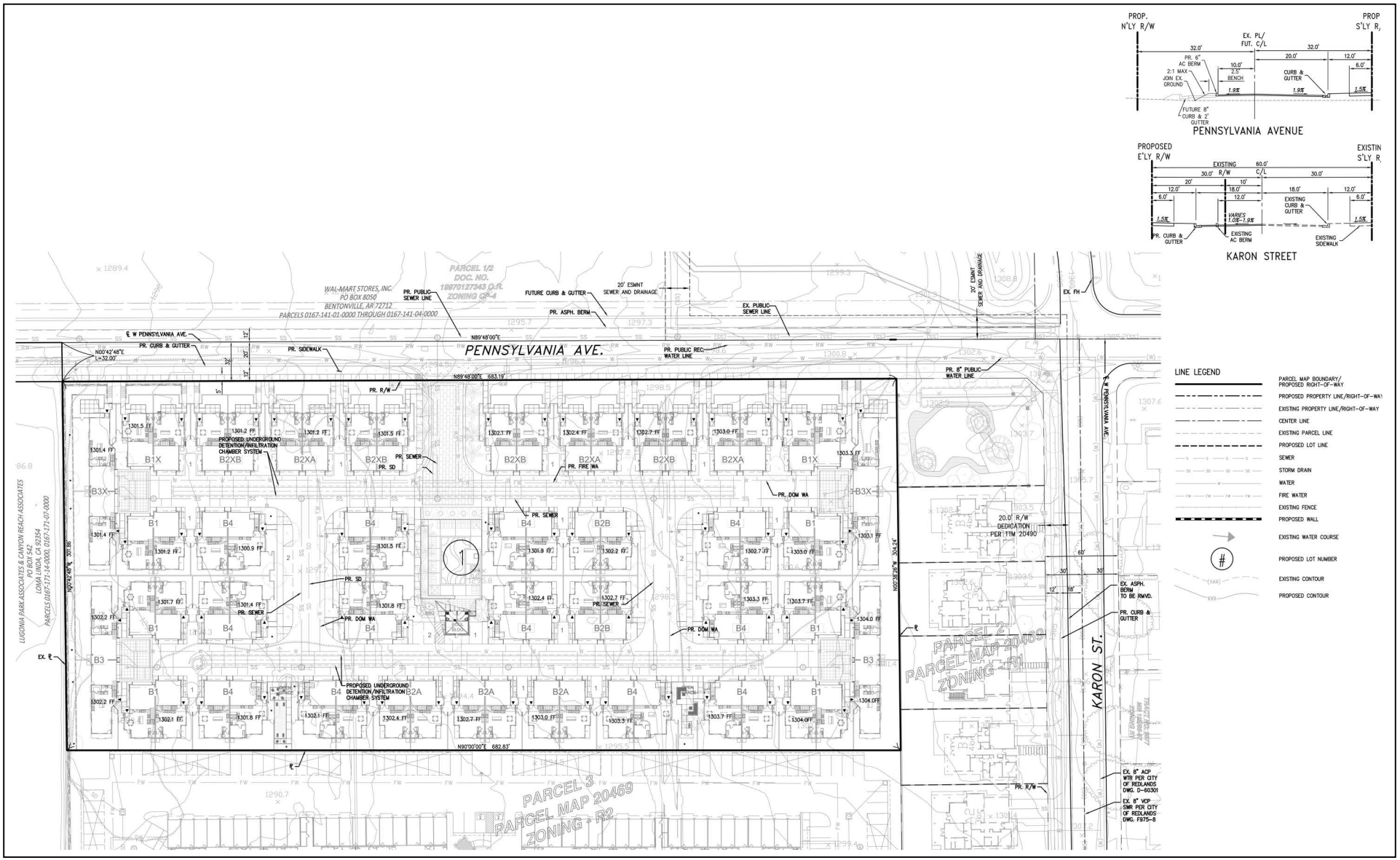

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FIGURE 4

0 60 120

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SOURCE: DRC Engineering

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The Neighborhoods at Lugonia Village

Tentative Tract Map

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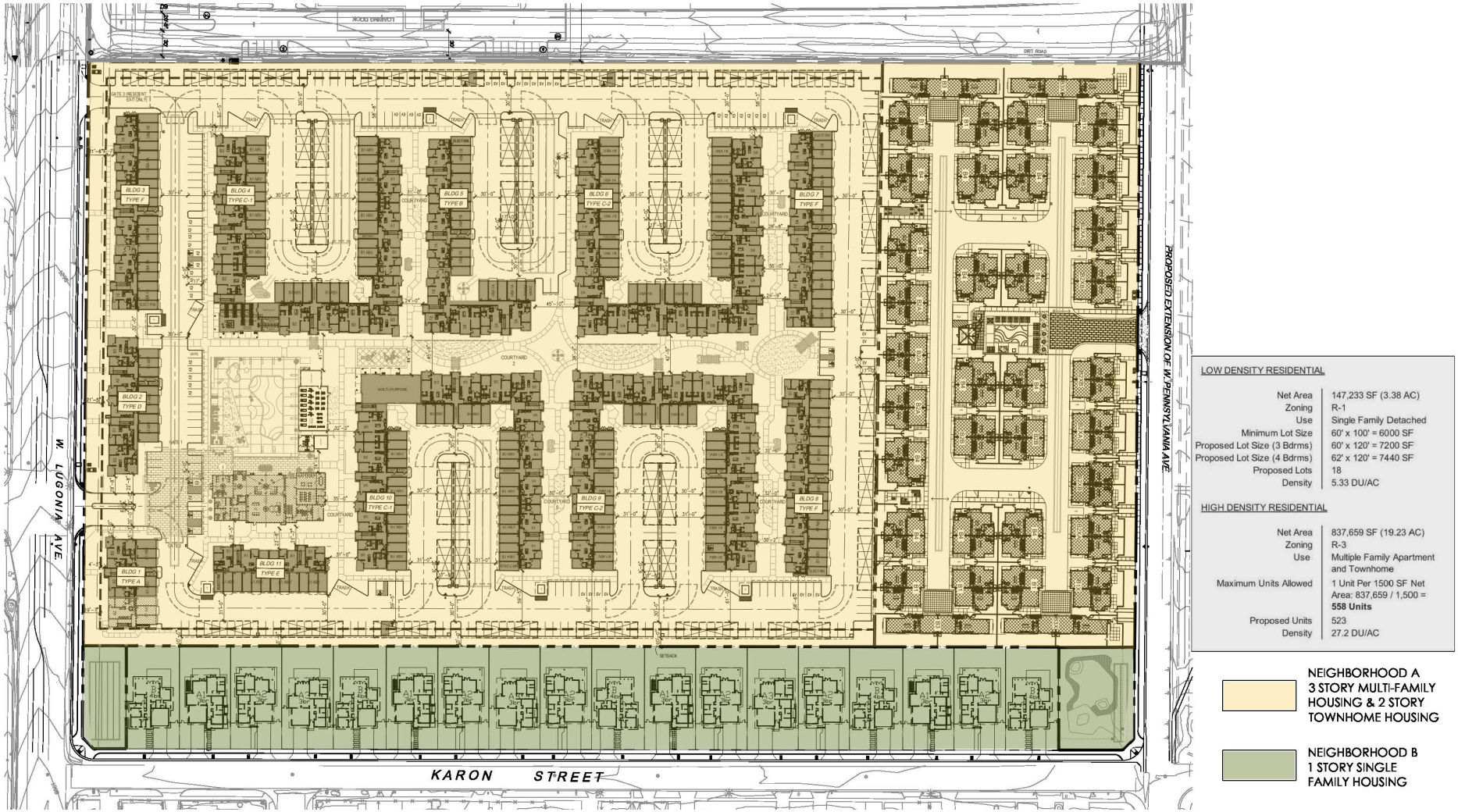

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FIGURE 5

0 85 170
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SOURCE: AO Group

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The Neighborhoods at Lugonia Village

Master Site Plan

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In addition to the proposed residential communities, the proposed Project would construct an extension of Pennsylvania Avenue along the northern edge of the Project site. The Pennsylvania Avenue extension would either end in a cul-de-sac (Scenario A) or connect to the existing Pennsylvania Avenue and residential community to the east (Scenario B).

The proposed apartment complex neighborhood would include a clubhouse and fitness center, a pool area, a kids club, a mail room, a fenced dog park, and a series of greenbelts that feature decorative walkways, fire pits, and BBQ grills. The proposed townhome neighborhood would include a central recreation building with an entertainment courtyard and pool as well as two pocket parks that would feature BBQ grills and fire pits. The single-family residential neighborhood would include a neighborhood park at the southwest corner of Pennsylvania Avenue and Karon Street. **Figure 6: Tentative Landscape Plan** provides an illustrative view of the proposed open space layout and the locations of proposed amenities.

The discretionary actions required for the Project include issuance of a Conditional Use Permit, approval of a Tentative Tract Map, approval of a Tentative Parcel Map, and the related actions listed below in Required Actions.

2.2.2 Construction and Phasing

Project construction would include site preparation, installation of utilities, paving, building construction, landscaping, architectural coating, and paving activities. The proposed Project would be constructed over 31 months, with construction anticipated to begin in April 2024. Construction activities are anticipated to occur between the hours of 7:00 a.m. and 5:00 p.m. Monday through Saturday. This is consistent with the City's Noise Ordinance, which prohibits operation of construction equipment between weekday hours of 6:00 p.m. and 7:00 a.m.

The preliminary Project construction phasing is presented below in **Table B: Preliminary Project Construction Phasing.**

Table B: Preliminary Project Construction Phasing

Phase	Begin Date	End Date
Grading	June 1, 2025	August 1, 2025
Building Construction	August 2, 2025	January 11, 2028
Paving	November 26, 2027	January 11, 2028
Architectural Coating	October 12, 2025	January 11, 2028

Source: Michael Baker International. 2023. *Air Quality, Green House Gas, and Energy Technical Memorandum for the Proposed Neighborhoods at Lugonia Village – City of Redlands, County of San Bernardino, California, Appendix A: Air Quality/Greenhouse Gas Emissions/Energy Data.* June 22.

2.2.3 Grading

The Project is anticipated to result in a balanced site, and no import or export of soil is anticipated.

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FIGURE 6

0 94 188
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SOURCE: AO Architects

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The Neighborhoods at Lugonia Village

Tentative Landscape Plan

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2.2.4 Access, Circulation, and Parking

Vehicular access to the Project site would be provided via two driveways from West Lugonia Avenue (a signalized intersection at New York Street/West Lugonia Avenue and a right-in/right-out driveway on the southwest corner of the Project site), one driveway from the proposed Pennsylvania Avenue extension, and one driveway from Karon Street. As discussed above, the proposed Pennsylvania Avenue extension would either end in a cul-de-sac just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street or would extend from Karon Street west to Tennessee Street, creating a complete connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street.

On-site parking within the apartment complex and townhome neighborhoods would be provided via a 26-foot-wide internal street system within each neighborhood. The apartment complex neighborhood would include 241 garage parking spaces, 325 carport spaces, 7 parallel parking spaces, 139 open stall parking spaces, and 32 electric vehicle charging spaces for a total of 744 parking spaces for residents. The townhome neighborhood would include 144 garage parking spaces for residents and 21 guest parking spaces for a total of 165 parking spaces. Each of the 18 single-family detached homes would include a 2-car garage, for a total of 36 parking spaces. Overall, the proposed Project would include a total of 945 parking spaces. The internal street system would also serve as a fire access system for first responders.

Figure 6 provides an illustrative view of the proposed landscape design, including the general locations of parkway and street tree plantings, the planned tree species mix, and the locations of proposed sidewalks and bike paths as well as the proposed recreation lawn and play area. As shown in **Figure 6,** pedestrian access within the Project site would be provided via internal walkways. A 6-foot-wide sidewalk would also be provided along West Lugonia Avenue, Pennsylvania Avenue, and Karon Street abutting the Project site.

2.2.5 Landscaping and Open Space

Based on the City of Redlands's Citywide Design Guidelines, the Project's proposed plant palette would be comprised of plant materials and trees known to thrive in the local climate and soil conditions. As described above, **Figure 6** provides a description of the tree species that are proposed to be planted. Proposed landscaping on the Project site would be consistent with the landscaping characteristics of surrounding residential neighborhoods and would complement the proposed development and surrounding area.

The Project proposes construction of an internal greenbelt area in the apartment complex that includes a 40-foot to 60-foot-wide linear east/west garden and a seating area framed by a central turf oval and trees. In addition, a 15-foot landscape easement would be established along the Project site boundary along West Lugonia Avenue.

The proposed Project would provide a total of 201,550 square feet (sf) of private open space in the apartment complex neighborhood. A total of 32,029 sf of open space would be provided in the townhome neighborhood.

The proposed Project would also provide a private open space parklet in the northeastern corner of the Project site, which would be used by residents of the proposed single-family neighborhood.

2.2.6 Design Elements

A distinct architectural style is proposed for the Project's residential buildings. The individual apartment buildings would not exceed 35 feet in height, the townhome buildings would not exceed 34 feet in height, and each single-family residential home would not exceed 20 feet in height. The architectural styles for each type of residential dwelling (apartment, townhome, and detached single-family unit) are presented in **Figure 7: Conceptual Architectural Renderings (5 sheets).**

2.2.7 Infrastructure and Utilities

The Project site is located in an urbanized area, and existing utilities and infrastructure are available for interconnection generally adjacent to or in close proximity to the site. The Project would require installation of the following utility connections to the satisfaction of the applicable utility providers: water, wastewater, stormwater drainage, electric, natural gas, and telecommunications services. Connections to existing utility infrastructure would occur within the adjacent public rights-of-way.

2.2.7.1 Water

Domestic water service to the Project site would be provided via existing lines beneath Karon Street and West Lugonia Avenue. The proposed Pennsylvania Avenue extension along the northern site boundary would include pipeline connections that would tie into the existing water line in Karon Street.

2.2.7.2 Wastewater

Sewer service to the Project site would be provided via lines that would connect to the existing 10-inch sewer line along West Lugonia Avenue and the existing 8-inch sewer line along Karon Street.

2.2.7.3 Stormwater

In its existing undeveloped condition, the Project site is covered entirely by pervious surfaces (1,064,038 sf) and is generally flat. The proposed Project would increase the impervious surface coverage on the Project site compared to existing conditions. Upon completion of the Project, a total of approximately 820,350 sf would be covered by impervious surfaces (80 percent of the Project site) and approximately 243,688 sf would be covered by pervious surfaces (20 percent of the Project site).

Because there are no storm drain connections available on the Project site, the overall drainage concept of the proposed Project is to reduce storm flows from the Project site through underground detention systems which would ultimately discharge the reduced flows onto the surrounding public streets. The apartment neighborhood would contain four separate underground detention chambers with a total storage volume of 94,800 cubic feet (cf). Storm flows from this underground detention/infiltration system would discharge reduced flows to Lugonia Avenue through a sidewalk culvert. The townhome neighborhood would contain two separate underground detention chambers with a total storage volume of 23,760 cf and would discharge reduced flows to the proposed Pennsylvania Avenue extension through a sidewalk culvert. The single-family neighborhood would contain two separate underground detention chambers, one for storm flows draining north towards Pennsylvania Avenue and the other for storm flows draining south to Lugonia Avenue. The underground detention chamber for storm flows draining north would have a total storage volume of 4,610 cf, and the underground detention chamber for southern drainage would have a total storage volume of 11,530 cf. Both underground detention systems would discharge reduced flows to the respective streets through a sidewalk culvert.

LSA

FIGURE 7.1

NOT TO SCALE

SOURCE: AO Architects

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The Neighborhoods at Lugonia Village

Perspective From Lugonia Ave. - Main Entry

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LSA

FIGURE 7.2

NOT TO SCALE

The Neighborhoods at Lugonia Village

Perspective of Multi-Family Internal Courtyard

SOURCE: AO Architects

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LSA

FIGURE 7.3

NOT TO SCALE

The Neighborhoods at Lugonia Village

Perspective of Amenity Pool Area

SOURCE: AO Architects

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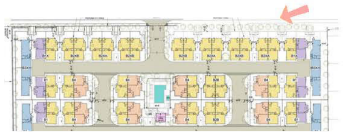

PENNSYLVANIA FRONT PATIOS

LSA

FIGURE 7.4

NOT TO SCALE

The Neighborhoods at Lugonia Village

Perspective of Townhomes

SOURCE: AO Architects

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STREET VIEW FROM SOUTH-EAST @ KARON ST.

STREET VIEW FROM NORTH-EAST @ KARON ST.

LSA

FIGURE 7.5

NOT TO SCALE

SOURCE: AO Architects

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The Neighborhoods at Lugonia Village

Perspective of Single Family Neighborhood

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2.2.7.4 Electricity and Gas

Electrical service would be provided by Southern California Edison (SCE) through connections to the existing overhead lines along Karon Street and West Lugonia Avenue. Two power poles on Lugonia Avenue, one power pole at the corner of Lugonia Avenue and Karon Street, and two power poles on Karon Street would be removed or relocated as part of the proposed Project. All other existing power poles in the vicinity of the Project site would be protected in place. Natural gas service would be provided by the Southern California Gas Company (SoCalGas) through connections to the existing 2-inch line beneath West Lugonia Avenue.

2.2.7.5 Telecommunication

Telecommunication services would be provided by Verizon.

2.3 REQUIRED ACTIONS

While the City is the Lead Agency for the Project under CEQA, other agencies also have discretionary authority related to the Project and approvals or serve as a responsible and/or trustee agency in connection to the Project as established in *CEQA Guidelines* Section 15124(d)(2), "If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed." A list of these agencies and potential permits and approvals that may be required is provided in **Table C: Potential Permits and Approvals.**

Table C: Potential Permits and Approvals

Lead Agency	Permits/Approvals
City of Redlands	• Approval of a 'Change in Zone' • Approval of a 'General Plan Amendment' • Approval of a 'Specific Plan Amendment' • Approval of a Conditional Use Permit for New Construction • Approval of Tentative Parcel Map No. 20469 • Approval of Tentative Tract Maps No. 20490 and 20491 • Commission Review and Approvals No. 940, 941, and 942 to approve the site plan, site improvements, landscaping plans, and architectural elevations for each portion of the Project • Environmental review
Other Agencies/Entities	
Redlands Fire Department	• Review/Approve fire truck access and site fire flow design
City of Redlands Building Division	• Issuance of Building Permits for new home construction
City of Redlands Municipal Utilities and Engineering Department	• Issuance of Final Map • Connection to water system • Connection to wastewater system
Southern California Edison and Southern California Gas Company	• Connection of electricity/natural gas service

Source: LSA (2022).

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3.0 INITIAL STUDY CHECKLIST

1. **Project Title:**
   The Neighborhoods at Lugonia Village Project

2. **Lead Agency Name and Address:**
   City of Redlands
   Development Services Department, Planning Division
   35 Cajon Street, Suite 20
   Post Office Box 3005
   Redlands, California 92373

3. **Contact Person and Phone Number:**
   Ryan Murphy, Senior Planner
   (909) 798-7555 ext. 7308
   rmurphy@cityofredlands.org

4. **Project Location:**
   The approximately 24.4-acre Project site is located on the northwest corner of West Lugonia Avenue and Karon Street in the northern area of the City of Redlands, San Bernardino County, California. The Project site is generally bounded by West Lugonia Avenue to the south, Karon Street to the east, a dirt road to the north, and fallow agricultural land to the west. **Figure 1: Regional Location** shows the location of the project site within the region.

5. **Project Sponsor's Name and Address:**
   Redlands Summit LLC
   2459 Huntington Drive
   San Marino, California 91108

6. **General Plan Designation:**
   Existing: Commercial, Parks/Golf Courses, Low Density Residential
   Proposed: High Density Residential, Low Density Residential

7. **Zoning:**
   Existing: East Valley Corridor Specific Plan/Special Development District
   Proposed: R-1 (Single Family Residential) and R-3 (Multiple Family Residential)

8. **Description of Property:**
   The Project site is currently undeveloped, generally rectangular in shape, and generally flat. Conditions on the site generally consist of disturbed vegetation, a few palm trees, and power utility poles. An open concrete irrigation canal runs parallel to the northern Project site boundary, and the remnants of a second north-south concrete irrigation canal cuts through the Project site. A dirt road along the northern boundary of the Project site provides a connection from Pennsylvania Avenue to Tennessee Street, west of the Project site. An informal dirt walking path is located along the southern Project site boundary, adjacent to West Lugonia Street. **Figure 2: Project Location** depicts an aerial view of the Project site.

9. Surrounding Land Uses and Setting:
The Project site is bordered by West Lugonia Avenue to the south, Karon Street and an existing residential community to the east, a dirt road and fallow agricultural land to the north, and fallow agricultural land to the west followed by Tennessee Street and State Route 210 (SR-210). **Table A: Surrounding Land Uses and Setting** summarizes the existing land uses, General Plan designations, and zoning designations on the Project site and surrounding properties.

10. Other Public Agencies whose Approval is Required:
Approvals from other regulatory agencies may also be required and are listed as follows:

- N/A

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun? Yes. Please refer to Checklist Section 3.17.
Note: Conducting consultation early in the CEQA process allows tribal governments, 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 (See Public Resources Code Section 21083.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of the initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: 12.5.23

Name and Title: RYAN MURPHY, SENIOR PLANNER

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3) (D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views? (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?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

a. Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact

Discussion of Effects: Scenic resources and vistas in the City of Redlands consist of the scenic corridors and views to and from open spaces, canyonlands, hillsides, groves, historic districts and resources, and the San Bernardino Mountains to the north.

The Project site is currently undeveloped, and conditions on the site generally consist of disturbed vegetation (such as grasses and weeds), a few palm trees, and power utility poles. The Project site is bordered by West Lugonia Avenue to the south followed by commercial land uses and undeveloped land, Karon Street and an existing residential community to the east, a dirt road and fallow agricultural land to the north, and fallow agricultural land to the west followed by Tennessee Street and SR-210. A public park, Texonia Park, exists to the east of the existing residential community, approximately 0.1 mile east of the Project site. The Project site is relatively level with no topographical features existing on the site. However, existing development, specifically the existing residential community east of the Project site, partially obscures views of the distant San Bernardino Mountains to the north.

The proposed Project would result in the construction of 451 apartment units, 72 townhomes, and 18 single-family detached homes, for a total of 541 units. The individual apartment buildings would not exceed 35 feet in height. The townhome buildings would not exceed 34 feet in height, and each single-family residential home would not exceed 20 feet in height. The proposed heights of the apartment and townhouse buildings would be below the maximum building height of four stories (approximately 43 feet)

allowed under the proposed R-3 zoning designation, and the proposed height of the single-family units would be below the maximum building height of 2.5 stories (approximately 35 feet). Although the construction of these homes would partially obscure the view of the San Bernardino Mountains from the Project site itself, partial views of the San Bernardino Mountains would still exist from nearby public access points, including Karon Street to the east of the Project site, portions of West Lugonia Avenue, and the proposed Pennsylvania Street extension.

As such, the proposed Project would have a **less than significant** impact related to scenic vistas. No mitigation is required.

b. Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?

Less Than Significant Impact

Discussion of Effects: According to the California Department of Transportation (Caltrans),[4] no officially designated State Scenic Highways exist in the City of Redlands. Two highways, State Route 330 (SR-330) north of the City of Highland, approximately 4.2 miles north of the Project site, and State Route 38 (SR-38) approximately 0.7 mile east of the Project site, are considered Eligible State Scenic Highways, presumably due to their views of the San Bernardino Mountains to the north and east. However, neither of these highways are officially designated as State Scenic Highways.

Although the Project site is within the viewshed of the section of SR-330 that is eligible for designation as a State Scenic Highway, due to its distance from the highway, the Project site represents a very small portion of the overall panorama. The Project site is not visible from SR-38 due to intervening, existing development. Given that the Project site is not visible from the eligible section of SR-38 and the Project would not exceed the four-story building height limit that applies to the R-3 zone or the 2.5-story building height limit that applies to the R-1 zone, the Project would not damage scenic resources within a State Scenic Highway. Therefore, impacts to scenic resources within a State Scenic Highway viewshed would be **less than significant**. No mitigation is required.

c. In non-urbanized areas, would the project 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?

Less Than Significant Impact

Discussion of Effects: The Project site is located on the edge of an urban neighborhood within the City of Redlands. Although the Project site is bordered by undeveloped land to the north, south, and west, the proposed Project can be seen as an extension of the urban neighborhood to the east. In addition, as discussed above in Threshold 3.1(b), public views from publicly accessible vantage points, including Karon Street, portions of West Lugonia Avenue, and the proposed Pennsylvania Street extension, would not be substantially degraded as a result of the proposed Project actions.

[4] California Department of Transportation. *California Scenic Highway Mapping System.* Website: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed October 27, 2023).

The construction phase of the Project would introduce the use of machinery such as excavators and bulldozers, and the presence of the construction equipment, as well as the construction activities, would temporarily alter the visual character of the Project site. Construction staging areas, including earth stockpiling, storage of equipment and supplies, and related activities would contribute to a disturbed site, which could be perceived by some viewers as a potential visual impact. Since construction activities would be temporary, they would not create a significant permanent impact on the visual character or quality of the Project site and its surroundings.

Upon completion of the Project, public views of the Project site along Karon Street, West Lugonia Avenue, and the proposed Pennsylvania Street extension would include streetscape landscaping, apartment buildings, townhome buildings, and single-family dwellings, which would be developed to a similar mass, color, and height as surrounding existing residential uses. As such, public views of the Project site would change to be similar to the views of the existing residential communities to the east. The proposed amenities for the apartment complex and townhome neighborhoods would be within those communities and would not be visible from public streets. In addition, the landscape frontage along West Lugonia Avenue and Karon Street would provide a visual buffer that would allow for an aesthetically pleasing transition to the development within the Project site. The proposed Project would result in a change in the visual character of the site; however, such changes would not be out of line with the existing pattern of land uses surrounding the Project site. For these reasons, implementation of the proposed Project would not generate a substantial degradation of the existing visual character or quality of public views of the site and its surroundings.

The proposed Project would be developed on a site that is currently mostly designated for Commercial land uses pursuant to the City's General Plan, with portions of the site designated as Parks/Golf Courses and Low Density Residential uses. The portion of the Project site designated for Low Density Residential uses is located directly adjacent to Karon Street. Implementation of the proposed Project would develop this portion of the Project site with 18 single-family dwellings at a proposed density of 5.33 dwelling units per acre (du/ac), which would not exceed the 6.0 du/ac density limit of the Low-Density Residential land use designation. A General Plan Amendment (GPA) would be required to change the Commercial and Parks/Golf Courses land use designations to High Density Residential in order to permit the proposed higher housing densities of the apartment complex and townhome neighborhoods. The High-Density Residential designation allows for up to 29 dwelling units per acre. Implementation of the proposed Project would develop this portion of the Project site with 451 apartment units and 72 townhome units for a proposed density of 27.2 du/ac, which would not exceed the density limit of the High-Density Residential land use designation.

The Project site is currently zoned as East Valley Corridor Specific Plan/Special Development District (EV/SD). Single-family dwelling units on parcels of 20 acres or more are permitted as interim uses under the current EV/SD zoning. The EV/SD zoning does not permit, conditionally permit, or permit as an accessory use, higher residential densities. A zoning change from EV/SD to R-3 Multiple Family Residential will be required to permit the proposed densities of the apartment complex and townhome neighborhood (27.2 units per gross acre), and a zoning change from EV/SD to R-1 Single Family Residential along Karon Street will be required to permit the proposed densities of the single-family detached residences (5.33 dwelling units per gross acre). The apartment and townhome residential units proposed for the Project would be no taller than 34 feet in height, which would be under the maximum building height of four stories (approximately 43 feet tall), pursuant to the R-3 zoning designation. The proposed height of the

single-family units would be not taller than 20 feet, which would be below the maximum building height of 2.5 stories (approximately 35 feet) pursuant to the R-1 zoning designation.

Pertaining to development of fences, landscaping and walls on the Project site, the Project Applicant would develop such features in compliance with Chapter 18.168 of the Redlands Zoning Code. The proposed Project would be designed to be consistent with surrounding existing neighborhoods in the vicinity of the Project site. Colored architectural exhibits of the proposed Project are shown in **Figure 7** in the Project Description. These design elements would be complementary of the surrounding visual character of the area and would be consistent with design guidelines in accordance with the City's General Plan. Therefore, impacts to the visual character or quality of the Project site and its surroundings would be **less than significant.** No mitigation is required.

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less Than Significant Impact

Discussion of Effects: Currently, nighttime lighting is produced by surrounding residential development, street lighting, and vehicles on adjacent roadways. Although the Project site is bordered by undeveloped land to the north, south, and west, the proposed Project actions can be seen as an extension of the existing neighborhood to the east. The proposed Project would add residential uses and vehicle trips that would incrementally increase ambient nighttime illumination in the area. The proposed Project would incorporate street and pedestrian lighting at entrances and exits to the neighborhood, streetlights, and lighting on individual residential units.

All lighting associated with the Project would be shielded such that it would minimize light spillage onto adjacent properties. Through compliance with City zoning and municipal code regulations, lighting would not substantially affect daytime or nighttime views in the Project vicinity.

Glare also can be produced during the daytime and is usually associated with reflective building materials, such as glass, stainless steel, aluminum, and photovoltaic panels. Building materials for the proposed residential development would generally consist of stucco facades, and wood or stone siding. Glass windows would be incorporated into the new home design to be consistent with the architectural style of the surrounding development in accordance with development standards established for the residential land use and zoning designations of the City of Redlands. On January 1, 2020, the California Solar Mandate went into effect requiring all new residential development (single-family and multi-family development) up to three stories in height to install an individual solar panel system for each residential unit. The residential units developed on the Project site would include rooftop photovoltaic panels that would be incorporated as part of the Project design. In the past, such photovoltaic panels were a source of glare that could potentially affect daytime views, especially for aircraft flying in such areas. However, solar panel design has advanced in recent years to increase the amount of sunlight that is absorbed and converted to electricity, thereby decreasing the amount of solar energy that is reflected. In general, since the whole concept of efficient solar power is to absorb as much light as possible, while reflecting as little light as possible, standard solar panels produce less glare and reflection than standard window glass. Technically, solar panels use "high transmission, low iron glass" which absorbs more light, producing a

smaller amount of glare and reflectance than normal glass does.[5] Based on this, installation of rooftop solar photovoltaic panels on the Project's residential units would not increase glare in the area.

The Project site perimeter would be developed with drought-tolerant street trees, decorative landscaping, architectural features, and other streetscape design techniques to minimize light spillage onto neighboring areas. Additionally, the proposed Project would not utilize high gloss or reflective materials that would cause glare or reflection or generate excessive light. Therefore, impacts from new sources of substantial light or glare would be **less than significant**. No mitigation is required.

[5] Colton, Rodger D., Sheehan Fisher, and Colton Public Finance and General Economics. 2014. Assessing Rooftop Solar PV Glare in Dense Urban Residential Neighborhoods: Determining Whether and How Much of a Problem. November 16, 2014. Website: http://www.fsconline.com/downloads/Papers/2014%2011%20Solar_Glare.pdf (accessed October 27, 2023).

3.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a. Would the project 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

Discussion of Effects: The Project site is currently undeveloped and generally consists of disturbed vegetation, a few palm trees, and power utility poles. According to the City's General Plan and the California Department of Conservation Farmland Mapping and Monitoring Program, the Project site is designated as Grazing Land.[6,7] Additional Grazing Land is located to the north and west of the site, while the land to the south and east is designated as Urban and Built-Up Land. The Project site is not designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Therefore, implementation

[6] City of Redlands. 2017. *General Plan Update and Climate Action Plan Environmental Impact Report, Final, SCH #2016081041. Figure 3.2-1: Farmland Classifications.* City of Redlands. July 21.

[7] California Department of Conservation. *California Important Farmland Finder.* Website: https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed October 27, 2023).

of the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. **No impact** would occur, and no mitigation is required.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

Discussion of Effects: The Project site is currently zoned East Valley Corridor Specific Plan/Special Development District (EV/SD). The purpose of the East Valley Corridor Specific Plan is to plan for large undeveloped areas along Interstate 10 (I-10) to facilitate future industrial, commercial, and residential development in an orderly and aesthetic manner, to provide a strong job base to support the local economy, and to ensure high-quality development through design guidelines and standards. The Project site is not currently zoned for agricultural use. According to the City's General Plan EIR, the Project site is not under a Williamson Act Contract.[8] Therefore, implementation of the proposed Project would not conflict with existing zoning for agricultural use, nor would it conflict with a Williamson Act Contract. **No impact** would occur, and no mitigation is required.

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

Discussion of Effects: As discussed above, the Project site is currently zoned East Valley Corridor Specific Plan/Special Development District (EV/SD). The Project site is not zoned as 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)). Therefore, implementation of the Project would not conflict with existing zoning for forest resources. **No impact** would occur, and no mitigation is required.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

Discussion of Effects: The Project site is currently undeveloped and generally consists of disturbed vegetation, a few palm trees, and power utility poles. The Project site is not occupied by forest land. Therefore, implementation of the proposed Project would not result in the loss of forest land or the conversion of forest land to non-forest use. **No impact** would occur, and no mitigation is required.

e. Would the project 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

Discussion of Effects: The Project site is not adjacent to farmland or forest land, or land that is zoned for agricultural or forestry use. Therefore, implementation of the proposed Project would not involve other changes in the existing environment which, due to its location or nature, could result in conversion of

[8] City of Redlands. *General Plan Update and Climate Action Plan Environmental Impact Report, Final, SCH #2016081041. Figure 3.2-1: Farmland Classifications.* City of Redlands. July 21, 2017

Farmland to non-agricultural use or the conversion of forest land to non-forest use. **No impact** would occur, and no mitigation is required.

3.3 AIR QUALITY

Would the project:

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	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	☐	☐	☒	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d.	Result in other emissions, such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

The Project site is within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) is the regional government agency that monitors and regulates air pollution within the Basin. The federal Clean Air Act and the California Clean Air Act mandate the control and reduction of specific air pollutants. Under these acts, the United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for specific "criteria" pollutants, designed to protect public health and welfare. Primary criteria pollutants include carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_X), particulate matter less than 10 microns in size (PM_{10}), sulfur dioxide (SO_2), and lead (Pb). Secondary criteria pollutants include ozone (O_3), and particulate matter less than 2.5 microns in size ($PM_{2.5}$). The ambient air quality standard for each criteria pollutant represents the level that is considered safe to the public and avoids specific adverse health effects associated with each criteria pollutant.

The Basin is in nonattainment for the federal and State standards for O_3 and $PM_{2.5}$, and nonattainment for the State PM_{10} standard. In addition, the Basin is in attainment/maintenance for the federal PM_{10}, CO, SO_2, and nitrogen dioxide (NO_2) standards. The SCAQMD has established project-level thresholds for VOCs, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ shown in **Table D: SCAQMD Construction and Operation Thresholds of Significance**. The SCAQMD considers any project in the Basin with construction- or operation-related emissions that exceed any of the emission thresholds below to have potentially significant impacts.

The discussion and analysis provided in this section is based on the Air Quality, Green House Gas, and Energy Technical Memorandum prepared by Michael Baker International and dated June 22, 2023 (refer to **Appendix A-1** of this IS/MND).

Table D: SCAQMD Construction and Operation Thresholds of Significance

Emission Source	Pollutant Emissions Threshold (lbs/day)					
	VOCs	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction Thresholds	75	100	550	150	150	55
Operation Thresholds	55	55	550	150	150	55

Source: South Coast Air Quality Management District (SCAQMD). 2023. South Coast AQMD Air Quality Significance Thresholds. March. Website: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25 (accessed October 27, 2023).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide
VOCs = volatile organic compounds

a. Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact

Discussion of Effects: In order to reduce emissions, the SCAQMD adopted the 2022 Air Quality Management Plan (AQMP) which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State and federal air quality standards. The 2022 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, the Southern California Association of Governments (SCAG), and the USEPA.

The 2022 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. Additionally, the 2022 AQMP utilized information and data from the SCAG and its 2020-2045 RTP/SCS. The SCAQMD considers projects that are consistent with the 2022 AQMP, which is intended to bring the Basin into attainment for all criteria pollutants, to also have less than significant cumulative impacts.

Criteria for determining consistency with the AQMP are defined by the following indicators:

Criterion 1: With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

1. *Would the project result in an increase in the frequency or severity of existing air quality violations?*

   Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed under impact thresholds b and c, the Project's short-term construction emissions, long-term operational emissions, and localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would result in less than significant impacts during Project construction and operations. Therefore, the Project would not result in an increase in the frequency or severity of existing air quality violations. It is noted that because VOCs are not a criteria pollutant, there is no ambient

standard or localized threshold for VOCs; due to the role VOC plays in O_3 formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. As such, the Project would not cause or contribute to localized air quality violations or delay the attainment of air quality standard or interim emissions reductions specified in the 2022 AQMP.

2. *Would the project cause or contribute to new air quality violations?*

   As discussed below in Responses 3.3(b) and (c), the proposed Project would result in emissions that would be below the SCAQMD's thresholds for regional and localized emissions. Therefore, the proposed Project would not have the potential to cause or affect a violation of the ambient air quality standards.

3. *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

   As discussed in Responses 3.3(b) and (c), the proposed Project would result in less than significant impacts with regard to localized concentrations during Project construction and operation. As such, the proposed Project would not delay the timely attainment of air quality standards or 2022 AQMP interim emissions reductions.

Criterion 2: With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not a proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2022 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2022 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

1. *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

   A project is consistent with the 2022 AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the 2022 AQMP. In the case of the 2022 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the General Plan, SCAG's regional growth forecast, and the SCAG RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

   The majority of the Project site is currently designated Commercial, with the eastern portion designated Low-Density Residential (LDR) and a small area in the center of the site designated as Parks/Golf Courses.[9] The Commercial land use category designates areas for the development of a wide range of commercial uses, including neighborhood-serving stores and convenience centers, regional commercial centers, and commercial recreation. The LDR land use category designates areas intended to be developed at densities of up to 6 dwelling units per acres. Park/Golf Courses includes both public and private facilities developed for outdoor active or

[9] City of Redlands. 2022. *City of Redlands General Plan Land Use Map*. April. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/generalplan2035.pdf?1649693557 (accessed October 27, 2023).

passive recreation, trails within linear parks, and golf courses. Further, the site is currently zoned as Special Development District (EV/SD) within the East Valley Corridor Specific Plan.[10] The Special Development District is intended to provide an alternative, more flexible site planning process which encourages creative and imaginative planning of administrative professional, commercial, or industrial developments, or a mixture of such uses, within the framework of a single cohesive concept plan. The Project proposes to construct a mixture of multi-family, townhomes, and single-family residential development for a total of 541 residential units surrounded by existing commercial and residential uses. As such, the proposed Project would require City discretionary approvals of a Zone Change and a General Plan Amendment, among others. As discussed above, the Project site is currently undeveloped with no existing commercial, residential, or park or recreational uses. The proposed residential development would be considered "an efficient use of the land" and increase the Project site's development potential.

Moreover, the Project would be consistent with the General Plan in regard to population and housing upon the City's approval of the required permits. The City's population estimate as of January 1, 2022, is 72,585 persons.[11] The Project would induce population growth directly through the construction of 541 residential units. Based on an average household size of 2.68 for the City of Redlands[12], the Project would result in a direct population increase of approximately 1,450 persons. While it is likely that future residents already live in the City, this analysis conservatively assumes all 1,450 future residents would move into the City. SCAG growth forecasts estimate the City's population to reach 80,800 persons by 2045, representing an estimated total increase of 11,300 persons between 2016 and 2045.[13] The Project's potential direct population growth (1,450 persons) therefore represents approximately 12.83 percent of the City's anticipated growth between 2016 and 2045, and a nominal amount (approximately 1.73 percent) of the City's total projected 2045 population. As such, the Project would be consistent with the types, intensity, and patterns of land use envisioned for the site vicinity and would be considered consistent with the General Plan upon the City's approvals of the required permits. It should be noted that the proposed residential development would also contribute to satisfying the City's housing needs as indicated by Regional Housing Needs Assessment (RHNA). Further, the population and housing growth projections, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2022 AQMP, it can be concluded that the proposed Project would be consistent with the projections.

2. Would the project implement all feasible air quality mitigation measures?

The proposed Project would not require mitigation and would result in less than significant air quality impacts (refer to Responses 3.3(b) and (c) below). In addition, the Project would comply with all applicable SCAQMD rules and regulations, including Rule 403 that requires excessive

[10] City of Redlands. 2022. *City of Redlands - Zoning Map.* April. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/zoning.pdf?1649714270 (accessed October 27, 2023).

[11] California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark.* Website: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ (accessed October 27, 2023).

[12] Ibid.

[13] Southern California Association of Governments (SCAG). 2020. *2020-2045 RTP/SCS Final Connect SoCal Demographic and Growth Forecast*, adopted September 3, 2020. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579 (accessed October 27, 2023).

fugitive dust emissions be controlled by regular watering or other dust prevention measures, and Rule 1113 that regulates the reactive organic gas (ROG) content of paint. As such, the proposed Project meets this AQMP consistency criterion.

3. *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

   Land use planning strategies set forth in the 2022 AQMP are primarily based on the 2020-2045 RTP/SCS. The Project site is within an urbanized area, with the nearest bus stop serving OmniTrans Bus line 15 located along West Lugonia Avenue approximately 400 feet to the west of the site. Surrounding land uses include undeveloped land to the north, single-family residences to the east, commercial land uses and undeveloped land to the south, and undeveloped land to the west with transportation uses (i.e., Tennessee Street and SR-210) located farther west. Further, the Project would provide bicycle parking spaces and electric vehicle charging stations on site to promote alternative transportation options. Therefore, the Project would be consistent with the actions and strategies of the 2020-2045 RTP/SCS.

In conclusion, the determination of 2022 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed Project would not result in a long-term impact on the region's ability to meet State and federal air quality standards. Also, the proposed Project would be consistent with the goals and policies of the 2022 AQMP for control of fugitive dust (refer to Response 3.3(b)). As discussed above, the proposed Project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and, therefore, it would be considered consistent with the 2022 AQMP.

b. Would the project 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?

Less Than Significant Impact

Discussion of Effects: As identified above, the Basin is currently designated as nonattainment for the federal and State standards for O_3 and $PM_{2.5}$. The Basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified SCAQMD significance thresholds identified in **Table D**, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary. The following analysis assesses the potential project-level air quality impacts associated with construction and operation of the proposed Project.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by site preparation and grading activities. Emissions from construction equipment are also anticipated and would include CO, NO_X, VOCs, directly emitted $PM_{2.5}$ or PM_{10}, and toxic air contaminants such as diesel exhaust particulate matter.

Project construction activities would include site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality from the proposed Project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403: Fugitive Dust, which would require the Project Applicant to implement measures that would reduce the amount of particulate matter generated during the construction period. The Rule 403 measures that were incorporated in this analysis include:

- Water active sites at least three times daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.

- Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, sulfur oxides (SO_X), NO_X, VOCs, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

The Project would be constructed over 31 months, with construction anticipated to begin in April 2024[14]. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model version 2022.1 (CalEEMod) program defaults. The construction equipment list was provided by the Project Applicant and used in the CalEEMod analysis. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of

[14] Since the time this analysis was prepared, the construction year has changed to 2025. As the analysis year increases, emission factors decrease due to the natural turnover of older equipment being replaced by less polluting equipment and emission regulations becoming more stringent. Therefore, the construction schedule utilized in the analysis represents a more conservative analysis.

construction personnel, and the amount of materials to be transported on or off site. The analysis of daily construction emissions has been prepared using CalEEMod. Refer to **Appendix A-2** for the CalEEMod outputs and results. **Table E: Short-Term Construction Emissions**, presents the anticipated daily short-term construction emissions.

Table E: Short-Term Construction Emissions

Emission Sources	Pollutants (lbs/day)[1]					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Year 1 (2024)						
Construction Related Emissions[2]	4.24	23.60	56.60	0.06	6.90	2.23
Year 2 (2025)						
Construction Related Emissions	3.83	21.40	53.60	0.06	6.79	2.13
Year 3 (2026)						
Construction Related Emissions	58.60	30.00	71.40	0.08	8.44	2.74
Maximum Daily Emissions	**58.60**	**30.00**	**71.40**	**0.08**	**8.44**	**2.74**
SCAQMD Regional Threshold	75	100	550	150	150	55
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).

1. Emissions were calculated using CalEEMod, version 2022.1.
2. Modeling assumptions include compliance with SCAQMD Rule 403 which requires: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in **Table E**, construction emissions associated with the Project would not exceed the SCAQMD's thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, and PM_{10}. Construction activities would comply with SCAQMD Rule 402, which prohibits fugitive dust from creating a nuisance off site, and Rule 403, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust prevention measures. Adherence to SCAQMD Rule 403 would greatly reduce PM_{10} and $PM_{2.5}$ concentrations. In addition, all architectural coatings for the proposed Project's structures would be required to comply with SCAQMD Rule 1113. Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. Therefore, construction of the proposed Project would not result in a cumulatively considerable increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **less than significant,** and no mitigation is required.

Operational Emissions. Long-term air quality impacts would consist of mobile source emissions generated from Project-related traffic, and emissions from stationary area and energy sources. Emissions associated with each of these sources were calculated and are discussed below.

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$); however, CO tends to be a localized pollutant, dispersing rapidly at the source. Based on the *Traffic Study* prepared by Michael Baker International (**Appendix H-1**), the proposed Project would

result in approximately 3,728 average daily trips, with 228 a.m. peak hour trips and 288 p.m. peak hour trips.

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed residential development. The primary use of electricity and natural gas by the Project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Criteria air pollutant emissions from electricity use were not quantified since criteria pollutants emissions occur at the site of the power plant, which is off site. Therefore, energy source emissions from electricity usage would be zero and the emissions would only be generated from consumption of the natural gas.

Typically, area source emissions consist of direct sources of air emissions located at the Project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the Project would include emissions from the use of landscaping equipment, architectural coating, and consumer products.

Operational emissions generated by the proposed Project were calculated with CalEEMod and are detailed in **Table F: Project Operational Emissions,** below.

Table F: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)[1]					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project Summer Emissions						
Area Source Emissions	15.50	7.95	37.40	0.05	0.63	0.64
Energy Source Emissions	0.10	1.74	0.74	0.01	0.14	0.14
Mobile Source Emissions	15.00	15.50	150.00	0.38	33.6	9.47
Total Emissions[2]	**30.60**	**25.20**	**188.00**	**0.44**	**34.30**	**9.47**
Proposed Project Winter Emissions						
Area Source Emissions	12.20	7.63	3.25	0.05	0.62	0.62
Energy Source Emissions	0.10	1.74	0.74	0.01	0.14	0.14
Mobile Source Emissions	14.00	16.60	124.00	0.36	33.60	8.70
Total Emissions[2]	**26.30**	**26.00**	**128.00**	**0.42**	**34.30**	**9.45**
Peak Emissions	**30.36**	**26.00**	**188.00**	**0.44**	**34.30**	**9.47**
SCAQMD Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).
[1] Emissions were calculated using CalEEMod, version 2022.1.
[2] The numbers may be slightly off due to rounding.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in **Table F**, the proposed Project would not exceed the significance criteria for daily VOCs, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **less than significant**, and no mitigation is required.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact

Discussion of Effects: Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project site include the single-family residences located approximately 33 feet (10 meters) to the east of the Project site boundary.

Local Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 and revised 2008) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for projects that disturb/grade 1, 2, or 5 acres per day emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over 5 acres in size should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors from area source emissions. For LST analysis purposes, the SCAQMD is divided into 38 Source Receptor Areas (SRAs), each of which contain specific localized air quality emission thresholds for CO, NO_X, $PM_{2.5}$, and PM_{10} to determine local air quality impacts. The proposed Project would be located in SRA 35, East San Bernardino Valley.

The SCAQMD provides LST thresholds for 1-, 2-, and 5-acre site disturbance areas per day; it is noted that the SCAQMD does not provide LST thresholds for projects disturbing over 5 acres per day. The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day.[15] Based on the equipment provided by the Project Applicant and default information provided by CalEEMod, the Project would actively disturb an average of approximately 2.5 acres per day. Therefore, the LST thresholds for 2 acres were conservatively utilized for the construction LST analysis. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive receptor is located approximately 10 meters from the Project site's boundary, the LST values for 25 meters were used.

Table G: Localized Significance of Construction Emissions, shows the localized construction-related emissions. It is noted that the localized emissions presented in **Table G** are less than those in **Table E** because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from worker, vendor, and hauling trips). As seen in **Table G**, emissions would not exceed the LSTs for SRA 35. Construction LST impacts would be **less than significant**.

[15] The number of acres represents the total acres traversed by grading equipment. In order to properly grade a piece of land, multiple passes with equipment may be required. The disturbance acreage is based on the equipment list and days of the grading phase according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday.

Table G: Localized Significance of Construction Emissions (in Pounds Per Day)[1]

Maximum Emissions	NO_X	CO	PM_{10}	$PM_{2.5}$
Year 1 (2024)[2]	18.50	20.00	1.17	0.75
Year 2 (2025)[3]	16.80	19.90	0.71	0.65
Year 3 (2026)[4]	25.30	32.80	1.03	0.95
Maximum Daily Emissions[5]	**25.30**	**32.80**	**1.03**	**0.95**
Localized Significance Threshold[6]	**118.0**	**775.0**	**4.0**	**4.0**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).

[1] Emissions were calculated using CalEEMod, version 2022.1. Winter emissions represent worst-case.

[2] Maximum on-site daily emissions occur during grading phase for all pollutants in Year 1.

[3] Maximum on-site daily emissions occur during building construction phase for NOX, CO, PM10, and PM2.5 in Year 2 and Year 3.

[4] Building construction, paving, and architectural coating phases are expected to occur simultaneously in Year 3, As such, maximum on-site emissions shown for Year 3 is the sum of all on-site emissions occurring during building construction, paving, and architectural coating phases.

[5] The maximum daily construction emissions include fugitive dust control measures required by SCAQMD Rule 403, which includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

[6] The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (more than 2 acres per day), the distance to sensitive receptors (less than 25 meters), and the source receptor area (SRA 35, East San Bernardino Valley).

CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

In addition, according to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed Project does not include such uses. Thus, due to the lack of such emissions, no long-term localized significance threshold analysis is necessary. Operational LST impacts would be **less than significant**.

Long Term Microscale (CO Hot Spot) Analysis. CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (2 percent) for any intersection with an existing level of service (LOS) of D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The Basin is designated as an attainment/maintenance area for the federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. Nationwide estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions.[16] CO emissions have continued to decline since this time.

[16] United States Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10 (accessed October 27, 2023).

The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*, which is the most recent AQMP that addresses CO concentrations. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed Project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35 ppm 1-hour CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California, with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City near the Project site due to the comparatively low volume of traffic that would occur as a result of Project implementation. Therefore, impacts would be **less than significant**.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact

Discussion of Effects: According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short term in nature and cease upon Project completion. In addition, the Project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than 5 minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The Project would also comply with the SCAQMD Rule 1113, which would minimize odor impacts from ROG emissions during architectural coating. Any impacts to existing adjacent land uses would be short term and are less than significant.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

The information and analysis in this section have been prepared based on the Results of a Biological Resources Assessment for the Proposed Neighborhoods at Lugonia Village, City of Redlands, County of

San Bernardino, California, prepared by Michael Baker International in February 2023[17] (**Appendix B-1**) and the Burrowing Owl (Athene cunicularia) Focused Survey for the Neighborhoods at Lugonia Village, City of Redlands, County of San Bernardino, California, prepared by Michael Baker International in July 2022[18] (**Appendix B-2**).

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 with Mitigation Incorporated

Discussion of Effects: The Project site is currently undeveloped, generally flat, and rectangular in shape. Conditions on the Project site generally consist of disturbed vegetation with areas that are subject to continual weed abatement and as a result contain compacted bare or sparsely vegetated ground. Where present, vegetation is dominated by native and non-native ruderal species.

The *Biological Resources Assessment* included in **Appendix B-1** included a literature review and record search for special-status biological resources potentially occurring on or within the vicinity of the Project site (within a 5-mile radius) and a biological field survey/habitat assessment of the Project site and a 500-foot buffer (survey area) conducted on April 5, 2022, to evaluate the condition of any potential habitat present within the Project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the Project site were determined through a query of the California Natural Diversity Database (CNDDB) Rarefind 5, California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). USFWS-designated Critical Habitat for species listed under the Federal Endangered Species Act (FESA) was reviewed online via the Environmental Conservation Online System: Threatened and Endangered Species Active Critical Habitat Report. In addition, the *Biological Resources Assessment* included the review of previously prepared reports, survey results, and literature, as available, detailing the biological resources previously observed on or within the vicinity of the Project site to understand existing site conditions, confirm previous species observations, and note the extent of any disturbances, if present, that have occurred within the Project site that would otherwise limit the distribution of special-status biological resources. The only sensitive wildlife species determined to have a moderate or high potential to occur at the Project site is the Cooper's hawk (*Accipiter cooperii*; a State Watch List [WL] species) as a foraging species, with a low potential to nest; burrowing owl (*Athene cunicularia*) as a foraging and nesting species; southern California legless lizard (*Anniella stebbinsi*; a State Species of Special Concern [SSC]); and the California horned lark (*Eremophila alpestris actia*; a State WL species). All other special-status wildlife species identified by the CNDDB and IPaC either have a low potential or are not expected to occur within the Project site. Based on the results of the field survey and a review of specific habitat preferences, distributions, and elevation ranges, the *Biological Resources Assessment* determined that none of the special-status plant species identified by the CNDDB, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California

[17] Michael Baker International. 2023. *Results of a Biological Resources Assessment for the Proposed Neighborhoods at Lugonia Village – City of Redlands, County of San Bernardino, California.*

[18] Michael Baker International. 2022. *Results of a Burrowing Owl (Athene cunicularia) Focused Survey for The Proposed Neighborhoods at Lugonia Village – City of Redlands, County of San Bernardino, California.*

(CIRP), and IPaC are expected to occur within the Project site. In addition, the Project site is not within USFWS-designated Critical habitat for any federally listed species.

No special-status plant species or special-status vegetation communities were observed within the Project site during the field survey. One special-status wildlife species, the Loggerhead shrike (*Lanius ludovicianus*; a State SSC), was observed during the field survey. However, due to a lack of nesting habitat and this species' status as a breeding bird along the southern California coastal slope, the bird that was observed was more likely a transient or lingering wintering bird that had not yet made it back to its breeding territory.

The Project site consists of existing disturbed areas that have been subject to a high level of anthropogenic disturbances that have eliminated the natural plant communities that once occurred on site. As such, the majority of the Project site consists of native and non-native ruderal/weedy plant species. Plant species identified on the Project site include annual bursage (*Ambrosia acanthicarpa*), common fiddleneck (*Amsinckia intermedia*), red brome (*Bromus rubens*), and London rocket (*Susymbrium irio*). The Project site provides minimal foraging and cover habitat for wildlife species adapted to a high degree of anthropogenic disturbance. Avian species observed during the field investigation include northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), white-crowned sparrow (*Zoniotrichia leucophrys*), house finch (*Haemorhour mexicanus*), and western meadowlark (*Sturnella neglecta*). The only reptilian species observed during the field investigation was western side-blotched lizard (*Uta stansburiana elegans*). Mammalian species observed during the field investigation included the long-tailed weasel (*Mustela frenata*) and California ground squirrel (*Otospermophilus beechei*). No fish or amphibian species were observed during the field investigation as no hydrogeomorphic features were observed on the Project site that would provide suitable habitat.

Due to its regional significance in the vicinity of the Project site, focused burrowing owl surveys were conducted on four separate days during the 2022 breeding season (February 1 through August 31). Areas that provided suitable habitat for the burrowing owl were surveyed for suitable, occupied, and remnant burrows consisting of natural and non-natural substrates. Methods to detect the presence of burrowing owls included direct observation, aural detection, and signs of presence (i.e., pellets, white wash, feathers, or prey remains, particularly around burrows). The *Burrowing Owl Focused Survey* included in **Appendix B-2** concluded that no burrowing owls, sign of burrowing owls (i.e., pellets, white wash, feathers, or prey remains), occupied burrows, or recemented burrows were observed during any of the four focused survey days. The survey results did note, however, that the Project site contains suitable foraging and nesting habitat for the burrowing owl and suitable burrows were observed during the surveys. In addition, the Project site is approximately 2 miles away from the closest known occurrence of burrowing owl. Due to the presence of suitable burrows and foraging habitat as well as the Project site's proximity to existing occurrence records of the burrowing owl, the *Burrowing Owl Focused Survey* recommended pre-construction surveys for burrowing owls be conducted as described in **Mitigation Measure BIO-1** prior to any ground-disturbing activities to reduce potential impacts to burrowing owls that may be present on or around the Project site.

While no breeding or nesting birds or raptors were observed within the Project site and surrounding vicinity, vegetation on the Project site could provide nesting habitat for birds protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Construction of the proposed Project may occur during the bird breeding season (typically February 1 through August 31), which could result in ground-disturbing construction activities directly affecting birds protected by the MBTA and their nests

through the removal of habitat on the Project site and indirectly through increased noise, vibration, and increased human activity. **Mitigation Measure BIO-2** requires that nesting bird pre-construction clearance surveys be conducted prior to any ground-disturbing activities.

Mitigation Measure BIO-1 A pre-construction burrowing owl clearance survey shall be conducted no less than 14 days prior to any vegetation removal or ground-disturbing activities to avoid impacts to burrowing owls and/or occupied burrows. The pre-construction clearance survey shall be conducted by a qualified biologist and in accordance with the methods outlined in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012). A second clearance survey shall be conducted within 24 hours prior to ground disturbance. Documentation of surveys and findings shall be submitted to the City of Redlands for review and file. If no burrowing owls or occupied burrows are detected, Project activities may begin, and no additional avoidance and minimization measures shall be required.

If an occupied burrow is found outside, but within 500 feet, of the development footprint, the qualified biologist shall establish a "no-disturbance" buffer around the burrow location(s). The size of the "no-disturbance" buffer shall be determined in consultation with the California Department of Fish and Wildlife (CDFW) and be based on the species status (i.e., breeding, non-breeding) and proposed level of disturbance. If an occupied burrow is found within the development footprint and cannot be avoided, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to CDFW for approval prior to initiating Project activities.

Mitigation Measure BIO-2 Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey shall be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.

If Project-related activities are to be initiated during the nesting season (January 1 to August 31), a pre-construction nesting bird clearance survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of any vegetation removal or ground disturbing activities. The qualified biologist shall survey all suitable nesting habitat within the Project impact area, and areas within a biologically defensible buffer zone surrounding the Project impact area. If no active bird nests are detected during the clearance survey, Project activities may begin, and no additional avoidance and minimization measures shall be

required. If an active bird nest is found, the species shall be identified, and a "no-disturbance" buffer shall be established around the active nest. The size of the "no-disturbance" buffer shall be increased or decreased based on the judgement of the qualified biologist and level of activity and sensitivity of the species. The qualified biologist shall periodically monitor any active bird nests to determine if Project-related activities occurring outside the "no-disturbance" buffer disturb the birds and if the buffer should be increased. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, Project activities within the "no-disturbance" buffer may occur following an additional survey by the qualified biologist to search for any new bird nests in the restricted area.

With implementation of Mitigation Measures BIO-1 and BIO-2, the proposed Project would have a less than significant impact with mitigation incorporated on special-status species.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact

Discussion of Effects: No discernible drainage courses, inundated areas, or wetland features/obligate plant species that would be considered jurisdictional by the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), or the CDFW were observed within the Project site. In addition, no special-status vegetation or other natural community were observed on the Project site during the biological field survey/habitat assessment. Therefore, the proposed Project would have **no impact** on riparian habitat or other sensitive natural communities, and no mitigation is required.

c. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact

Discussion of Effects: As discussed in Response 3.4(b) above, no discernible drainage courses, inundated areas, or wetland features/obligate plant species that would be considered jurisdictional by the USACE, the RWQCB, or the CDFW were observed within the Project site. Therefore, the proposed Project would have **no impact** on federally protected wetlands, and no mitigation is required.

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 with Mitigation Incorporated

Discussion of Effects: Habitat fragmentation occurs when a single, contiguous habitat area is divided into two or more areas, or where an action isolates the two or more new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to another or to/from

one habitat type to another. Habitat fragmentation may occur when a portion of one of more habitats is converted into another habitat, as when scrub habitats are converted into annual grassland habitat because of frequent burning. Wildlife movement includes seasonal migration along corridors, as well as daily movements for foraging. Examples of migration corridors may include areas of unobstructed movement for deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and between roosting and feeding areas for birds.

The Project site is not located within any wildlife corridors. The Project site is surrounded by developed land (residential and commercial uses) to the east and south and undeveloped land to the north and west, with minimal opportunities for movement to the south and almost no movement opportunities to the east and west. The Santa Ana River Wash is located approximately 1.25 miles north of the Project site; however, this natural area is separated from the Project site by existing roads and developments. Based on the surrounding area, any wildlife movement across the Project site is most likely to be local movements rather than regional. However, the surrounding residential land uses and existing roadways have fragmented the connection between the Project site and other undeveloped areas in the vicinity and region. The existing landscape of the Project site and absence of native vegetation would also limit the movement of wildlife through the Project site. In addition, wildlife movement across the Project site is further reduced by the presence of surrounding high-traffic roadways (e.g., West Lugonia Avenue, West San Bernardino Avenue, and SR-210) and existing residential and commercial development. Elevated noise levels, vehicle traffic, lighting, and human presence associated with the surrounding residential and commercial developments and roadways would also decrease the suitability of the Project site to be used as a wildlife movement corridor.

Although no riparian or other natural vegetation communities occur on the Project site, existing vegetation on the Project site may provide nesting habitat for migratory birds. Therefore, with implementation of **Mitigation Measure BIO-2** for the protection of birds pursuant to the MBTA, the proposed project would have a **less than significant impact with mitigation incorporated** on the movement of native resident or migratory fish or wildlife species, native or migratory wildlife corridors, or native wildlife nursery sites.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

Discussion of Effects: The City of Redlands General Plan outlines policies that protect biological resources. These policies pertain to important ecological areas in the City of Redlands, such as San Timoteo Canyon, Live Oak Canyon, the Crafton Hills, the Santa Ana River, Mill Creek, and other riparian areas within the City of Redlands. The Project site is not in the vicinity of any of the important ecological areas identified in the City of Redlands General Plan, and no riparian areas were observed on the Project site.

Street trees and other trees in the public domain within the City of Redlands are managed pursuant to Redlands Municipal Code Chapter 12.52 (Trees and Tree Protection along Streets and in Public Places).19 However, the City of Redlands does not have any local policies or ordinances pertaining to trees on private property.

[19] City of Redlands Municipal Code Chapter 12.52. *Trees and Tree Protection along Streets and in Public Places*.

The Project would not conflict with any policies protecting biological resources in the City and would not require the removal of any street trees. Therefore, development of the proposed Project would not conflict with any local policies or ordinances protecting biological resources. **No impact** would occur, and no mitigation is required.

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

Discussion of Effects: The City has adopted the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan, which permits and mitigates construction and maintenance activities within the Santa Ana River Wash, approximately 1.1 miles north of the Project site, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. The Project site is located outside the boundaries of the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan. As such, **no impact** or conflict would occur in regard to conservation plans, and no mitigation is required.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

The information and analysis in this section is based on the *Cultural Resources Assessment* prepared by LSA in February 2023 (**Appendix C**).

a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Pursuant to §15064.5, the term "historical resource" shall include:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources [California Register] (Pub. Res. Code §5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

B. Is associated with the lives of persons important in our past.

C. 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.

D. Has yielded, or may be likely to yield, information important in prehistory or history.

A "substantial adverse change" to a historical resource, according to Public Resources Code (PRC) §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

A project-specific cultural resources assessment was conducted for the Project site and included an archaeological and historical record search by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, a Sacred Lands File search, an intensive pedestrian survey of the project parcel, and additional research from a qualified LSA archaeologist including review of historic period aerial photographs, maps, and the Built Environment Resource Directory (**Appendix C: Cultural Resources Assessment**). The record search by SCCIC included a review of all recorded historic-era and prehistoric archaeological sites within the Project site and a 1-mile search radius, as well as a review of known cultural resource surveys and excavation reports.

The results of the record search identified 12 previous cultural resource studies within 0.5 mile of the Project site, none of which included the Project site. Additionally, 15 previously identified cultural resources were recorded within 0.5 mile of the Project site, including historic period foundations and refuse scatters, water conveyance features, orchards, landscaping, and four built environment properties which have been evaluated as eligible for local listing as historical properties. Review of historic period aerial photographs and maps indicates that there were buildings within the vicinity of the Project site (apparently a residence and ancillary buildings) from the 1890s until they were removed sometime before 1959, and the parcels were under cultivation with a citrus orchard from at least the late 1930s until at least the late 1960s.

The Sacred Lands File (SLF) record search was performed by the Native American Heritage Commission (NAHC). On November 7, 2022, the NAHC responded indicating the record search was positive, and a list of Native American contacts in San Bernardino County to be contacted for consultation was provided. The records and results of Tribal Consultation are discussed in Section 3.18, Tribal Cultural Resources.

The intensive pedestrian survey of the Project site identified a historic period water conveyance system and feature on the Project site, LSA-CRX2202-S-1. This resource comprises a somewhat unusual water conveyance (irrigation) system (three predominantly rock-and-mortar flumes) along with a brick-and-mortar cistern. Rock-and-mortar flumes are generally associated with late 19th to early 20th century agriculture, and the combination of materials and technology in these (cobbles and mortar, cement-surfaced brick-and-mortar, pre-cast concrete/concrete pipe) suggests an 1890s to 1910s irrigation system that was repaired/maintained well into the 20th century. The system has been severely damaged, disrupted, and obscured (buried). This sustained catastrophic loss of integrity in terms of both physical aspect and setting makes this resource ineligible for the California Register of Historical Resources (California Register) or local designation under the City's Historic and Scenic Preservation Ordinance. As such, collectively the features do not constitute a "historical resource" or "unique archaeological resource" as defined by CEQA. There are no prehistoric resources documented within 1 mile of the Project

site. However, the apparent age of the resource and the former presence of a related residence and ancillary buildings suggest some potential for undocumented subsurface historic period cultural resources.

Although there are no prehistoric resources document within 1 mile of the Project site, due to the former presence of 19th century buildings within the Project site, there is some potential for the proposed Project to unearth previously undocumented cultural resources during construction. Therefore, **Mitigation Measures CUL-1 and CUL-2**, which require the retention of a qualified archaeologist on an on-call basis to assess the significance of any find and determine the appropriate treatment in the event that unanticipated cultural material is unearthed on the Project site, are prescribed.

Mitigation Measure CUL-1 Prior to the issuance of a grading permit, the Applicant shall provide the Director of the City of Redlands Department of Development Services, or designee, with evidence that it has retained the services of a qualified archaeologist that meets the Secretary of the Interior standards on an on-call basis. Archaeological monitoring shall occur during all excavation activities down to a depth of 3 feet within 100 feet of the former residence location. In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 100-foot buffer) shall cease and the project archaeologist shall assess the find and determine appropriate treatment. Work on the other portions of the Project outside of the buffered area may continue during this assessment period.

Mitigation Measure CUL-2 If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the qualified archaeologist shall develop a Monitoring and Treatment Plan for the remainder of the Project site. The Monitoring and Treatment Plan shall be developed in coordination with the Applicant and the City. The Applicant shall secure a monitoring agreement with the archaeologist prior to the recommencement of work, and the archaeologist shall monitor during the remainder of the ground disturbance activities on the Project site and implement the Plan accordingly.

Implementation of **Mitigation Measures CUL-1 and CUL-2** would reduce impacts to known, unknown, or potential cultural resources that may be located within the Project site to **less than significant** levels.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Please refer to Response 3.5(a). Implementation of **Mitigation Measures CUL-1 and CUL-2** would reduce impacts to known, unknown, or potential archaeological resources that may be located within the Project site to **less than significant** levels.

c. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation Incorporated

Discussion of Effects: No known human remains are present on the Project site, and there are no facts or evidence to support the idea that Native Americans or people of European descent are buried on the Project site; however, buried and undiscovered archaeological resources, including human remains, may be present below the ground surface in portions of the Project site. Disturbing human remains could violate the State Health and Safety Code, as well as destroy the resource. In the unlikely event that human remains are encountered during Project grading, the construction contractor would be required to notify the proper authorities and adhere to standard procedures that would ensure the respectful handling of human remains during the earthmoving activities.

Construction contractors are required to adhere to California Code of Regulations (CCR) Section 15064.5(e), Public Resources Code (PRC) Section 5097, and Section 7050.5 of the State's Health and Safety Code. To ensure proper treatment of burials in the event of an unanticipated discovery of a burial, human bone, or suspected human bone, the law requires that all excavation or grading in the vicinity of the find halt immediately, the area of the find be protected, and the contractor immediately notify the County Coroner of the find. The construction contractor, the Applicant, and the County Coroner are required to comply with the provisions of CCR Section 15064.5(e), PRC Section 5097.98, and Section 7050.5 of the State Health and Safety Code. Compliance with these provisions (specified in **Regulatory Compliance Measure CUL-1**) would ensure that any potential impacts to unknown buried human remains would be **less than significant** by ensuring appropriate examination, treatment, and protection of human remains as required by State law.

Regulatory Compliance Measure CUL-1

In the event that human remains or funerary objects are encountered on the Project site during any construction activities associated with the Project, work within 100 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD).

With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the Applicant shall consult with the MLD as

identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Redlands Department of Development Services, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

The discussion and analysis provided in this section is based on the Michael Baker International *Air Quality, Greenhouse Gas, and Energy Technical Memorandum* dated June 22, 2023 (refer to **Appendix A-1** of this IS/MND).

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact

Discussion of Effect: This analysis focuses on three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips and off-road equipment associated with Project construction and operations. The analysis of operational electricity is based on the California Emissions Estimator Model version 2022.1 (CalEEMod) modeling results for the Project. The Project's estimated electricity consumption is based primarily on CalEEMod's default settings for the County, and consumption factors provided by Southern California Edison (SCE) and the Southern California Gas Company (SoCalGas), who are the electricity and natural gas providers for the City and the Project site. The results of the CalEEMod and energy consumption modeling are included in **Appendix A-2**. The amount of operational fuel consumption was estimated using the CARB Emissions Factor 2021 (EMFAC2021) computer program which provides projections for typical daily fuel (i.e., diesel and gasoline) usage in the County, and the Project's annual vehicle miles traveled (VMT) outputs from CalEEMod. The estimated construction fuel consumption is based on the Project's construction equipment list timing/ phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips.

The Project's estimated energy consumption is summarized in **Table H: Project and Countywide Energy Consumption**. As shown in **Table H**, the Project's energy usage would constitute an approximate 0.0184 percent increase over the County's typical annual electricity consumption and an approximate 0.0123 percent increase over the County's typical annual natural gas consumption. The Project's off-road construction equipment diesel fuel consumption, on-road construction fuel consumption, and operational vehicle fuel consumption would increase San Bernardino County's consumption by 0.4543 percent, 0.0177 percent, and 0.0927 percent, respectively.

Table H: Project and Countywide Energy Consumption

Energy Type	Project Annual Energy Consumption[1]	San Bernardino County Annual Energy Consumption[2]	Percentage Increase Countywide[2]
Electricity Consumption	2,970 MWh	16,180,811 MWh	0.0184%
Natural Gas Consumption	68,976 therms	561,360,617 therms	0.0123%
Fuel Consumption			
Construction Off-Road Fuel Consumption[3]	111,562 gallons	24,554,746 gallons	0.4543%
Construction On-Road Fuel Consumption[3]	202,819 gallons	1,147,766,168 gallons	0.0177%
Operational Automotive Fuel Consumption[3]	1,033,060 gallons	1,113,988,859 gallons	0.0927%

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).
Notes:
1. As modeled in CalEEMod version 2022.1.
2. The project increases in electricity and natural gas consumption are compared to the total consumption in San Bernardino County in 2021. The project increases in automotive fuel consumption are compared with the projected Countywide off-road fuel consumption in 2024 (start of construction), on-road fuel consumption in 2024 (start of construction), and on-road fuel consumption in 2026 (operational year). Countywide fuel consumption is projected from the California Air Resources Board EMFAC2021 model. San Bernardino County electricity consumption data source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed October 27, 2023. San Bernardino County natural gas consumption data source: California Energy Commission, *Gas Consumption by County*, http://www.ecdms.energy.ca.gov/gasbycounty.aspx, accessed October 27, 2023.
3. Project fuel consumption calculated based on CalEEMod results. Countywide fuel consumption is projected from the California Air Resources Board EMFAC2021 model.

MWh = Megawatt-hours

Construction Energy Use. Project construction would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading, paving, building construction, and architectural coatings. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that heavy-duty diesel equipment not in use for more than 5 minutes be turned off. Project construction equipment would also be required to comply with the latest USEPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

The Project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and glass) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. As indicated in **Table H**, the Project's off-road fuel consumption and on-road fuel consumption from construction would be approximately 111,562 gallons and 202,819 gallons, respectively. The Project's off-road fuel consumption and on-road fuel consumption from construction would increase off-road construction equipment diesel fuel use and on-road vehicle fuel consumption in the County by approximately 0.4543 percent and 0.0177 percent, respectively. As such, construction would not have a significant effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual

project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, the impact would be **less than significant.**

Operational Energy Use. Table H provides an estimate of the daily fuel consumed by vehicles traveling to and from the Project site. Based on the Traffic Study, the proposed Project would result in approximately 3,728 average daily trips, with 228 A.M. peak hour trips and 288 P.M. peak hour trips. As indicated in **Table H**, Project operational daily trips are estimated to consume approximately 1,033,060 gallons of fuel per year, which would increase the County's automotive fuel consumption by 0.0927 percent. The Project does not propose any unusual features that would result in excessive long-term operational fuel consumption.

The key drivers of transportation-related fuel consumption are job locations/commuting distance and many personal choices on when and where to drive for various purposes. Those factors are outside of the scope of the design of the proposed Project. However, the Project would provide electric vehicle charging stations and bicycle parking in compliance with the CALGreen Code, and the closest bus stop is located approximately 400 feet west of the Project site along West Lugonia Avenue. Inclusion of electrical vehicle charging stations would encourage and support the use of electric vehicles, and the availability of other alternative transportation methods would reduce the petroleum fuel consumption associated with operation of the Project. Therefore, fuel consumption associated with Project-related vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. The impact would be less than significant.

The California Energy Commission (CEC) developed 2020 to 2035 forecasts for energy consumption and peak demand in support of the 2021 Integrated Energy Policy Report (IEPR) for each of the major electricity and natural gas planning areas and the State based on the economic and demographic growth projections.20 CEC forecasts that the statewide annual average growth rates of energy demand between 2021 and 2030 would be 1.3 percent to 2.3 percent for electricity and less than a 0.1 percent to 0.8 percent increase for natural gas.[21] As shown in **Table H**, operational energy consumption of the Project would represent a less than 0.02 percent increase in electricity and natural gas consumption over the current Countywide usage, which would be significantly below CEC's forecasts and the current Countywide usage. Therefore, the Project would be consistent with the CEC's energy consumption forecasts and would not require additional energy capacity or supplies. Additionally, the Project would consume energy during the same time periods as other residential projects. As a result, the Project would not result in unique or more intensive peak or base period electricity demand.

The proposed Project would be required to comply with the most current Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. The Title 24 Building Energy Efficiency Standards are updated every 3 years and become more stringent between each update. The Project would also incorporate sustainable building design features in accordance with Title 24 and

[20] California Energy Commission. 2022. *Final 2021 Integrated Energy Policy Report Volume IV California Energy Demand Forecast*, February. Annual average growth rates of electricity demand and natural gas per capita demand are shown in Figure 10 and Figure 14, respectively.

[21] Ibid.

CALGreen Code standards, such as reserving area on the roof for future solar panels and installing energy efficient appliances. The 2022 Title 24 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, and more.

Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects will not result in the waste of the finite energy resources.

Therefore, the Project would not cause wasteful, inefficient, and unnecessary consumption of building energy during Project operation, or preempt future energy development or future energy conservation. The impact would be **less than significant.**

b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Less Than Significant Impact

Discussion of Effect: The City does not have an adopted renewable energy or energy efficiency plan. State and regional plans for renewable energy and energy efficiency include the California Energy Commission's IEPR, California Public Utilities Commission's Energy Efficiency Strategic Plan (CPUC Strategic Plan), Title 24 standards, and CALGreen standards. The Project would be required to comply with Title 24 and CALGreen standards and incorporates all applicable energy efficiency measures. Energy efficiency measures typical for residential projects include installation of energy efficient windows, insulation, lighting, ventilation systems, and water efficient fixtures, conservation of roof areas for future installation of solar panels, as well as provision of electric vehicles charging infrastructure, among others. Compliance with Title 24 and CALGreen standards would also be consistent with the CPUC Strategic Plan strategies and the IEPR building energy efficiency recommendations, which would ensure the Project's conformance with the State's energy reduction goals. It should be noted that the Project is consistent with the *City of Redlands Climate Action Plan*, which includes City-specific policies related to energy; refer to Section 3.8. Greenhouse Gas Emissions, **Table L**. As such, the proposed Project would result **in less than significant impacts** associated with renewable energy or energy efficiency plans.

3.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a. Expose people or structures to 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

Discussion of Effects: The Project site is within a seismically active region; however, it is not located within the boundaries of an Earthquake Fault Zone for fault rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1972.[22] In addition according to the Geotechnical Engineering Investigation Report prepared for the proposed Project (**Appendix D: Geotechnical Engineering Investigation Report**)[23], the nearest active fault with known surface rupture is the Live Oak Canyon Fault (part of the Crafton Hills Fault Zone) located approximately 3.25 miles southwest of the Project site, and the San Andreas Fault is located approximately 4.25 miles northeast of the Project site. As such, the Geotechnical Engineering Investigation Report determined that the potential for ground rupture at the site is low. In the absence of any on-site active faults, **no impact** related to fault rupture would occur on the Project site, and no mitigation is required.

ii. Strong seismic shaking?

Less Than Significant Impact

Discussion of Effects: The Project site is within a seismically active area, where earthquakes have the potential to produce very strong seismically related ground shaking during the anticipated operational life of the Project. As previously discussed, the nearest known active fault is the Live Oak Canyon Fault located approximately 3.25 miles to the southwest of the Project site.[24]

The extent of ground shaking associated with an earthquake is dependent upon the size of the earthquake and the geologic material of the underlying area. All future construction and development within the Project site would be required to comply with applicable provisions of the California Building Code (CBC) and the City's building regulations in effect at the time when building permit applications are submitted. Proper engineering design and construction in conformance with the CBC standards and Project-specific geotechnical recommendations (**Standard Condition GEO-1**) would ensure that seismic ground shaking would be **less than significant.** No mitigation is required.

Standard Condition: No mitigation is required; however, the following Standard Condition is a regulatory requirement that would be implemented to ensure impacts related to seismic activity remain less than significant.

[22] Moore Twining Associates, Inc. 2022. *Geotechnical Engineering Investigation, The Neighborhoods at Lugonia Village Northwest Corner of West Lugonia Avenue and Karon Street, Redlands, California, Project Number: H02901.01.* February 11.

[23] Ibid.

[24] Ibid.

Standard Condition GEO-1 Compliance with applicable California Building Code and Project-specific geotechnical recommendations. Prior to the approval of grading and/or building permits, the Applicant shall provide evidence to the City of Redlands for review and approval that on-site structures, features, and facilities have been designed and will be constructed in conformance with applicable provisions of the California Building Code in effect at the time of City review and the recommendations cited in the Project-specific Geotechnical Engineering Investigation Report. This measure shall be implemented to the satisfaction of the Director of the City of Redlands Department of Development Services, Building and Safety Division, or designee.

Adherence to the measures identified in the Geotechnical Engineering Investigation Report as well as the current CBC in effect at the time of City review and other requirements identified and required by the City would ensure ground shaking hazards remain **less than significant.** No mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact

Discussion of Effects: Liquefaction is a phenomenon that occurs when strong seismic ground shaking causes soils to collapse from a sudden loss of cohesion and undergo a transformation from a solid to a liquefied state. There are three basic factors that must exist concurrently in order for liquefaction to occur:

- A source of ground shaking, such as an earthquake, capable of generating soil mass distortions;
- A relatively loose silty and/or sandy soil; and
- A relatively shallow groundwater table (within approximately 50 feet below ground surface) or completely saturated soil conditions that would allow positive pore pressure generation.

According to the Project-specific Geotechnical Engineering Investigation Report, no groundwater was encountered to the maximum depth drilled of 51.5 feet below ground surface (bgs). Because groundwater is anticipated to be much deeper than 50 feet BSG and has historically not been encountered in the upper 50 feet bgs, the Geotechnical Engineering Investigation Report determined that liquefaction is not a concern at the Project site. However, the analysis indicated that the granular soil layers encountered on the Project site would be subject to dry seismic settlement of between 3 and 6 inches and primarily occurred between the depths of approximately 12 and 42 feet bgs. The Geotechnical Engineering Investigation Report noted that the estimated seismic settlements may be excessive for support of wood-frame structures on conventional shallow spread foundations; however, the proposed Project includes the construction of a rigid post-tensioned slab which would provide foundation design that can tolerate the anticipated seismic settlements.

Secondary effects of seismic activity which may occur at the site include ground subsidence, ground lurching, and lateral spreading. The probability of occurrence of each type of seismically induced ground failure is dependent on the severity of the earthquake, distance from the fault, topography of the site, subsoil, and groundwater conditions at the site. According to the Project-specific Geotechnical Engineering Investigation Report the potential for ground lurching, lateral spreading, and similar seismic-

related ground failure is considered low with implementation of the Project-specific geotechnical recommendations. Through incorporation of **Standard Condition GEO-1**, impacts from seismically induced ground failure would be **less than significant,** and no mitigation is required.

iv. Landslides?

No Impact

Discussion of Effects: According to the City's General Plan EIR, the Project site is not located within an area susceptible to landslides.[25] Due to the Project site's flat topography, the absence of significant nearby slopes or hills in the area planned for development, and the planned site grading in accordance with **Standard Condition GEO-1**, **no impacts** from landslides or slope instabilities at the Project site would occur. No mitigation is required.

b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

Discussion of Effects: Construction at the Project site would disturb surface soils and make them susceptible to erosion from wind and water. In order to address the potential for erosion, the Project is required to implement Best Management Practices (BMPs) during the construction phase that would reduce erosion in accordance with National Pollutant Discharge Elimination System (NPDES) regulations. These BMPs would be selected as part of the Storm Water Pollution Prevention Plan (SWPPP), which is required to address erosion and discharge impacts associated with the proposed on-site grading.

The Project must also comply with the City's grading permit requirements, which would ensure that construction practices include measures to protect exposed soils such as limiting work to dry seasons, covering stockpiled soils, and use of straw bales and silt fences to minimize off-site sedimentation. In addition, the Project site would be covered with asphalt, concrete, and landscaping materials during operations; therefore, soil erosion would be none to minimal. Compliance with State and federal requirements, as well as with City grading permit requirements, would ensure that the proposed Project would have a **less than significant** impact related to soil erosion or loss of topsoil. No mitigation is required.

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

Discussion of Effects: As discussed in Response 3.7(a)(iv) above, the Project site is not located within an area susceptible to landslides. Due to the Project site's flat topography, the absence of significant nearby slopes or hills, and the planned site grading in accordance with **Standard Condition GEO-1**, **no impacts** from landslides or slope instabilities at the Project site would occur. No mitigation is required.

As discussed in Response 3.7(a)(iii), no groundwater was encountered to the maximum depth drilled of 51.5 feet below the existing ground surface. Because groundwater is anticipated to be much deeper than

[25] City of Redlands. *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, SCH#: 2016081041,* Chapter 3.6: Geology, Soils, and Seismicity, *Figure 3.6-3: Landslide Potential.* July 21, 2017.

50 feet bgs and has historically not been encountered in the upper 50 feet bgs, groundwater is not anticipated to adversely affect the Project's proposed improvements. Based on the lack of shallow groundwater underlying the Project site, the potential for liquefaction to occur is considered low. However, the analysis indicated that the granular soil layers encountered on the Project site would be subject to dry seismic settlement of between 3 and 6 inches and primarily occurred between the depths of approximately 12 and 42 feet bgs. The Geotechnical Engineering Investigation Report noted that the estimated seismic settlements may be excessive for support of wood-frame structures on conventional shallow spread foundations; however, the proposed Project includes the construction of a rigid post-tensioned slab which would provide foundation design that can tolerate the anticipated seismic settlements. With implementation of the Project-specific geotechnical recommendations as detailed in the Geotechnical Engineering Investigation Report (**Standard Condition GEO-1**), the potential for lateral spreading, settlement, subsidence, and similar seismic-related ground failure at the Project site is considered low.

The earth underlying the Project site consists of silty sands extending to varying depths and generally overlying interbedded layers of poorly graded sands, poorly graded sands with silt, and additionally silty sand layers extending to the maximum depth explored (51.5 feet bgs). According to the Project-specific Geotechnical Engineering Investigation Report, these near surface soils are granular in nature, have a very low expansion potential, and are not susceptible to soil liquefaction during an earthquake event. Through incorporation of **Standard Condition GEO-1**, impacts from subsidence and/or collapse would be **less than significant**, and no mitigation is required.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact

Discussion of Effects: As described above in Response 3.7(c), the near surface soils on the Project site have a very low expansion potential and are not anticipated to pose a hazard for the proposed Project. Therefore, the Project's impacts would be **less than significant,** and no mitigation is required.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact

Discussion of Effects: The proposed Project would be connected to existing wastewater collection and conveyance facilities owned and operated by the City. Therefore, septic tanks would not be necessary. Because the proposed Project would not include the installation of septic tanks or alternative wastewater disposal systems, **no impact** would occur. No mitigation is required.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effect: According to the City's General Plan EIR, paleontological resources, including fossils, have been found in the Redlands area, and there is potential for paleontological finds to occur in remaining, unexcavated open space areas within and adjacent to the City of Redlands. Paleontological resources are the fossil remains or traces of past life forms, including both vertebrate and invertebrate

species, as well as plants. Vertebrate land mammal fossils have been discovered in parts of the City, including the fossils of a mammoth, ground sloth, camel, bison, horse, and deer. These resources are found in geologic strata conducive to their preservation, typically sedimentary formations. In the past, paleontological resources have been identified in the San Timoteo Canyon area.

The earth underlying the Project site consists of silty sands extending to varying depths and generally overlying interbedded layers of poorly graded sands, poorly graded sands with silt, and additionally silty sand layers extending to the maximum depth explored (51.5 feet bgs). Although the Project site is currently undeveloped, the site visit performed as part of the Geotechnical Engineering Investigation Report indicated some remnant elements of past structures and improvements on the site including a rectangular shaped open concrete structure and various concrete drainage structures. In addition, the Project site was historically used for orchard/agricultural purposes. As such, the Project site was likely subject to periodic ground disturbance associated with agricultural use of the site and development of the various structures. In addition, the Project site is approximately 2.6 miles from San Timoteo Canyon, the nearest area of paleontological significance identified in the City's General Plan EIR. Therefore, it is unlikely that unique paleontological resources are present on the Project site.

No unique geologic features are present on the Project site, and no unique geologic features would be destroyed, either directly or indirectly, as a result of the proposed Project's actions.

General Plan Objective OSC-7.1, Policy P3 requires the appropriate protection, evaluation, and recovery of any potential paleontological resource to a less than significant level. Although the Project site and surrounding area have likely been disturbed due to past agricultural use and no known paleontological resources are known to exist on site, because of the Citywide potential to encounter paleontological resources, unknown/undiscovered resources could be encountered during on-site grading or construction activities. **Mitigation Measure GEO-1** has been identified to reduce any paleontological resource impacts to a **less than significant** level.

Mitigation Measure GEO-1 Prior to commencement of any grading activity on the Project site, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the Director of the City of Redlands Department of Development Services, Planning Division, or designee. The qualified paleontologist shall be present at the pre-grade conference and shall establish procedures for paleontological resource surveillance and procedures for temporarily halting and redirecting work to permit sampling and identification and evaluation of fossils. If the resources are deemed to be significant, the paleontologist shall determine appropriate actions, in cooperation with the Applicant, which ensure proper exploration and/or salvage. Full-time monitoring and salvage efforts will be necessary whenever previously undisturbed sediments are being disturbed (8 hours per day during grading or trenching activities). Once the earth moving is 50 percent completed, monitoring may be reduced if no fossils are being recovered. The paleontologist shall be empowered to temporarily divert or direct grading operations to facilitate assessment and salvaging of exposed fossils. Collection and processing of matrix samples through fine screens will be necessary to salvage any micro-vertebrate remains.

In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP).

With implementation of **Mitigation Measure GEO-1,** impacts to paleontological resources would be **less than significant**.

3.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The discussion and analysis provided in this section is based on the Michael Baker International *Air Quality, Greenhouse Gas, and Energy Technical Memorandum* dated June 22, 2023 (refer to **Appendix A-1** of this IS/MND).

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

Less Than Significant Impact.

Discussion of Effects: *CEQA Guidelines* Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

Appendix G of the *CEQA Guidelines* includes significance thresholds for greenhouse gas (GHG) emissions. A project would normally have a significant effect on the environment if it would do either of the following:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Similarly, the SCAQMD, CARB, or any other State or regional agency have not yet adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy *CEQA Guidelines* Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions.

- The proposed Project would result in direct and indirect emissions of CO_2, N_2O, and CH_4, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct Project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from energy consumption, water demand, and solid waste generation. The most recent version of the California Emissions Estimator Model (CalEEMod), version 2022.1, was used to calculate Project related GHG emissions. **Table I: Estimated Project Greenhouse Gas Emissions** presents the estimated CO_2, N_2O, and CH_4 emissions of the proposed Project. CalEEMod outputs are contained within **Appendix A-2**.

Table I: Estimated Project Greenhouse Gas Emissions

Source	Pollutant Emissions (MT per year)[1]				
	CO_2	CH_4	N_2O	Refrigerants	CO_2e [2]
Direct Emissions					
Construction[4]	119.17	0.01	0.01	0.12	121.13
Area Sources	121.00	<0.01	<0.01	0.00	121.00
Mobile Sources	6,131.00	0.28	0.30	9.57	6,235.00
Total Direct Emissions[3]	6,371.17	0.30	0.32	10.34	6,477.78
Indirect Emissions					
Energy Sources	932.0	0.08	0.01	0.00	836.00
Solid Waste	9.02	0.30	0.00	0.00	31.50
Water Demand	34.70	0.74	0.02	0.00	58.40
Total Indirect Emissions[3]	875.72	1.12	0.03	0.00	925.90
Total Project-Related Emissions[3]					**7,403.68**
Emissions per Service Population per Year					**5.1**
City of Redlands CAP Year 2030 Service Population Threshold Per Year Capita Per Year					**6.00**
Exceed Threshold?					**No**

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).

1. Emissions Calculated using CalEEMod Version 2022.1
2. Carbon dioxide equivalent values calculated using the U.S. Environmental Protection Agency, *Greenhouse Gas Equivalencies Calculator*, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed October 27, 2023.
3. Totals may be slightly off due to rounding.
4. Total project construction GHG emissions equate to 3,634.00 $MTCO_2e$. However, construction emissions are amortized over the lifetime of the project (assumed to be 30 years) and added to operational GHG emissions consistent with SCAQMD's guidance.

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT = metric tons
N_2O = nitrous oxide

Construction Activities. Construction activities associated with the proposed Project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As mentioned above, the SCAQMD and the City do not provide a separate GHG significance threshold for construction emissions; rather, applicable guidance specifies that construction emissions should be amortized over 30 years (a typical project's lifetime), added to the Project's operational emissions, and that total compared to the GHG significance threshold.

As shown in **Table I**, construction of the proposed Project would generate a total of approximately 3,634.00 $MTCO_2e$ per year. The amortized construction emissions would be approximately 121.13 $MTCO_2e$ per year (refer to the CalEEMod output in **Appendix A-2** for details)[26]. In accordance with SCAQMD's guidance, **Table I** shows the amortized construction emissions added to the Project operational emissions and the total emissions compared to the GHG significance threshold to evaluate the Project's operational emissions impact, as discussed below.

Since there is no separate GHG significance threshold for construction emissions, Project-level and cumulative GHG emissions during construction activities alone would be **less than significant**, and no mitigation is required.

Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks, and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include Project-generated vehicle and truck trips to and from the Project site. Area-source emissions would be associated with activities such as landscaping and maintenance on the Project site.

Waste source emissions generated by the proposed Project include energy generated by land filling and other methods of disposal related to transporting and managing Project-generated waste. Refrigerant source emissions are generated by the substances used in equipment for air conditioning and refrigeration. Operational GHG emissions associated with the proposed Project are shown in **Table I** above.

As shown in **Table I**, the total amount of Project-related GHG emissions from direct and indirect sources combined would total 7,403.68 $MTCO_2e$/year. Based on an average household size of 2.68 for the City of Redlands[27], the Project's 541 residential units would result in a direct population increase of approximately 1,450 persons. As such, the Project's emission would be 5.1 $MTCO_2e$ per service population

[26] Since the time this analysis was prepared, the construction year has changed to 2025. As the analysis year increases, emission factors decrease due to the natural turnover of older equipment being replaced by less polluting equipment and emission regulations becoming more stringent. Therefore, the construction schedule utilized in the analysis represents a more conservative analysis.

[27] Ibid.

per year, which is below the CAP's Year 2030 6.0 $MTCO_2e$ per service population per year target. As such, impacts would be **less than significant.**

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact

Discussion of Effects: The GHG plan consistency analysis provided below is based on the Project's consistency with the City's General Plan and Climate Action Plan (CAP), SCAG's 2020-2045 RTP/SCS, and CARB's 2022 Scoping Plan. The General Plan contains goals and principles to reduce GHG emissions in the City. The 2020-2045 RTP/SCS is a regional growth management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The 2020-2045 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The 2022 Scoping Plan identifies strategies to achieve carbon neutrality by 2045 or earlier.

SCAG 2020-2045 RTP/SCS. On September 3, 2020, the Regional Council of SCAG formally adopted the 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS includes performance goals that were adopted to help focus future investments on the best-performing projects, as well as different strategies to preserve, maintain, and optimize the performance of the existing transportation system. **Table J: Consistency with the 2020-2045 RTP/SCS** shows the Project's consistency with these five strategies found within the 2020-2045 RTP/SCS. As shown therein, the proposed Project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS.

Table J: Consistency with the 2020-2045 RTP/SCS[1]

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
Focus Growth Near Destinations and Mobility Options		
• Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations. • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets. • Plan for growth near transit investments and support implementation of first/last mile strategies. • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses. • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods. • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations). • Identify ways to "right size" parking requirements and promote alternative	Center Focused Placemaking, Priority Growth Areas (PGAs), Job Centers, High Quality Transit Areas (HQTAs), Transit Priority Areas (TPAs), Neighborhood Mobility Areas (NMAs), Livable Corridors, Spheres of Influence (SOIs), Green Region, Urban Greening.	**Consistent.** The proposed Project would involve a mixture of multi-family, townhomes, and single-family residential development on undeveloped land. The Project site is located in an urbanized area and within walking and biking distance of existing residential and commercial uses. As such, the proposed Project's future residents would enjoy greater access to work, educational, and other destinations, reducing commute times and distances, and thereby reducing greenhouse gas emissions associated with transportation. Therefore, the Project would focus growth near destinations and mobility options. The Project would be consistent with this strategy.

Table J: Consistency with the 2020-2045 RTP/SCS[1]

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
parking strategies (e.g., shared parking or smart parking).		
Promote Diverse Housing Choices		
• Preserve and rehabilitate affordable housing and prevent displacement. • Identify funding opportunities for new workforce and affordable housing development. • Create incentives and reduce regulatory barriers for building context sensitive accessory dwelling units to increase housing supply. • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.	PGA, Job Centers, HQTAs, NMAs, TPAs, Livable Corridors, Green Region, Urban Greening.	**Consistent.** As discussed above, the Project would provide three types of residential development at different price points: multi-family residences, townhomes, and single-family residences. As such, the Project would be consistent with this strategy. In addition, the Applicant is providing affordable housing in accordance with the City's adopted Inclusionary Housing Program.
Leverage Technology Innovations		
• Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space. • Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments. • Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	HQTAs, TPAs, NMAs, Livable Corridors.	**Consistent.** The Project would install electric vehicle charging stations and provide bike storage spaces in accordance with the 2022 Title 24 standards and CALGreen Code. Therefore, the proposed Project would leverage technology innovations to promote alternative modes of transportation and help the City, County, and State meet their GHG reduction goals. The Project would be consistent with this strategy.
Support Implementation of Sustainable Policies		
• Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions. • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations. • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space. • Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies.	Center Focused Placemaking, PGAs, Job Centers, HQTAs, TPAs, NMAs, Livable Corridors, SOIs, Green Region, Urban Greening.	**Consistent.** As previously discussed, the proposed Project would install electric vehicle charging stations and provide bike storage spaces to promote alternative modes of transportation. Further, the Project would comply with sustainable development practices included in the 2022 Title 24 standards and CALGreen Code, including installation of vanpooling and carpooling parking spaces, installation of high-efficient lighting, and implementation of water-efficiency irrigation and drought-tolerant landscaping. Thus, the Project would be consistent with this strategy.

Table J: Consistency with the 2020-2045 RTP/SCS[1]

Reduction Strategy	Applicable Land Use Tools	Project Consistency Analysis
• Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region. • Continue to support long range planning efforts by local jurisdictions. • Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy.		
Promote a Green Region		
• Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards. • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration. • Integrate local food production into the regional landscape. • Promote more resource efficient development focused on conservation, recycling, and reclamation. • Preserve, enhance, and restore regional wildlife connectivity. • Reduce consumption of resource areas, including agricultural land. • Identify ways to improve access to public park space.	Green Region, Urban Greening, Greenbelts and Community Separators.	**Consistent.** The proposed Project consists of a residential development in an urbanized area and would not interfere with regional wildlife connectivity or convert agricultural land. The Project would be required to comply with 2022 Title 24 standards and CALGreen Code, which would help reduce energy consumption and reduce GHG emissions. Thus, the Project would support resource-efficient development that reduces energy consumption and GHG emissions. The Project would be consistent with this strategy.

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, January 2023).

[1] Southern California Association of Governments, 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy – Connect SoCal, September 3, 2020.

2022 CARB Scoping Plan. The 2022 Scoping Plan identifies reduction measures necessary to achieve the goal of carbon neutrality by 2045 or earlier. Actions that reduce GHG emissions are identified for each Assembly Bill (AB) 32 inventory sector. Provided in **Table K: Consistency with the 2022 Scoping Plan: AB 32 GHG Inventory Sectors,** is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project would be consistent with or exceed reduction actions/strategies outlined in the 2022 Scoping Plan.

Table K: Consistency with the 2022 Scoping Plan: AB 32 GHG Inventory Sectors

Actions and Strategies[1]	Project Consistency Analysis
Smart Growth/ Vehicles Miles Traveled (VMT)	
Reduce VMT per capita to 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	**Consistent.** The proposed Project would involve a mixture of multi-family, townhomes, and single-family residential development on undeveloped land. The Project site is in an urbanized area and within walking and biking distance of existing residential and commercial uses. As such, the proposed Project's future residents would enjoy greater access to work, educational and other destinations, reducing VMT. As such, the Project would be consistent with this action.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	**Consistent**. The Project is anticipated to include natural gas heating and/or cooking on-site. The City of Redlands has not adopted an ordinance or program limiting the use of natural gas for on-site cooking and/or heating. However, if adopted, the Project would comply with the applicable goals or policies limiting the use of natural gas equipment in the future. As such, the Project would be consistent with this action.
Non-combustion Methane Emissions	
Divert 75% of organic waste from landfills by 2025.	**Consistent**. The Project would be required to recycle and compost 75 percent of waste per AB 341. As such, the Project would be consistent with this action.

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).

[1] California Air Resources Board, *2022 Scoping Plan*, November 16, 2022.

General Plan and Climate Action Plan. The City adopted both the General Plan and CAP on December 5, 2017. The CAP has been prepared concurrently with the updated General Plan, reflecting the City's most current land use and transportation strategy, and GHG implications of various General Plan's goals and principles. The CAP is designed to provide discrete actions to operationalize the General Plan policies that help with GHG reduction. As demonstrated in **Table L: Consistency with General Plan and Climate Action Plan**, the Project is consistent with the goal(s) related to GHG emissions reduction in the General Plan and Climate Action Plan. Additionally, the Project would not exceed the Year 2030 emissions target of 6.0 $MTCO_2e$ per capita per year described in **Table I**.

Table L: Consistency with General Plan and Climate Action Plan

Goal/principle	Project Consistency
General Plan Sustainable Community Element[1]	
Goal: Serve as an environmental steward; ensure that residents enjoy clean air and water; make efficient use of energy, water, and land resources; and grow in a manner in which increased population does not negatively impact resources. • 8-P.8: Promote sustainability by reducing the community's greenhouse gas (GHG) emissions and fostering green development patterns- including buildings, sites, and landscapes. • 8-P.9: Undertake initiatives to enhance sustainability by reducing the community's GHG emissions.	**Consistent.** The proposed Project would involve a mixture of multi-family, townhomes, and single-family residential development on undeveloped land. The proposed Project would comply with the 2022 Title 24 Building Energy Efficiency Standards. The Project would promote alternative mode of transportation by providing electric vehicle charging spaces and bike storage spaces. As such, the Project would ensure that the increased population associated with the proposed Project would not negatively impact resources. The Project would be consistent with this goal.
Climate Action Plan[2]	
The climate action plan aims to reduce GHG emissions by reducing VMT through the following categories: bikeway system improvements, pedestrian improvements and increased connectivity, traffic calming, parking facilities and policies, transportation improvement.	**Consistent.** The Project site is in an urbanized area and within walking and biking distance of existing residential and commercial uses. Additionally, the proposed Project site is within a half mile of a bus stop for OmniTrans Route 15. The Project would also comply with Title 24 and the CalGreen Code, which would be required to be electric vehicle ready. As such, the Project would be consistent with the CAP's GHG reduction measures.

Source: Air Quality, Greenhouse Gas, and Energy Technical Memorandum (Michael Baker, June 2023).
1. City of Redlands, *City of Redlands General Plan*, *Chapter 8, Sustainable Community*, December 5, 2017.
2. City of Redlands, *City of Redlands Climate Action Plan*, adopted December 5, 2017.

Summary. In summary, the consistency analyses provided above demonstrate that the proposed Project complies with the plans, policies, regulations, and strategies outlined in the City's General Plan (and CAP), SCAG's 2020-2045 RTP/SCS, and CARB's 2022 Scoping Plan. Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Impacts would be **less than significant.**

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. 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?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. 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 the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	☐	☐	☒	☐

The following hazards and hazardous materials analysis was obtained from the *Phase I Environmental Site Assessment (ESA)* (**Appendix E-1: Phase I ESA**) prepared by Hillman Consulting on June 28, 2021, and the *Limited Phase II Subsurface Investigation* (**Appendix E-2: Limited Phase II Subsurface Investigation**) prepared by Hillman Consulting on August 16, 2023.

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact

Discussion of Effects: Construction of the Project has the potential to create a hazard to the public or environment through the routine transportation, use, and disposal of construction-related hazardous materials such as fuels, soils, solvents, and other materials. These materials are typical of materials delivered to construction sites. The United States Department of Transportation regulates the transport of hazardous materials and waste in connection with construction of the Project and would require carriers to register with the Department of Toxic Substances Control (DTSC).

Occupation of the proposed residential uses is expected to utilize relatively small amounts of hazardous materials, such as chemicals associated with fuel for landscape maintenance equipment, solvents, cleaning products, pesticides/fertilizers, and other similar chemicals. These materials are substantially similar to household chemicals and solvents already in general and wide use throughout the City and in the vicinity of the Project site. Compliance with all applicable federal, State, and local regulations would ensure the Project would have a **less than significant impact** to the public or environment from the routine transportation, use, and disposal of hazardous materials. No mitigation is required.

b. 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?

Less Than Significant Impact

Discussion of Effects: A *Phase I ESA* (**Appendix E-1**) was prepared for the Project site in accordance with the standards and procedures outlined in the American Society for Testing and Materials E 1527-13, as applicable. The Phase I ESA included a review of official government databases concerning the locations of known hazardous materials releases for the purpose of identifying any listings suggesting a potential impact to the Property due to presence or migration of hazardous substances and/or petroleum products. The report provided a search of standard environmental record sources for listings of the Project site, adjoining properties and sites within the surrounding area. In addition, the Project site and the surrounding area were evaluated via the State Water Resources Control Board (SWRCB) GeoTracker database, the Department of Toxic Substances Control's (DTSC) EnviroStor database, and the Hazardous Waste and Substances Sites (Cortese) list for the purposes of identifying recognized environmental conditions or historical recognized environmental conditions.

"Recognized environmental condition" means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate

governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions. "Historical Recognized environmental condition" means an environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. If a past release of any *hazardous substances or petroleum products* has occurred in connection with the property, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a case closed letter or equivalent), this condition shall be considered a *historical recognized environmental condition*.

Based on historic records, the Project site was utilized for agriculture between 1930 and 1985 and has remained vacant from 2002 to present day. The surrounding properties have been utilized for agriculture starting in 1938 and residential uses were introduced to the surrounding sites in 1959. After 1994, agricultural use of the surrounding sites ceased. Commercial uses were introduced in 2002, and the surrounding sites have been utilized for commercial and residential uses until present day. No evidence was identified indicating improper storage, disposal, or application of hazardous materials, and a review of available aerial photographs did not show improvements such as hangars, tanks, or large barns that would indicate significant storage, formulation, and handling of hazardous materials.

The *Phase I ESA* identified one recognized environmental condition (REC) in connection to the proposed Project. As the Project site was historically used as orchards identified from as early as 1930 until 1985, there is potential for concentrated pesticides in shallow soils. Therefore, historical agricultural use is considered to be a REC. Additionally, five properties associated with hazardous environmental conditions were identified within a one-mile radius of the Project site, as detailed in **Table M: Summary of Identified Hazardous Sites Near the Project Site**. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Project site when reviewing applicable databases concerning the locations of known hazardous materials releases. In review of these properties, the *Phase I ESA* considered whether these properties constitute a REC or vapor encroachment condition (VEC) in connection with the Project site.

Each of the sites listed in **Table M** have been granted environmental closure regarding potential contaminants of concern or appropriate cleanup activities and no REC of VEC is suspected in connection with the Project site. Because the historical agricultural use at the Project site is considered to be a REC, the *Phase I ESA* recommended a *Limited Phase II ESA* be performed for the Project site to determine potential for soil contamination due to historical pesticide application.

A *Limited Phase II Subsurface Investigation* (**Appendix E-2**) was prepared for the Project site by Hillman Consulting on August 16, 2023. On July 31, 2023, Hillman collected thirty-six (36) shallow soil samples from multiple soil borings on the Project site. The samples were submitted to A&R Laboratories of Ontario California for laboratory analysis. The results of the analysis indicated detectable concentrations of several pollutants including 4,4'-DDD, 4,4'-DDT, and 4,4'- DDE, alpha-Chlordane, and Dieldrin. However, none of the concentrations exceeded their respective conservative screening levels for residential or commercial applications. The analysis also indicated samples had low levels of heavy metals including the following: barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, lead, and zinc. The detected concentrations were compared to the EPA Regional Screening Levels (RSLs), and none of the heavy metal concentrations exceeded their respective conservative screening levels for residential or commercial applications or the DTSC-established background concentrations. As such, the REC associated with the Project site would not create a significant hazard to the public or the environment with implementation of the proposed Project.

Table M: Summary of Identified Hazardous Sites Near the Project Site

Property	Environmental Condition	Location Relative to the Project Site	REC[1]/VEC[2] Discussion
The Home Depot Store #1013/1151 West Lugonia Avenue	The CERS database lists this site as a permitted industrial facility for stormwater discharges and a chemical storage facility. Multiple violations were listed and have since achieved compliance.	415 feet southwest of the Project site.	Based on the details provided, the *Phase I ESA* determined that neither a REC nor VEC are suspected in connection with the Project site.
7-Eleven Inc. #33292/1161 West Lugonia Avenue/1390 East Arrow Highway	This site is an active gas station listed as a hazardous waste generator with several administrative violations that have since achieved compliance. The violations were related to failure to submit and maintain compete and current Certification of Financial Responsibility or other mechanism for financial assurance.	443 feet southwest of the Project site.	Based on the details provided, the *Phase I ESA* determined that neither a REC nor VEC are suspected in connection with the Project site.
Teledyne Battery Products/ 840 West Brockton Avenue	This site appears on the EnviroStor database with a "No Further Action" determination dated September 7, 2018.	1,296 feet southeast off the Project site.	Based on distance, the *Phase I ESA* determined that the listing is not considered to be a REC nor VEC in connection with the Project site.
Texas Street Pumping Plant/1401 Texas Street	This site is listed on the LUST database due to diesel contamination of the soil. The leak was first discovered September 1, 1991 and the case received regulatory closure on July 16, 2004.	953 feet east of the Project site.	Based on the media impacted and the regulatory closure granted, the *Phase I ESA* determined that the listing is not considered to be a REC or VEC in connection with the Project site.
Teledyne/840 West Brockton Avenue	This site is listed with a regulatory closure on August 19, 2005, and the CERS database identifies the site as under a cleanup program.	1,296 feet southeast of the Project site.	Based on the details provided, the *Phase I ESA* determined that neither a REC nor VEC are suspected in connection with the Project site.

Source: Hillman Consulting. 2021. *Phase I ESA*. Pages 19 – 21.
[1] REC = Recognized Environmental Condition
[2] VEC = Vapor Encroachment Condition

A review of the Hazardous Waste and Substances Sites (Cortese) List revealed one active federal superfund site, the Newmark Groundwater Contamination site. The site is an 8 square-mile area of groundwater contamination in the Bunker Hill Groundwater Basin in the City of San Bernardino. The site is defined by two contaminant plumes, the Newmark plume and the Muscoy plume. Remediation measures to inhibit migration of groundwater contamination into clean portions of the aquifer and limit the flow of additional contamination (groundwater extraction and treatment at the leading edge of the plume) are ongoing and are functioning as intended under federal, State, and municipal actions. Given

that the Project site is located hydrogeologically up-gradient of the Newmark plume, the remedial actions have been in effect since 1998 and continue to be monitored frequently by federal, State, and local officials, shallow groundwater is not present beneath the Project site, and the fact that the Project would receive potable water from the City's water system rather than groundwater wells, the Project site's proximity to the Newmark Groundwater Contamination site does not represent an environmental concern to the Project. Therefore, there are no Cortese listings that could potentially impact the Project site.

None of the properties/listings identified in the database review completed as part of the *Phase I* occurs on the Project site or has any activities or materials that would represent a significant risk to public health or safety (e.g., on-site storage, leaking tanks, approaching groundwater contamination plume) on the Project site. Although the Project site currently contains an REC associated with historical pesticide use at the Project site, results from the *Limited Phase II Subsurface Investigation* determined that no pesticide concentration that exceed applicable screening levels are present on the Project site. Further, the Project site is not subject to vapor migration from any on-site or off-site sources. Therefore, impacts would be **less than significant**, and no mitigation measures would be required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact

Discussion of Effects: The nearest school facility in proximity to the Project site is Citrus Valley High School located at 800 West Pioneer Avenue in Redlands, approximately 0.5 mile to the southwest. The City works with the Redlands Unified School District (RUSD) concerning the design of roads and other public improvements in and around school sites, and is responsible for fire, police, and public safety concerns involving all facilities within the City, including both public and private schools.

Although the *Phase I ESA* indicated the Project site currently contains an REC associated with historical pesticide use at the Project site, the *Limited Phase II* prepared for the site determined that all pesticide concentrations were below applicable screening levels. Further, the Project site is not within one-quarter mile of an existing or proposed school. As such, the proposed Project would not emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **No impact** would occur, and no mitigation measures would be required.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact

Discussion of Effects: Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by the California Environmental Protection Agency Hazardous Materials Data Management Program. The DTSC compiles information from subsets of the following databases to make up the Cortese List:

1. The DTSC list of contaminated or potentially contaminated hazardous waste sites listed in the California Sites database;

2. The California State Water Resources Control Board listing of leaking underground storage tanks; and

3. The CalRecycle list of sanitary landfills that have evidence of groundwater contamination or known migration of hazardous materials.

None of the historical RECs identified in **Table M** occurs on the Project site or includes any activities or materials that would represent a significant hazard to the public or environment at the Project site. Therefore, **no impact** related to the Cortese List or other governmental databases would occur. No mitigation is required.

e. 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 the project result in a safety hazard for people residing or working in the project area?

No Impact

Discussion of Effects: The Project site is located approximately 2.2 mile southeast of San Bernardino International Airport and approximately 2.3 miles southwest of Redlands Municipal Airport. The Project site is located outside the Airport Compatibility Zones of San Bernardino International Airport and Redlands Municipal Airport.[28] **No impacts** related to the Project's vicinity to a public airport would occur. No mitigation is required.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact

Discussion of Effects: The proposed Project includes the design, construction, and maintenance of new residential units, roadways, and utilities in accordance with applicable standards associated with vehicular access, resulting in the provision of adequate emergency access and evacuation. Construction activities associated with the proposed Project would include the extension of Pennsylvania Avenue, which would either end in a in a cul-de-sac just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street or would extend from Karon Street west to Tennessee Street, creating a complete connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street. Such improvements are not expected to result in road closures; however, temporary lane closures may be required to complete construction activities. As a condition of Project approval, the Applicant would be required to provide lane closure requirements to the City and local emergency service responders in advance of such closures. The proposed Project would develop two access points onto the site from West Lugonia Avenue (a signalized intersection at New York Street/West Lugonia Avenue and a right-in/right-out driveway on the southwest corner of the Project site), one access point from the proposed Pennsylvania Avenue extension, and one access point from Karon Street. The design of the proposed Project would be reviewed by the City's Fire and Police Departments prior to the issuance of building permits. Adherence to the emergency access measures required by the City would ensure a **less than**

[28] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Figure 3.7-2 (Airport Hazards). City of Redlands. July 21, 2017.

significant impact related to implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

g. Expose people or structures to a significant risk of loss, injury or death involving wildland fires.

Less Than Significant Impact

Discussion of Effects: The Project site is within a LRA Non-Very High Fire Hazard Severity Zone according to CALFIRE mapping.[29] The General Plan EIR, Figure 3.7-3, indicates that the Project site is located in an area designated as a Moderate Fire Level Threat.[30] No hillside areas or natural areas prone to wildfires are located in the immediate Project vicinity as this area of Redlands is urbanized with residential neighborhoods and commercial areas. Due to the nature of the Project vicinity, on-site and adjacent areas have minimal capability to support a wildfire. The proposed Project would be required to implement and abide to Redlands General Plan policies (specifically Policies 7-A.83 through 7-A.106) that promote fire safety through agency cooperation and management of risk factors; adhere to applicable building and fire codes; and implement existing programs such as weed abatement and education under the Redlands Fire Department; all of which would reduce the wildfire risk at the Project site. In addition, the proposed Project will be designed in accordance with current California Fire Code Standards, which include requirements for internal road widths, access points to the Project site, and construction fire suppression techniques. Proper enforcement of these existing regulations will ensure that implementation of the proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be **less then significant**, and no mitigation is required.

[29] CAL FIRE. Fire Hazard Severity Zones Maps, City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed October 27, 2023).

[30] City of Redlands, Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan, Chapter 3.7: Hazards and Hazardous Materials, Figure 3.7-3: Fire Hazards and Fire Safety Services.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede substantial groundwater management of the basin?	☐	☐	☒	☐
c. 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 substantial erosion or siltation on or off site?	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. Result in flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

The following hydrology and water quality analysis was obtained from the *Preliminary Water Quality Management Plan* (**Appendix F-1: PWQMP**) prepared by DRC Engineering, Inc on September 5, 2023, and the *Conceptual Hydrology Study* (**Appendix F-2: Conceptual Hydrology Study**) prepared by DRC Engineering, Inc on June 26, 2023.

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less Than Significant Impact

Discussion of Effects: Pollutants of concern during construction include sediment, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction. Any of these pollutants have the potential to be transported via storm water runoff into receiving waters (i.e., Santa Ana River Reach 5, 4, 3, 2, and 1 and Newport Slough).

Construction of the proposed Project would disturb approximately 11.68 acres. Because Project construction would disturb greater than 1 acre of soil, the Project would be subject to the requirements of the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit), which was adopted on September 8, 2022 and will become effective on September 1, 2023. The Project would also be required to comply with the City of Redlands Municipal Code Chapter 13.54. Chapter 13.54 prohibits land disturbance or construction activities without first obtaining coverage under the State Construction General Permit, development of a Storm Water Pollution Prevention Plan (SWPPP), and implementation of Best Management Practices (BMPs) to ensure that construction practices include measures to address pollutant discharge into storm drains. As specified in **Regulatory Compliance Measures HYD-1 and HYD-2** and as required by the Construction General Permit and City Municipal Code, the Construction Contractor would be required to prepare a SWPPP and implement construction BMPs detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, erosion and sediment control (designed to minimize erosion and retain sediment on site), and good housekeeping practices to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

According to the Geotechnical Engineering Investigation prepared for the proposed project on February 11, 2022, by Moore Twining Associates, Inc., no groundwater was encountered to the maximum depth drilled of 51.5 feet below the existing ground surface. Excavation at the Project site during construction of the proposed Project is not anticipated to extend further than 10 feet bgs. Given the depth to groundwater, it is unlikely that excavation activities would have the potential to encounter groundwater. Therefore, groundwater dewatering is not anticipated to be required during construction activities.

With implementation of **Regulatory Compliance Measures HYD-1** and **HYD-2**, including preparation and implementation of a SWPPP and construction BMPs, impacts associated with the violation of water quality standards or waste discharge requirements during project construction would be less than significant, and no mitigation is required.

During operation, anticipated pollutants of concern associated with the proposed project include pathogens (bacterial/virus), nutrients (phosphorous and nitrogen), noxious aquatic plans, sediment, oil

and grease, trash and debris, pesticides and herbicides, organic compounds, and oxygen demanding compounds. The current impairments for receiving waters (i.e., Santa Ana River Reach 5, 4, 3, 2, and 1 and Newport Slough) include pathogens, copper, lead, and indicator bacteria. The Santa Ana Regional Water Quality Control Board has adopted a Total Maximum Daily Load (TMDL) implementation plan for pathogens, copper, lead, indicator bacteria, enterococcus, fecal coliform, and total coliform, which are applicable to the proposed Project.

The City of Redlands is a co-permittee under Santa Ana Regional Water Quality Control Board's (RWQCB) National Pollutant Discharge Elimination System (NPDES) Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit).

The San Bernardino County MS4 Permit requires the preparation of project-specific WQMPs for priority projects. The proposed Project is considered a priority project because it involves the development of more than 10,000 square feet of impervious surface and because it includes more than 5,000 square feet of parking lots that would be exposed to stormwater runoff. As specified in **Regulatory Compliance Measure HYD-3** and as required by the San Bernardino County MS4 Permit, the Applicant would be required to prepare a Final WQMP. The Final WQMP would specify the Site Design, Source Control, Low Impact Development (LID), and Treatment Control BMPs that would be implemented to capture, treat, and reduce pollutants of concern in storm water runoff. Site Design BMPs are storm water management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a site. Source Control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into storm water. LID BMPs mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to piped or impervious storm drains. Treatment Control BMPs are structural BMPs designed to treat and reduce pollutants in storm water runoff prior to releasing it to receiving waters.

A Preliminary WQMP has been prepared for the Project that details the following operational BMPs that would be implemented to reduce impacts to water quality from operation of the Project:

1. **Site Design BMPs** include minimizing impervious surface areas; preserving existing on-site drainage patterns; re-vegetating disturbed areas; minimizing unnecessary compaction in stormwater retention/infiltration basin/trench areas; utilizing vegetated drainage swales in place of underground piping or imperviously lined swales; and staking off areas that will be used for landscaping to minimize compaction during construction.

2. **Non-Structural Source Control BMPs** include education of property owners regarding potential impacts to downstream water quality; activity restrictions; landscape management BMPs consistent with the City of Redland's water efficient landscape requirements (Chapter 15.54 of the City's Municipal Code); BMP maintenance; compliance with City of Redlands stormwater ordinance (Chapter 13.54 of the City's Municipal Code); spill contingency plan; litter and debris control program; employee training on stormwater BMPs; catch basin inspection and cleanout program; and vacuum sweeping of private streets and parking lots.

3. **Structural Source Control BMPs** include storm drain signage and stenciling; trash and waste storage areas that are designed and constructed to reduce pollution introduction, efficient irrigation systems and landscape design; and finish grade of landscaped areas at a minimum of 1-2 inches below the top of the curb, sidewalk, or pavement.

4. **LID BMPs** include catch basins and curb inlets with filters and underground infiltration and detention systems.

With implementation of the proposed Project, the Project site would be divided into 4 drainage areas (DA) to manage stormwater runoff from the entire Project site. The 4 drainage areas are discussed below.

DA 1 would manage stormwater runoff from the portion of the Project site that includes the proposed apartments. Stormwater runoff from impervious areas (e.g., concrete, asphalt, and roofs) within DA 1 would be directed to proposed inlets with storm filters and discharged into one of the four proposed underground infiltration and detention chambers (underground chambers) via a storm drain pipe system. Overflows from the underground chambers (stormwater runoff volume that exceeds the storage volume of the underground chamber) would be directed off-site via a storm drain pipe and discharged along Lugonia Avenue through a sidewalk culvert.

DA 2 would manage stormwater runoff from the portion of the Project site that includes the proposed town homes. Stormwater runoff from impervious areas within DA 2 would be directed to proposed inlets with storm filters and discharged into one of the two proposed underground chambers via a storm drain pipe system. Overflows from the underground chambers would be directed off-site via a storm drain pipe and discharged onto the proposed Pennsylvania Avenue extension through a proposed inlet.

DAs 3 and 4 would manage stormwater runoff from the portion of the Project site that includes the proposed single-family homes. There is a high point within Karon Street, causing DA 3 to drain north towards Pennsylvania Avenue and DA 4 to drain south towards Lugonia Avenue. Stormwater runoff from impervious areas within DAs 3 and 4 would be directed to proposed inlets with storm filters and discharged into its respective proposed underground chamber via a storm drain pipe system. Overflows from the underground chamber that infiltrates and detains flows draining to the north within DA 3 would be discharged along Karon Street through a sidewalk culvert. Overflows from the underground chamber that infiltrates and detains flows draining to the south within DAs 3 and 4 would be discharged along Lugonia Avenue through a sidewalk culvert.

As part of the proposed Project, Pennsylvania Avenue would be extended from Karon Street to the westerly property line and 32 feet of right-of-way would be dedicated to the City. In addition, a 52-foot and a 22-foot right of -way width would be dedicated to the City at Lugonia Avenue. Ownership of the proposed sewer, water, and reclaimed water lines within the Pennsylvania Avenue extension would be transferred to the City. These areas are considered DA 5 and 6; however, they are not included in the Design Capture Volume calculations as they are considered off-site improvements owned and managed by the City.

The underground chambers within DA 1, 2, 3, and 4 would be designed to store and infiltrate the entire Design Capture Volume (DCV) (69,360 cubic feet) for the Project site in accordance with the County of San Bernardino's technical guidance for WQMPs. The DCV is the volume of stormwater runoff that must be captured and treated by stormwater BMPs.

Infiltration of stormwater could have the potential to affect groundwater quality. As discussed above, the Project includes site design, source control, and LID BMPs, including catch basins and curb inlets with storm filters to capture trash and debris to reduce pollutants of concern in stormwater prior to entering the underground chambers and infiltrating into the soil. Furthermore, when storm water is infiltrated, soil and plants absorb and filter pollutants and reduce the potential for pollutants of concern to reach groundwater. As specified in **Regulatory Compliance Measure HYD-3**, a Final WQMP would be prepared in compliance with the San Bernardino County MS4 Permit prior to or during final design, which would ensure that the Project design would adequately target pollutants of concern in stormwater runoff before infiltrating into the soil.

With implementation of **Regulatory Compliance Measure HYD-3**, which requires adherence to the San Bernardino County MS4 Permit, including preparation of a Final WQMP to address pollutants of concern in storm water runoff, Project impacts associated with the violation of water quality standards or waste discharge requirements would be **less than significant**, and no mitigation is required.

Regulatory Compliance Measures. No mitigation is required; however, the following Regulatory Compliance Measures would be implemented to ensure that impacts related to water quality standards or waste discharge requirements would remain **less than significant**.

Regulatory Compliance Measure HYD-1

Construction General Permit. Prior to issuance of a grading permit, the Applicant shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The Applicant shall provide the Waste Discharge Identification Number (WDID) to the Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the proposed Project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction and stabilization

of the site, a Notice of Termination shall be submitted via SMARTS.

Regulatory Compliance Measure HYD-2 Prior to the commencement of any land disturbing activities, the Applicant shall obtain coverage under the Construction General Permit and develop a Stormwater Pollution Prevention Plan to the City for review and approval that incorporates Best Management Practices to protect water quality during construction activities pursuant to Section 13.54 of the City Municipal Code.

Regulatory Compliance Measure HYD-3 Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (Final WQMP) to the Director of the City of Redlands Department of Development Services review and approval in compliance with the requirements of the Santa Ana RWQCB's NPDES Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit). The Final WQMP shall specify the BMPs to be incorporated into the Project design to target pollutants of concern in storm water runoff from the Project site and the necessary operation and maintenance activity for each BMP. The City shall ensure that the BMPs specified in the Final WQMP are incorporated into the final Project design. The proposed BMPs specified in the Final WQMP shall be incorporated into the grading and development plans submitted to the City for review and approval. Project occupancy and operation shall be in accordance with the schedule outlined in the WQMP.

Compliance with all applicable federal, State, and local laws regulating surface and groundwater quality, as well as implementation of **Regulatory Compliance Measures HYD-1, HYD-2**, and **HYD-3**, the Project would result in a **less than significant impact** associated with water quality standards and/or waste discharge, and no mitigation is required.

b. Substantially deplete groundwater supplies or interfere with groundwater recharge such that may impede substantial groundwater management of the basin?

Less Than Significant Impact

Discussion of Effects: According to the *Geotechnical Engineering Investigation Report* (**Appendix D**) prepared for the proposed Project, no groundwater was encountered to the maximum depth drilled of 51.5 feet below the existing ground surface. Excavation at the Project site during construction of the

proposed Project is not anticipated to extend further than 10 feet bgs. Based on depth to groundwater, groundwater dewatering activities are not anticipated during project construction. Furthermore, according to the Project-specific Preliminary Water Quality Management Plan, soil compaction would be minimized during construction, which would promote natural infiltration during construction activities. Therefore, construction impacts related to a decrease in groundwater supplies or interference with groundwater recharge in a manner that may impede sustainable groundwater management would be **less than significant**, and no mitigation is required.

Once developed, the Project site would be approximately 80 percent impervious for a total impervious surface area of approximately 820,350 square feet. Currently, the Project site is 100 percent pervious; therefore, development of the proposed Project would increase impervious surface on the Project site approximately 820,350 square feet, which would decrease on-site infiltration. However, as described above in Response 3.10(a), the Project would include BMPs to collect and infiltrate stormwater at the Project site in accordance with the San Bernardino County MS4 Permit. Therefore, development of the proposed Project would not substantially decrease the amount of stormwater that infiltrates as compared to the existing conditions.

The Project site is located in Upper Santa Ana Valley Groundwater Basin. As discussed in Response 3.10(e) below, the Upper Santa Ana Valley Groundwater Basin is identified by the Department of Water Resources as a low priority basin and, therefore, a Groundwater Sustainability Plan is not required for this basin. While groundwater provides the City with approximately 70 percent of its water supply, the City has sufficient supplies to meet current and future development consistent with its General Plan through the year 2035. As discussed in Section 3.19, Utilities and Service Systems, based on the Project's anticipated water demand of 81.96 afy, the proposed Project would demand up to 0.4 percent of the City's surplus water in 2035 during the third year of a worst-case multiple dry year scenario.[31] Because the City has sufficient water supplies to meet current and future development within the City, the proposed Project's water demand would not deplete groundwater supplies.

Therefore, development of the proposed Project would not deplete groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management. Impacts associated with groundwater supply and recharge are **less than significant,** and no mitigation is required.

c. 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 substantial erosion or siltation on or off site?

Less Than Significant Impact

Discussion of Effect: In the existing condition, stormwater generally sheet flows from east to west across the Project site onto the adjacent undeveloped property. In the post-project condition, stormwater would be intercepted by multiple proposed catch basin and curb inlet and conveyed to one of eight proposed

[31] 69.95 afy of project demand ÷ 23,118 afy water surplus in 2035 during the third year of a worst-case multiple dry year scenario = 0.246 percent of the City's surplus water.

underground chambers where stormwater would infiltrate into the soil. Overflows from the underground chambers would be discharged to either Karon Street, Pennsylvania Avenue, and Lugonia Avenue.

Currently, the Project site consists of 100 percent pervious surfaces. During construction activities, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above in Response 3.10(a) and as specified in **Regulatory Compliance Measures HYD-1 and HYD-2**, the Project Applicant would be required to obtain coverage under the Construction General Permit, which requires preparation of a SWPPP. The SWPPP would detail Erosion Control and Sediment Control BMPs to be implemented during construction to minimize erosion and retain sediment on site. With compliance with the requirements of the Construction General Permit and with implementation of the construction BMPs, construction impacts related to on-site and off-site erosion or siltation would be **less than significant**, and no mitigation is required.

Implementation of the proposed Project would increase the amount of impervious surface area on the Project site by 80 percent. An increase in impervious surface area increases the rate and volume of runoff during a storm, which can more effectively transport sediments to receiving waters. However, the impervious surface areas on the Project site would not be prone to on-site erosion or siltation because there would be no exposed soil. The remaining pervious surfaces on the Project site would be landscaped with vegetation that would stabilize the soil and promote infiltration, thereby minimizing on-site erosion and siltation. Furthermore, the Project would be required to implement **Regulatory Compliance Measure HYD-3**, which requires the preparation of a Final WQMP, in compliance with the San Bernardino County MS4 permit, and the implementation of Site Design, Source Control, and LID BMPs that minimize stormwater runoff.

With implementation of **Regulatory Compliance Measure HYD-3**, operational impacts related to on-site or off-site erosion or siltation would be **less than significant,** and no mitigation is required.

ii Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

iv Impede or redirect flood flows?

Less Than Significant Impact

Discussion of Effect: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06071C8704H (August 28, 2008), the Project site is not within a 100-year floodplain. The Project site is mapped within Zone X, which is characterized by FEMA as an area of minimal flood hazard.

As discussed above in Response 3.10(a), Project construction would comply with the requirements of the Construction General Permit and the City of Redlands Municipal Code. Furthermore, the Applicant would be required to prepare and implement a SWPPP (**Regulatory Compliance Measures HYD-1** and **HYD-2**). The SWPPP would specify construction BMPs to control and direct on-site surface runoff to ensure that Project construction does not increase the rate or amount of surface runoff or impede or redirect flood flows in manner that would result in on-site or off-site flooding. With implementation of a SWPPP and associated BMPs (**Regulatory Compliance Measures HYD-1** and **HYD-2**), construction impacts related to

a substantial increase in the rate or amount of surface runoff or impeding or redirecting flood flows in a manner that would result in on-site or off-site flooding would be **less than significant**, and no mitigation is required.

As stated in Response 3.10(c)(i) above, development of the Project would result in total impervious surface area of approximately 820,350 square feet (80 percent of the site), which would increase stormwater runoff and could potentially result in flooding. However, as discussed above, the Project site is not mapped within a 100-year floodplain and therefore would not impede or redirect flood flows. Additionally, the proposed LID BMPs (underground chambers), which have been designed to be consistent with the requirements of the San Bernardino County MS4 Permit (**Regulatory Compliance Measure HYD-3**), would capture and treat stormwater runoff consistent with the requirements of the San Bernardino County MS4 Permit. Compliance with the San Bernardino County MS4 Permit (**Regulatory Compliance Measure HYD-3**) would ensure that operational activities would not result in a substantial increase in the rate or amount of surface runoff or impede or redirect flood flows in a manner that would result in on- or off-site flooding, and impacts would be **less than significant**. No mitigation is required.

iii Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact

Discussion of Effect: As discussed above in Response 3.10(a), Project construction would comply with the requirements of the Construction General Permit and the City of Redlands's Municipal Code and would include the preparation and implementation of a SWPPP (**Regulatory Compliance Measures HYD-1 and HYD-2**). The SWPPP would specify construction BMPs to control and direct on-site surface runoff to ensure that storm water runoff from the construction site does not exceed the capacity of the stormwater drainage system and does not discharge polluted runoff during construction activities. With implementation of **Regulatory Compliance Measures HYD-1 and HYD-2**, construction impacts related to exceeding the capacity of the storm water drainage system or additional polluted runoff would be **less than significant**, and no mitigation is required.

As previously discussed, the Project site is undeveloped and there is no existing stormwater infrastructure on-site. Currently, stormwater runoff on the Project site sheet flows from east to west and discharges onto the adjacent undeveloped property. The proposed Project would increase the impervious surface area by 80 percent compared to existing conditions, which would increase stormwater runoff collected on the Project site and discharged off-site into the existing storm drainage system and receiving waters. However, as previously discussed, the proposed Project would capture and retain the required DCV and gradually release overflows to public streets so that stormwater runoff does not exceed the capacity of the existing stormwater system pursuant to the requirements of the San Bernardino County MS4 Permit (**Regulatory Compliance Measure HYD-3).** Additionally, as discussed in Response 3.10(a), the proposed Project would implement operational BMPs to reduce pollutants of concern in stormwater runoff in compliance with the County of San Bernardino MS4 permit (**Regulatory Compliance Measure HYD-3**).

With implementation of **Regulatory Compliance Measure HYD-3**, operational impacts related to the creation or contribution of storm water runoff that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would be **less than significant**, and no mitigation is required.

d. Result in flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation?

Less Than Significant Impact

Discussion of Effect: As discussed in Response 3.10(c)(ii) above, the Project site is not within a 100-year flood zone; therefore, there is no risk of pollutants from the Project site due to Project inundation.

The Project site is approximately 51 miles northeast of the Pacific Ocean, and the Santa Ana Mountains are between the Project site and the Pacific Ocean. Based on the distance from the Pacific Ocean and the presence of an intervening mountain range, the Project site would not be susceptible to inundation from a tsunami.

Seiches are oscillations in enclosed bodies of water that are caused by a number of factors, most often wind or seismic activity. The nearest major water feature is Lake Perris, which is located approximately 14 miles south of the Project site.[32] Given the distance of large standing bodies of water from the Project site, there is no risk of a release of pollutants from the Project site due to seiche-related flooding. Based on the fact that the Project site is not located within a 100-year flood zone and is located a substantial distance from the Pacific Ocean and closest bodies of water, implementation of the Project would not result in a flood hazard, tsunami, or seiche risking release of pollutants due to Project site inundation. **No impacts** would occur, and no mitigation is required.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact

Discussion of Effect: The Project site is within the jurisdiction of the Santa Ana RWQCB. The Santa Ana RWQCB adopted a Water Quality Control Plan (i.e., Basin Plan) (January 1995, updated June 2019) that designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. The proposed Project would comply with the Construction General Permit and the existing San Bernardino County MS4 Permit, which requires preparation of a SWPPP, preparation of a Final WQMP, and implementation of construction and operational BMPs to reduce pollutants of concern in storm water runoff. Therefore, the proposed Project would not result in water quality impacts that would conflict with the Santa Ana RWQCB Basin Plan. Impacts related to a conflict with or obstruction of the implementation of a water quality control plan would be **less than significant,** and no mitigation is required.

The Sustainable Groundwater Management Act (SGMA) was enacted in September 2014. SGMA requires governments and water agencies located within high- and medium-priority groundwater basins to halt overdraft of the basins. SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs), which are required to adopt Groundwater Sustainability Plans (GSPs) to manage the sustainability of the

[32] It should be noted that the Seven Oaks Reservoir is approximately 7 miles northeast of the Project site. The Seven Oaks Reservoir is considered a dry reservoir that serves mainly for flood protection to Orange, Riverside, and San Bernardino Counties. The reservoir is also used to impound water for groundwater recharge. If the Seven Oaks Reservoir was filled with enough water to experience a seiche during an earthquake, floodwaters would follow the Santa Ana River Wash, north of the Project site.

groundwater basins. The Project site is located within the Upper Santa Ana Valley Groundwater Basin. The Upper Santa Ana Valley Groundwater Basin is identified by the Department of Water Resources as a very low priority basin; therefore, development of a GSP or an approved GSP alternative is not required.[33]

As discussed previously, due to the depth to groundwater, it is not expected that any storm water that may infiltrate during construction would affect groundwater quality because the groundwater table is deep, and pollutants would be filtered prior to reaching groundwater. In addition, the proposed Project would be required to implement operational BMPs to treat storm water before it could reach groundwater. Further, pollutants in storm water are generally removed by soil through absorption as water infiltrates. Therefore, in areas of deep groundwater, there is more absorption potential and, as a result, less potential for pollutants to reach groundwater. Due to the depth to groundwater, it is not expected that any storm water that may infiltrate during construction or operation would affect groundwater quality because there is not a direct path for pollutants to reach groundwater.

Although the proposed Project would increase impervious surface area by 80 percent, which would decrease on-site infiltration, the proposed Project would collect and infiltrate the required DCV in accordance with the requirements of the San Bernardino County MS4 Permit. Therefore, the proposed Project would not substantially decrease on-site infiltration and groundwater recharge when compared to existing conditions. Therefore, the proposed Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan, and impacts would be **less than significant**. No mitigation is required.

[33] California Department of Water Resources. 2016. Groundwater Exchange. Website: https://groundwaterexchange.org/basin/upper-santa-ana-valley-3/ (accessed October 27, 2023).

3.11 LAND USE AND PLANNING

Would the project:

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	☐	☒
b.	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?	☐	☐	☒	☐

a. Physically divide an established community?

No Impact

Discussion of Effects: The Project site is located on the western end of an established neighborhood within the City of Redlands. The Project site is bordered by West Lugonia Avenue to the south, Karon Street and an existing residential community to the east, a dirt road and fallow agricultural land to the north, and fallow agricultural land to the west followed by Tennessee Street and SR-210. The proposed Project includes the construction of 451 apartment units, 72 townhome units, and 18 single-family homes for a total of 541 residential units on the Project site. In addition to the residential development, the proposed Project includes the construction of on-site recreational facilities and the extension of Pennsylvania Avenue along the northern boundary of the Project site. The proposed Project uses are consistent with the surrounding land uses to the east, which are primarily residential, so the proposed Project would integrate uniformly with the established residential uses surrounding the Project site.

The proposed Project would be served by existing public streets (West Lugonia Avenue, Karon Street, and Pennsylvania Avenue) and other infrastructure. The construction of the apartment and townhome neighborhoods would result in a proposed density of 27.2 du/acre and the construction of the single-family residences would result in a proposed density of 5.33 du/ac. The City's General Plan currently designates the portion of the Project site directly adjacent to Karon Street that would contain the single-family residences as *Low Density Residential,* which allows for densities up to 6.0 du/ac. The rest of the Project site is currently designated as *Commercial,* with a small area designated as *Park/Golf Courses.* As part of the proposed Project actions, a General Plan Amendment (GPA) to change the designation from *Commercial* and *Parks/Golf Courses* to *High Density Residential* will be required to permit the proposed higher housing densities of the apartment complex and townhome neighborhoods. The *High Density Residential* land use designation allows for up to 29 dwelling units per acre. The Project's proposed density is consistent with the applicable General Plan designation for the Project site and with the density of the surrounding residential neighborhoods. As such, the proposed Project can be seen as an extension of the existing residential neighborhood to the east. The proposed Project would not physically divide an established community, but rather extend an established community. **No impact** would occur, and no mitigation is required.

b. 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?

Less Than Significant Impact

Discussion of Effects: The Project site's current zoning designation is East Valley Corridor Specific Plan/Special Development District (EV/SD). The purpose of the East Valley Corridor Specific Plan is to plan for large undeveloped areas along I-10 to facilitate future industrial, commercial and residential development in an orderly and aesthetic manner, provide a strong job base to support the local economy, and to ensure high-quality development through design guidelines and standards. The intent of the Special Development District is to provide alternative, more flexible site planning process which encourages creative and imaginative planning of administrative, professional, commercial or industrial, or mixed-use development within the framework of a single comprehensive plan. Single-family dwelling units on parcels of 20 acres or more are permitted as interim uses under the current EV/SD zoning. The EV/SD zoning does not permit, conditionally permit, or permit as an accessory use, higher residential densities. A zoning change from EV/SD to R-3 Multiple Family Residential will be required to permit the proposed densities of the apartment complex and townhome neighborhoods (27.2 units per gross acre), and a zoning change from EV/SD to R-1 Single Family Residential along Karon Street will be required to permit the proposed densities of the single-family detached residences (5.33 dwelling units per gross acre).

With approval of the zoning change to *R-3* and *R-1*, the proposed Project would not conflict with any land use plan, policy, or regulation adopted by the City. As detailed throughout this Initial Study, all impacts to the environment resulting from the proposed Project are subject to applicable mitigation and local, State and/or federal regulations, which would reduce those impacts to less than significant levels. Therefore, impacts related to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the General Plan, Specific Plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect are **less than significant**. No mitigation is required.

3.12 MINERAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact.

Discussion of Effect: Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil-bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations. According to the *Redlands General Plan EIR* [34], the Project site is located within Mineral Resource Zone-2 (MRZ-2) where geologic data indicate that significant plain cement concrete (PCC)-grade aggregate resources are present. The Project site is also located in an aggregate resource sector designated by the State Mining and Geology Board (1987) as containing regionally significant PCC-grade aggregate resources. According to the City's General Plan EIR, the majority of the City's aggregate resources are concentrated along the Santa Ana River wash. In light of this, the City has adopted the Upper Santa Ana Wash Land Management and Habitat Conservation Plan, which accommodates the relocation and expansion of aggregate mining quarries, to help ensure long-term availability of high quality aggregate reserves located within the Santa Ana River Wash Planning Area for local and regional use. The Project site is outside the boundaries of the Upper Santa Ana Wash Land Management and Habitat Conservation Plan and not within an area designated for aggregate mining by the City, and access to the aggregate resources along the Santa Ana River wash would not be affected by proposed Project actions.

Any construction activities, such as grading or soil excavation, would not be at a depth where unknown mineral resources may be inadvertently discovered. Therefore, the development of the proposed Project would not result in the loss of available mineral resources. Therefore, development of the proposed

[34] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Final, SCH #2016081041.* Figure 3.11-1 (Mineral Resources). City of Redlands. July 21, 2017.

Project would have less than significant impacts related to the availability of mineral resources. No mitigation is required.

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

Discussion of Effect: Please refer to Response 3.11(a). **No impact** related to mineral resources would occur. No mitigation is required.

3.13 NOISE

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in 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?	☐	☐	☒	☐
b. Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The discussion and analysis provided here describes the potential short-term construction noise and vibration impacts associated with the proposed Project, as well as long-term operational noise and vibration impacts.

Characteristics of Sound. Sound is increasing in the environment and can affect quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations (or cycles per second) of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound and describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments.

Measurement of Sound. Sound intensity is measured through the A-weighted scale 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. Unlike units of measurement that use a linear scale (e.g., inches or pounds), decibels use a scale based on powers of 10.

For example, 10 decibels (dB) is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound-pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (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. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in California are L_{eq} and the Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during relaxation hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance, when assessing the annoyance factor, include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Another noise scale often used together with L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category, audible impacts, refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally involve a change of 3 dB or greater because that level has been found to be barely perceptible in exterior environments. The second category, potentially audible impacts, refers to a change in the noise level between 1 and 3 dB.

This range of noise levels has been found to be noticeable only in laboratory environments. The last category involves changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

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 the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell 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 sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will potentially result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas.

Table N: Definition of Acoustical Terms lists definitions of acoustical terms, and **Table O: Common Sound Levels and Their Noise Sources** shows common sound levels and their noise sources.

Table N: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of noise level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_2, L_8, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter during a designated time interval using fast-time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris 1991).

Table O: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near-Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2004).

Fundamentals of Ground-borne Vibration:

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Although the perceptibility threshold is approximately 65 vibration velocity decibels (VdB), human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. A vibration level that causes annoyance is well below the damage risk threshold for typical buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet, problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source based on the Federal

Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*[35] (FTA Manual). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes (e.g., blasting and pile driving) to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS velocity is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. The vibration velocity level in decibels is defined as the following:

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10-6 inches/second (in/sec) used in the United States.

Regulatory Settings

Federal Guidelines

Federal Transit Administration. Although Section 8.06.120 of the City's Municipal Code exempts construction activities during the permitted hours during weekdays and Saturdays, project construction noise was assessed using criteria from the FTA Manual[36]. The FTA Manual's Detailed Assessment Daytime Construction Noise Criteria for residential uses is 80 dBA L_{eq}. In addition, vibration standards included in the FTA Manual were used in this analysis because the City of Redlands does not have construction vibration damage criteria. **Table P: Construction Vibration Damage Criteria** provides the criteria for assessing the potential vibration building damage associated with construction activities.

Local Regulations

City of Redlands General Plan Noise Element[37]. The City of Redlands lists policies to meet the City's noise-related goals and has established a noise land use compatibility matrix shown in **Table Q: Noise/Land Use Compatibility Matrix and Interpretation** to assess the compatibility of proposed land uses along with interior and exterior noise standards for specific land uses shown in **Table R: Interior and Exterior Noise Standards**. The following are the applicable City policies.

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35 Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 27, 2023).

36 Ibid.

37 City of Redlands. General Plan 2035, Chapter 7. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/07_healthy_community_low.pdf?1667249222 (accessed October 27, 2023).

Table P: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate L_V (VdB)[1]
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: *Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) re 1 µin/sec.
µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Table Q: Noise/Land Use Compatibility Matrix and Interpretation

Land Use Categories		Community Noise Equivalent Level (CNEL)						
Categories	**Uses**	**<**	**60**	**65**	**70**	**75**	**80**	**85**	**>**
RESIDENTIAL	Single Family, Duplex Multiple Family	A	C	C	C	D	D	D
RESIDENTIAL	Mobile Homes	A	C	C	C	D	D	D
COMMERCIAL Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
COMMERCIAL Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theater	A	A	A	A	B	B	C
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Office Building, Research & Dev., Professional Offices, City Office Building	A	A	A	B	B	C	D
COMMERCIAL Recreation INSTITUTIONAL Civic Center	Amphitheater, Concert Hall, Auditorium, Meeting Hall	B	B	C	C	D	D	D
COMMERCIAL Recreation	Childrens Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	A	B	B	B
COMMERCIAL General, Special INDUSTRIAL, INSTITUTIONAL	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
INSTITUTIONAL General	Hospital, Church, Library, Schools Classroom	A	A	B	C	C	D	D
OPEN SPACE	Parks	A	A	A	B	C	D	D
OPEN SPACE	Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
AGRICULTURE	Agriculture	A	A	A	A	A	A	A

Zone A CLEARLY COMPATIBLE	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
ZONE B NORMALLY COMPATIBLE	New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.
ZONE C NORMALLY INCOMPATIBLE	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 the design.
ZONE D CLEARLY INCOMPATIBLE	New construction or development should generally not be undertaken.

Source: City of Redlands General Plan Noise Element, Table 7-10. (December 2017).

Table R: Interior and Exterior Noise Standards

Land Use Categories	Community Noise Equivalent Level (CNEL) Energy Average	
	Interior[1]	Exterior[2]
Residential		
Single Family, Duplex, Multiple Family	45[3]	60
Mobile Home	---	60[4]
Commercial, Industrial, Institutional		
Hotel, Motel, Transit Lodging	45	65[3]
Commercial Retail, Bank, Restaurant	50	---
Office Building, Research & Development, Professional Offices, City Office Building	50	---
Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	---
Gymnasium (Multipurpose)	50	---
Sports Club	55	---
Manufacturing, Warehousing, Wholesale, Utilities	60	---
Movie Theaters	45	---
Institutional		
Hospitals, Schools classrooms	45	60
Open Space		
Parks	---	60

Source: City of Redlands General Plan Noise Element, Table 7-11 (December 2017).

[1] Indoor environment excludes bathrooms, toilets, closest, corridors.

[2] Outdoor environment limited to private yard of single family as measured at property line; multifamily private patio or balcony that is served by means of exist from inside; mobile home park; hospital patio; park picnic area; school playground; hotel and recreational area.

[3] Noise level requirement with open window if they are used to meet natural ventilation requirements.

[4] Exterior noise levels should be such that interior noise levels will not exceed 45 CNEL.

[5] Expect those areas affected by aircraft noise.

Policy 9.0e Use the criteria specified in Table 7-10 (**Table Q of this IS**) to assess the compatibility of proposed land uses with the projected noise environment, and apply the noise standards in Table 7-11 (**Table R of this IS**), which prescribe interior and exterior noise standards in relation to specific land uses. Do not approve projects that would not comply with the standards in Table 7-11 (**Table R**).

Policy 9.0v Consider the following impacts as possibly "significant":

- An increase in exposure of four or more dB if the resulting noise level would exceed that described as clearly compatible for the affected land use, as established in Table 7-10 (**Table Q**) and Table 7-11 (**Table R**);
- Any increase of 6 dB or more, due to the potential for adverse community response.

Policy 9.0w Limit hours for all construction or demolition work where site-related noise is audible beyond the site boundary.

City of Redlands Municipal Code.[38] Section 8.06.070 of the City's Municipal Code outlines the exterior noise standards for stationary noise sources and are shown below in **Table S: Maximum Permissible Exterior Sound Levels by Receiving Land Use**.

Table S: Maximum Permissible Exterior Sound Levels by Receiving Land Use

Receiving Land Use Category	Time Period	Noise Level (dBA)					
		Noise Standard	L_{50}[1]	L_{25}[2]	L_8[3]	L_2[4]	L_{max}[5]
Single-family residential districts	10:00 p.m. to 7:00 a.m.	50	50	55	60	65	70
	7:00 a.m. to 10:00 p.m.	60	60	65	70	75	80
Multifamily residential districts; Public space; institutional	10:00 p.m. to 7:00 a.m.	50	50	55	60	65	70
	7:00 a.m. to 10:00 p.m.	60	60	65	70	75	80
Commercial	10:00 p.m. to 7:00 a.m.	60	60	65	70	75	80
	7:00 a.m. to 10:00 p.m.	65	65	70	75	80	85
Industrial	Any time	75	--	--	--	--	--

Source: City of Redlands. Municipal Code, Section 8.06.070 (Exterior Noise Limits).

Note: Per the City of Redlands Municipal Code: *If the measured ambient level exceeds the allowable noise exposure standard within any of the first 4 noise limit categories above, the allowable noise exposure standard shall be adjusted in 5 dBA increments in each category as appropriate to encompass or reflect said ambient noise level. In the event the ambient noise level exceeds the 5th noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level. The ambient noise shall be measured at the same location along the property line with the alleged offending noise source inoperative. If the alleged offending noise source cannot be shut down, the ambient noise shall be estimated by performing a measurement in the same general area of the source but at a sufficient distance that the noise from the source is at least 10 dBA below the ambient in order that only the ambient level be measured. If the difference between the ambient and the noise source is 5 to 10 dBA, then the level of the ambient itself can be reasonably determined by subtracting a one decibel correction to account for the contribution of the source. In the event the alleged offensive noise contains a steady, audible tone such as a whine, screech, hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits shall be reduced by 5 dBA.*

[1] The noise standard for a cumulative period of more than 30 minutes in any hour.
[2] The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
[3] The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
[4] The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour.
[5] The noise plus 20 dBA or the maximum measured ambient level for any period of time.

dBA = A-weighted decibels
L_{eq} = Equivalent continuous sound level

Section 8.06.090(F) of the City's Municipal Code prohibits the operation or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 6:00 p.m. and 7:00 a.m., including Saturdays, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities, the city or another governmental entity. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with

[38] City of Redlands. 2023. Municipal Code. January. Website: https://codelibrary.amlegal.com/codes/redlandsca/latest/redlands_ca/0-0-0-5191 (accessed October 27, 2023).

exhaust and air intake silencers in proper working order, or suitable to meet the standards set forth herein.

Section 8.06.090(G) of the City's Municipal Code prohibits the operation or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The City's Municipal Code defines the perception threshold to be a motion velocity of 0.01 inches per second over the range of 1 to 100 hertz (Hz).

Section 8.06.090(F) of the City's Municipal Code prohibits the operation or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 6:00 p.m. and 7:00 a.m., including Saturdays, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities, the city or another governmental entity. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order, or suitable to meet the standards set forth herein.

Section 8.06.090(G) of the City's Municipal Code prohibits the operation or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way.

Section 8.06.100 of the City's Municipal Code states that it is unlawful to operate any air conditioning or air handling equipment that exceeds sound levels shown in **Table S.**

Section 8.06.120(G) of the City's Municipal Code states that the noise standards shall not apply to noise sources associated with new construction, remodeling, rehabilitation or grading of any private property, provided such activities take place between the hours of 7:00 a.m. and 8:00 p.m. on weekdays, including Saturdays, with no activities taking place at any time on Sundays or federal holidays. All motorized equipment used in such activities shall be equipped with functioning mufflers.

Existing Settings

Surrounding Land Uses

Land uses surrounding the Project site include vacant land to the north, single-family residences to the east across Karon Street, vacant land and commercial uses to the south across Lugonia Avenue, and vacant land to the west.

Overview of the Existing Ambient Noise Environment

The existing noise sources in the vicinity of the Project site include traffic noise on traffic on SR-210, Lugonia Avenue, and Karon Street. Noise from motor vehicles is generated by engines, the interaction between the tires and the road, and the vehicles' exhaust systems. Other noise sources include commercial activities south of the Project site.

Ambient Noise Levels

Long-Term Noise Measurements

Three long-term (24-hour) noise level measurements were conducted from December 7 to December 8, 2022, using Larson Davis Spark dosimeters. **Table T: Long-Term Ambient Noise Monitoring Results** summarizes the results of the long-term noise level measurements along with a description of the measurement locations and noise sources that occurred during the measurements. As shown in **Table T**, the daytime noise levels ranged from 53.7 to 64.5 dBA L_{eq} and nighttime noise levels ranged from 50.0 to 65.9 dBA L_{eq}. The daytime maximum instantaneous noise level ranged from 69.6 to 90.0 dBA and the nighttime instantaneous maximum noise level ranged from 67.9 to 90.5 dBA. Also, the calculated CNEL levels at LT-1, LT-2, and LT-3 were 62.7, 66.8, and 67.3 dBA, respectively. The long-term noise level measurement survey sheets along with the detailed hourly L_{eq}, L_{max}, and minimum measured sound level (L_{min}) results are provided in **Appendix G-1**. **Figure 8: Noise Monitoring Locations** shows the long-term monitoring locations.

Table T: Long-Term Ambient Noise Monitoring Results

Monitor No.	Location	Noise Level (dBA)					Noise Sources
		Daytime		Nighttime		CNEL	
		L_{eq}	L_{max}	L_{eq}	L_{max}		
LT-1	Located on the southeast corner of Karon Street and Pennsylvania Avenue. On a utility pole. Approximately 22 ft from Pennsylvania Avenue centerline.	53.7-62.8	69.6-86.4	50.0-61.7	67.9-84.9	62.7	Traffic on Pennsylvania Avenue and Karon Street.
LT-2	1402 Karon Street. In front of a single-family home on a utility pole. Approximately 18 ft from Karon Street centerline.	57.7-64.5	74.8-90.0	54.9-65.9	74.7-90.5	66.8	Traffic on Karon Street.
LT-3	1141 Lugonia Avenue. At the parking lot of the Jack in the Box on a utility pole. Approximately 128 ft from Lugonia Avenue centerline.	59.2-63.7	73.8-81.2	56.7-63.0	72.1-79.7	67.3	Traffic on Lugonia Avenue and noise from vehicles exiting the Jack in the Box drive through.

Source: Compiled by LSA (2023).
Note: Long-term (24-hour) noise level measurements were conducted from December 7, 2022, to December 8, 2022.
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level

Existing Traffic Noise. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108)[39] was used to evaluate traffic-related noise conditions along roadway segments in the vicinity of the Project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods

[39] Federal Highway Administration (FHWA). 1977. *Highway Traffic Noise Prediction Model*, FHWA RD 77-108.

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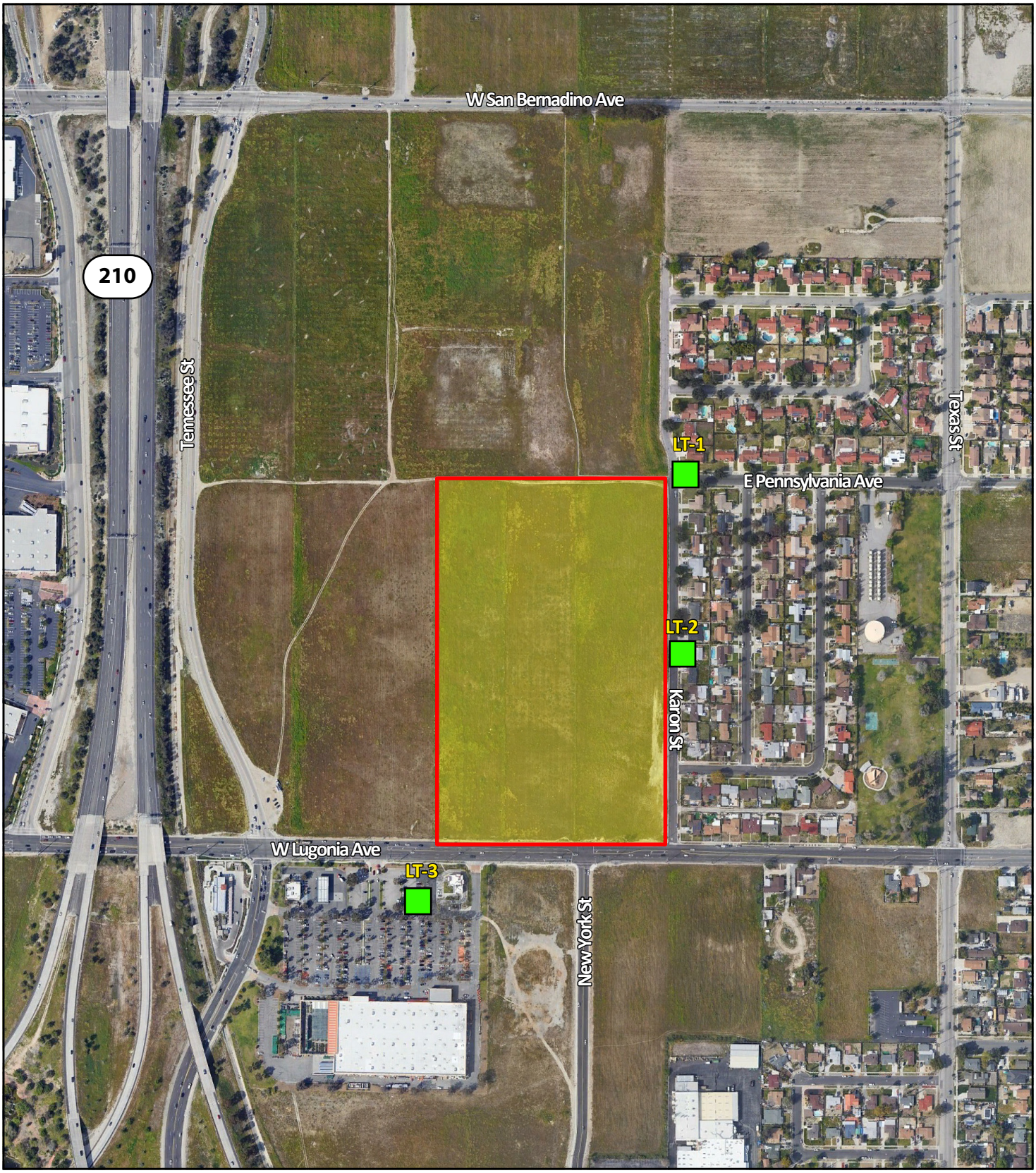

LSA

FIGURE 8

LEGEND

Project Site Boundary

LT-1 Long-Term Noise Monitoring Location

N

0 100 200

FEET

SOURCE: Google Earth 2021

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The Neighborhoods at Lugonia Village

Noise Monitoring Locations

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to determine the CNEL values. The existing (2022) ADT volumes were obtained from the *Traffic Study for the Neighborhoods at Lugonia Village Project*[40]. The standard vehicle mix for Southern California roadways was used for roadways in the vicinity of the Project site. **Table U: Existing (2022) Traffic Noise Levels** shows the existing (2022) traffic noise levels on the nearby roadways. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix G-2**.

Table U: Existing (2022) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane
Tennessee Street between San Bernardino Avenue and Pennsylvania Avenue (Future)	6,190	< 50	< 50	134	63.8
Tennessee Street between Pennsylvania Avenue (Future) and Lugonia Avenue	6,190	< 50	< 50	134	63.8
Tennessee Street between Lugonia Avenue and I-10 Westbound On/Off Ramps	14,590	< 50	100	315	67.5
Pennsylvania Avenue between Karon Street and Texas Street	910	< 50	< 50	< 50	51.9
Pennsylvania Avenue east of Texas Street	2,620	< 50	< 50	< 50	56.5
Karon Street north of Pennsylvania Avenue	250	< 50	< 50	< 50	49.6
Karon Street between Pennsylvania Avenue and Lugonia Avenue	1,065	< 50	< 50	< 50	55.9
Texas Street north of Pennsylvania Avenue	5,300	< 50	< 50	116	62.1
Texas Street between Pennsylvania Avenue and Lugonia Avenue	6,175	< 50	< 50	135	62.8
Texas Street south of Lugonia Avenue	9,080	< 50	66	197	64.5
Lugonia Avenue between Tennessee Street and Project Driveway	17,270	< 50	120	372	67.2
Lugonia Avenue between Project Driveway and New York Street	17,860	< 50	124	385	67.4
Lugonia Avenue between New York Street and Texas Street	15,520	< 50	108	335	66.8
Lugonia Avenue east of Texas Street	14,130	< 50	99	305	66.4
New York Street south of Lugonia Avenue	4,280	< 50	< 50	93	61.8

Source: Compiled by LSA (2023).

ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
I-10 – Interstate 10

[40] Michael Baker International. 2023. *Traffic Study for the Neighborhoods at Lugonia Village*. January 13.

a. Result in the 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?

Less Than Significant Impact

Discussion of Effects:

Short-Term (Construction) Noise. Two types of short-term noise impacts could occur during construction on the Project site. First, construction crew commutes and the transport of construction equipment and materials to the Project site would incrementally increase noise levels on roadways leading to the site. The pieces of construction equipment for construction activities would move on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the vicinity of the Project site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 feet would generate up to a maximum of 84 dBA), the effect on longer-term ambient noise levels would be small because the number of daily construction-related vehicle trips would be small compared to existing daily traffic volumes in the vicinity of the Project site. The proposed Project would generate a maximum of 1,552 passenger car equivalent (PCE) trips per day based on the California Emissions Estimator Model (CalEEMod) (Version 2022.1) results contained in **Appendix A-2**. Roadways that would be used to access the Project site include Lugonia Avenue and Tennessee Street. As shown in **Table U**, Lugonia Avenue and Tennessee Street have estimated existing ADT volumes of 14,130 and 6,190, respectively, near the Project site. Based on the information above, construction-related traffic noise would increase by up to 1.0 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, no short-term construction-related impacts associated with worker commutes and transport of construction equipment and material to the Project site would occur, and no noise reduction measures would be required.

The second type of short-term noise impact is related to noise generated from construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. The Project anticipates site preparation and grading, building construction, paving, and architectural coating phases of construction. These various sequential phases change the character of the noise generated on a project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. **Table V: Typical Construction Equipment Noise Levels** lists the L_{max} recommended for noise impact assessments for typical construction equipment included in the *FHWA Highway Construction Noise Handbook*[41], based on a distance of 50 feet between the equipment and a noise receptor.

[41] FHWA. 2006. *FHWA Highway Construction Noise Handbook*. Roadway Construction Noise Model, FHWA HEP-06-015. DOT-VNTSC-FHWA-06-02. NTIS No. PB2006-109012. August.

Table V: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor[1]	Maximum Noise Level (L_{max}) at 50 ft[2]
Backhoe	40	80
Compactor (ground)	20	80
Compressor (air)	40	80
Concrete Saw	20	90
Crane	16	85
Dozer	40	85
Dump Truck	40	84
Excavator	40	85
Flatbed Truck	40	84
Forklift	20	85
Front-End Loader	40	80
Generator (<25KVA, VMS signs)	50	70
Grader	40	85
Impact Pile Driver	20	95
Jackhammer	20	85
Pickup Truck	40	55
Paver	50	85
Pavement Scarafier	20	85
Pneumatic Tools	50	85
Pump	50	77
Rock Drill	20	85
Roller	20	85
Scraper	40	85
Tractor	40	84
Welder	40	73

Source: *FHWA Highway Construction Noise Handbook,* Table 9.1 (FHWA 2006).
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] The usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] The maximum noise levels were developed based on Specification 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

Table W: Summary of Construction Phase, Equipment, and Noise Levels lists the anticipated construction equipment for each construction phase based on the CalEEMod (version 2022.1) results in **Appendix A-2**. Also, **Table W** shows the combined L_{max} and L_{eq} noise level at a distance of 50 feet for each construction phase along with the number of each construction equipment, acoustical usage factor, and the noise level (L_{max} and L_{eq}) for each construction equipment at a distance of 50 feet based on the quantity. As shown in **Table W**, construction noise levels would reach up to 97.4 dBA L_{max} (92.6 dBA L_{eq}) at a distance of 50 feet.

The closest residential property line is located immediately east of the Project site and is approximately 460 feet from the center of the Project site. At a distance of 460 feet, noise levels would reduce by 19.3 dBA compared to the noise level measured at 50 feet from the source. During the noisiest construction phase, the closest residential property line would be exposed to a construction noise level of 78.1 dBA L_{max} (97.4 dBA -19.3 dBA = 78.1 dBA) or 73.3 dB L_{eq} (92.6 dBA – 19.3 dBA = 73.3 dBA).

Table W: Summary of Construction Phase, Equipment, and Noise Levels

Construction Phase	Construction Equipment	Quantity	Reference Noise Level at 50 ft (dBA L_{max})	Acoustical Usage Factor[1] (%)	Noise Level at 50 ft (dBA)		Combined Noise Level at 50 ft (dBA)	
					L_{max}	L_{eq}	L_{max}	L_{eq}
Grading	Concrete Saw	1	90	20	90.0	83.0	97.3	92.6
	Crane	1	85	16	85.0	77.0		
	Tractor	2	84	40	87.0	83.0		
	Excavator	1	85	40	85.0	81.0		
	Grader	1	85	40	85.0	81.0		
	Dump Truck	1	84	40	84.0	80.0		
	Paver	2	85	50	88.0	85.0		
	Pavement Scarafier	1	85	20	85.0	78.0		
	Roller	2	85	20	88.0	81.0		
	Dozer	2	85	40	88.0	84.0		
	Scraper	1	85	40	85.0	81.0		
	Front-End Loader	2	80	40	83.0	79.0		
Building Construction	Concrete Saw	1	90	20	90.0	83.0	94.8	89.0
	Crane	1	85	16	85.0	77.0		
	Excavator	2	85	40	88.0	84.0		
	Grader	1	85	40	85.0	81.0		
	Forklift	1	85	20	85.0	78.0		
	Generator (variable message sign)	1	70	50	70.0	67.0		
	Pavement Scarafier	1	85	20	85.0	78.0		
	Front-End Loader	1	80	40	80.0	76.0		
Paving	Grader	1	85	40	85.0	81.0	92.3	87.9
	Paver	1	85	50	85.0	82.0		
	Roller	2	85	20	88.0	81.0		
	Generator (variable message sign)	1	70	50	70.0	67.0		
	Paver	1	85	50	85.0	82.0		
	Front-End Loader	1	80	40	80.0	76.0		
Architectural Coating	Compressor (air)	1	80	40	80.0	76.0	80.0	76.0

Source: Compiled by LSA (2023).
[1] The acoustical usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
dBA = A-weighted decibels
ft = foot/feet
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level

Although the closest residence may be subject to temporary substantial ambient noise level increases, short-term construction noise levels would not exceed the FTA Manual construction noise criteria of 80 dBA L_{eq} for residential uses. Compliance with the City's Noise Ordinance would ensure that construction noise impacts would be minimized to the greatest extent feasible. **Standard Condition NOI-1** would limit construction hours to between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday provided all motorized equipment is equipped with functioning mufflers pursuant to Sections 8.06.090F (Noise Disturbances Prohibited) and 8.06.120 (Exemptions) of the City's Municipal Code. If permission is obtained to construct outside of the permitted hours, compliance with the City's Municipal Code noise standards shown in **Table S** is required.

The following standard condition is a regulatory requirement that would be implemented to ensure that project construction noise would be minimized to the greatest extent feasible.

Standard Condition NOI-1 Compliance with Sections 8.06.090F (Noise Disturbances Prohibited) and Chapter 8.06.120 (Exemptions) of the City of Redland's (City) Municipal Code. Construction activities, including operating or causing the operation of any tools or equipment used in site preparation, construction, drilling, repair, alteration, grading, paving, and/or architectural coating shall be restricted to the hours of 7:00 a.m. to 8:00 p.m. Mondays through Saturdays, and are prohibited at any time on Sundays and holidays unless permission is given by the City and noise levels remain below the City's noise level standards.

All mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order and shall be maintained so that vehicles and their loads are secured from rattling and banging.

With implementation of **Standard Condition NOI-1**, construction noise impacts would be **less than significant.** No mitigation measures are required.

Long-Term (Operational) Traffic Noise

The FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108)[42] was used to evaluate traffic-related noise conditions along roadway segments in the vicinity of the Project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2022) ADT volumes without and with the Project were obtained from the *Traffic Study for the Neighborhoods at Lugonia Village Project* (Traffic Study)[43]. The standard vehicle mix for Southern California roadways was used for roadways in the vicinity of the Project site as shown in **Table X: Existing (2022) Traffic Noise Levels Without and With Project Scenario A and Table Y: Existing (2022) Traffic Noise Levels Without and With Project Scenario B**. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix G-2**.

As also shown in **Tables X and Y**, the Project-related traffic noise would increase by up to 0.5 dBA under both Scenarios A and B, as discussed in the Traffic Study. Scenario A assumes a cul-de-sac on Pennsylvania Avenue just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street. For Scenario B, Pennsylvania Avenue would extend from Karon Street to Tennessee Street, which would complete the connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street. Noise level increases less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from Project-related traffic on off-site sensitive receptors would be **less than significant**. No mitigation measures are required.

[42] FHWA 1977. *Highway Traffic Noise Prediction Model*, FHWA RD 77-108.

[43] Michael Baker International. 2023. *Traffic Study for the Neighborhoods at Lugonia Village*, *City of Redlands*. January 13.

Table X: Existing (2022) Traffic Noise Levels Without and With Project Scenario A

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions (dBA)
Tennessee Street between San Bernardino Avenue and Pennsylvania Avenue (Future)	6,190	< 50	< 50	134	63.8	6,510	< 50	< 50	140	64.0	0.2
Tennessee Street between Pennsylvania Avenue (Future) and Lugonia Avenue	6,190	< 50	< 50	134	63.8	6,710	< 50	< 50	145	64.1	0.3
Tennessee Street between Lugonia Avenue and I-10 Westbound On/Off Ramps	14,590	< 50	100	315	67.5	15,710	< 50	107	339	67.8	0.3
Pennsylvania Avenue between Karon Street and Texas Street	910	< 50	< 50	< 50	51.9	940	< 50	< 50	< 50	52.1	0.2
Pennsylvania Avenue east of Texas Street	2,620	< 50	< 50	< 50	56.5	2,620	< 50	< 50	< 50	56.5	0.0
Karon Street north of Pennsylvania Avenue	250	< 50	< 50	< 50	49.6	250	< 50	< 50	< 50	49.6	0.0
Karon Street between Pennsylvania Avenue and Lugonia Avenue	1,065	< 50	< 50	< 50	55.9	1,155	< 50	< 50	< 50	56.2	0.3
Texas Street north of Pennsylvania Avenue	5,300	< 50	< 50	116	62.1	5,440	< 50	< 50	119	62.2	0.1
Texas Street between Pennsylvania Avenue and Lugonia Avenue	6,175	< 50	< 50	135	62.8	6,285	< 50	< 50	137	62.9	0.1
Texas Street south of Lugonia Avenue	9,080	< 50	66	197	64.5	9,080	< 50	66	197	64.5	0.0
Lugonia Avenue between Tennessee Street and Project Driveway	17,270	< 50	120	372	67.2	19,170	< 50	133	413	67.7	0.5
Lugonia Avenue between Project Driveway and New York Street	17,860	< 50	124	385	67.4	19,480	< 50	135	419	67.8	0.4
Lugonia Avenue between New York Street and Texas Street	15,520	< 50	108	335	66.8	16,020	< 50	112	345	66.9	0.1
Lugonia Avenue east of Texas Street	14,130	< 50	99	305	66.4	14,410	< 50	101	311	66.5	0.1
New York Street south of Lugonia Avenue	4,280	< 50	< 50	93	61.8	4,410	< 50	< 50	96	61.9	0.1

Source: Compiled by LSA (2023).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet
I-10 = Interstate 10

Table Y: Existing (2022) Traffic Noise Levels Without and With Project Scenario B

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions (dBA)
Tennessee Street between San Bernardino Avenue and Pennsylvania Avenue (Future)	6,190	< 50	< 50	134	63.8	6,530	< 50	< 50	141	64.0	0.2
Tennessee Street between Pennsylvania Avenue (Future) and Lugonia Avenue	6,190	< 50	< 50	134	63.8	7,000	< 50	< 50	151	64.3	0.5
Tennessee Street between Lugonia Avenue and I-10 Westbound On/Off Ramps	14,590	< 50	100	315	67.5	15,720	< 50	107	339	67.8	0.3
Pennsylvania Avenue between Karon Street and Texas Street	910	< 50	< 50	< 50	51.9	980	< 50	< 50	< 50	52.3	0.4
Pennsylvania Avenue east of Texas Street	2,620	< 50	< 50	< 50	56.5	2,620	< 50	< 50	< 50	56.5	0.0
Karon Street north of Pennsylvania Avenue	250	< 50	< 50	< 50	49.6	250	< 50	< 50	< 50	49.6	0.0
Karon Street between Pennsylvania Avenue and Lugonia Avenue	1,065	< 50	< 50	< 50	55.9	835	< 50	< 50	< 50	54.8	-1.1[1]
Texas Street north of Pennsylvania Avenue	5,300	< 50	< 50	116	62.1	5,440	< 50	< 50	119	62.2	0.1
Texas Street between Pennsylvania Avenue and Lugonia Avenue	6,175	< 50	< 50	135	62.8	6,325	< 50	< 50	138	62.9	0.1
Texas Street south of Lugonia Avenue	9,080	< 50	66	197	64.5	9,080	< 50	66	197	64.5	0.0
Lugonia Avenue between Tennessee Street and Project Driveway	17,270	< 50	120	372	67.2	18,780	< 50	130	404	67.6	0.4
Lugonia Avenue between Project Driveway and New York Street	17,860	< 50	124	385	67.4	19,090	< 50	132	411	67.7	0.3
Lugonia Avenue between New York Street and Texas Street	15,520	< 50	108	335	66.8	15,630	< 50	109	337	66.8	0.0
Lugonia Avenue east of Texas Street	14,130	< 50	99	305	66.4	14,890	< 50	104	321	66.6	0.2
New York Street south of Lugonia Avenue	4,280	< 50	< 50	93	61.8	4,410	< 50	< 50	96	61.9	0.1

Source: Compiled by LSA (2023).

[1] Scenario B would connect the newly constructed Pennsylvania Avenue resulting in different local vehicle distribution patterns.

ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet
I-10 = Interstate 10

Long-Term (Operational) Stationary Noise

The proposed Project includes on-site ground floor heating, ventilation, and air conditioning (HVAC) units for the single-family residences and rooftop HVAC units for the multifamily residences, which could potentially operate 24 hours per day. The specifications of typical HVAC equipment, including the reference noise level, are provided in **Appendix G-3**. Each HVAC unit would generate a noise level of 44.4 dBA L_{eq} at a distance of 50 feet. Based on the proposed Project's site plan and surrounding land uses, it is estimated that off-site single-family residences to the east would be exposed to up to four HVAC units from on-site single-family residences and up to 16 HVAC units from on-site multifamily residences, which would generate a noise level of 41.5 dBA L_{eq} and 43.1 dBA L_{eq}, respectively, at a distance of 50 feet. Also, it is estimated that off-site commercial uses to the south would be exposed to up to 28 HVAC units, which would generate a noise level of 50.3 dBA L_{eq} at a distance of 50 feet.

Table Z: HVAC Noise Levels shows the noise levels generated from HVAC units at the residential property line to the east and commercial property line to the south along with the distance from the HVAC equipment to the property line and distance attenuation. As shown in **Table Z**, noise levels generated from on-site HVAC units would reach up to 45.4 dBA L_{eq} at the closest residential property line to the east and 50.3 dBA L_{eq} at the closest commercial property line to the south. These noise levels would not exceed the City's daytime 30-minute (L_{50}) noise standards of 60 dBA and 65 dBA for residential and commercial uses, respectively. In addition, these noise levels would not exceed the City's nighttime 30-minute (L_{50}) noise standards of 50 dBA and 60 dBA for residential and commercial uses, respectively. Therefore, noise impacts from project operations would be **less than significant**. No mitigation measures are required.

Table Z: HVAC Noise Levels

Land Use	Direction	No. of Units	Reference Noise Level at 50 ft (dBA L_{eq})	Total Reference Noise Level at 50 ft (dBA L_{eq})	Distance (ft)	Distance Attenuation (dBA)	Noise Level[1] (dBA L_{eq})	Combined Noise Level (dBA L_{eq})
Residence	East	4	44.4	50.4	140	8.9	41.5	45.4
		16[2]	44.4	56.4	230	13.3	43.1	
Commercial	South	28[3]	44.4	58.9	135	8.6	50.3	50.3

Source: Compiled by LSA (2023).

[1] Noise levels generated from HVAC equipment would be lower when shielding factors are considered. Ground floor HVAC units for the proposed single-family residences would be shielded by the proposed residential buildings and rooftop HVAC units for the proposed multifamily residences would be shielded by a 4 ft high parapet.

[2] Total of 16 HVAC units for 16 multifamily residential dwelling units in Building 11.

[3] Total of 28 HVAC units for 28 multifamily residential dwelling units in Building 3.

dBA = A-weighted decibel
ft = foot/feet
HVAC = heating, ventilation, and air conditioning
L_{eq} = equivalent continuous sound level

Overall, the proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project site in excess of standards established by the City of Redlands through its General Plan and Municipal Code. Noise impacts would be **less than significant,** and no mitigation measures are required.

b. Result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact

Discussion of Effects:

Short-Term Construction Vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in RMS (VdB) and assesses the potential for building damage using vibration levels in PPV (in/sec). Vibration levels calculated in RMS velocity are best for characterizing human response to building vibration, whereas vibration levels in PPV are best for characterizing damage potential.

Table AA: Vibration Source Amplitudes for Construction Equipment shows the reference vibration levels at a distance of 25 feet for each type of standard construction equipment from the FTA Manual[44]. Project construction is expected to require the use of large bulldozers and loaded trucks, which would generate ground-borne vibration levels of up to 0.089 in/sec (PPV) and 0.076 in/sec (PPV), respectively, when measured at 25 feet.

Table AA: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] The equipment shown in **bold** text is expected to be used on site.

µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The greatest vibration levels are anticipated to occur during the site preparation and grading phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts normally occur within the buildings.

[44] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.*

The formula for vibration transmission is provided below:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Table AB: Potential Construction Vibration Annoyance lists the projected vibration levels from various construction equipment expected to be used on the Project site along with the distance from center of the Project site to the property line of the affected land use. As shown in **Table AB**, the residential and commercial property line to the east and south are approximately 460 feet and 710 feet from the center of the Project site and would experience vibration levels of up to 0.001 in/sec (RMS). These vibration levels would not result in community annoyance because they would not exceed the City's vibration annoyance threshold of 0.01 in/sec (RMS). Other building structures that surround the Project site would experience lower vibration levels because they are farther away.

Table AB: Potential Construction Vibration Annoyance

Land Use	Direction	Equipment/ Activity	Reference Vibration Level at 25 ft	Distance to Structure (ft)[1]	Vibration Level
			PPV (in/sec)		RMS (in/sec)[2]
Residential	East	Large bulldozers	0.089	460	0.001
		Loaded trucks	0.076	460	0.001
Commercial	South	Large bulldozers	0.089	710	0.000
		Loaded trucks	0.076	710	0.000

Source: Compiled by LSA (2023).
Note: The City's vibration perception threshold is 0.01 in/sec (RMS) at the property line of the Project site.
[1] Distance from the center of the project to the property line of the Project site.
[2] The RMS value is approximately 0.71 of the peak value (Caltrans 2020).
ft = foot/feet
in/sec = inches per second
RMS = root mean square

Similarly, **Table AC: Potential Construction Vibration Damage** lists the projected vibration levels from various construction equipment expected to be used on the project site at the project construction boundary to the nearest buildings in the project vicinity. As shown in **Table AC**, the closest residential and commercial buildings are approximately 70 feet to the east and 140 feet to the south, respectively, from the Project construction boundary and would experience vibration levels of up to 0.019 in/sec (PPV). This vibration level would not have the potential to result in building damage because the residential and commercial buildings would be constructed equivalent to non-engineered timber and masonry and vibration levels would not exceed the FTA vibration damage threshold of 0.20 in/sec (PPV). Other building structures that surround the Project site would experience lower vibration levels because they are farther away and would be constructed equivalent to non-engineered timber and masonry.

Table AC: Potential Construction Vibration Damage

Land Use	Direction	Equipment/ Activity	Reference Vibration Level at 25 ft	Distance to Structure (ft)[1]	Vibration Level
			PPV (in/sec)		PPV (in/sec)
Residential	East	Large bulldozers	0.089	70	0.019
		Loaded trucks	0.076	70	0.016
Commercial	South	Large bulldozers	0.089	140	0.007
		Loaded trucks	0.076	140	0.006

Source: Compiled by LSA (2023).
Note: The FTA-recommended building damage threshold is 0.20 PPV [in/sec]) at the receiving non-engineered timber and masonry building.
[1] Distance from the Project construction boundary to the building structure.
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
PPV = peak particle velocity

Long-Term (Operational) Vibration. The Project would not generate vibration. In addition, vibration levels generated from Project-related traffic on roadways within the vicinity of the Project site (Tennessee Street, Lugonia Avenue, Texas Street, Pioneer Avenue, and San Bernardino Avenue) would be unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Therefore, vibration impacts from project-related operations would occur, and no vibration reduction measures are required.

Overall, ground-borne vibration or ground-borne noise generated from proposed Project would be **less than significant**. No mitigation measures are required.

c. For a project located within the vicinity of a private airstrip or airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

No Impact

Discussion of Effect: The San Bernardino International Airport and Redlands Municipal Airport are 2.1 miles northwest and 2.4 miles northeast, respectively, of the Project site. The *Airport Layout Plan Narrative Report for San Bernardino International Airport*[45] shows that the Project site is outside of the San Bernardino International Airport's 65 dBA CNEL noise contour. The *Redlands Municipal Airport Land Use Compatibility Plan*[46] and the City's General Plan[47] show that the Project site is outside of the Redlands Municipal Airport's 60 dBA CNEL noise contour. Also, there are no private airstrips located within the vicinity of the Project site. Therefore, the proposed Project would not expose people residing or working in the vicinity of the Project site to excessive noise levels generated from nearby airport operations. There would be **no impact**.

[45] San Bernardino International Airport Authority (SBIAA). 2010. *Airport Layout Plan Narrative Report for San Bernardino International Airport*. November.
[46] Shutt Moen Associates. 2003. *Redlands Municipal Airport Land Use Compatibility Plan*. May 6.
[47] City of Redlands. 2017. *General Plan 2035*. December 5.

3.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Induce substantial 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)?	☐	☐	☒	☐
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Induce substantial 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)?

Less Than Significant Impact

Discussion of Effects: The Project site is currently undeveloped and does not contain any residential units. The proposed Project would construct 451 apartment units, 72 townhome units, and 18 single-family homes, for a total of 541 new units on the Project site. Based on a 2.77 persons per household estimate for the City of Redlands obtained from the United States Census Bureau, development of the 541 living units is estimated to result in a total population of 1,499 residents on the Project site (1,498.6 rounded to 1,499). [48] As of July 1, 2022, the population in the City was estimated at 73,288. Therefore, implementation of the Project is anticipated to increase the City's population by approximately 2 percent.[49]

On March 4, 2021, the Southern California Association of Governments (SCAG) released its final draft allocation of housing units for each jurisdiction in the region. For the current Regional Housing Needs Assessment (RHNA) cycle, SCAG provided the RHNA allocation number to the City of Redlands for the 2021-2029 housing element planning period consisting of the following household income levels: 967 very-low-income units, 615 low-income units, 652 moderate income units, and 1,282 above-moderate income units for a total allocation of 3,516 units.[50] Implementation of the proposed Project would result in the development of a total of 541 living units, including 27 very low income apartment units. The remaining apartment, townhome, and single-family residential units are expected to be sold at market rate (the above-moderate income level). The proposed Project would account for approximately 2.8

[48] United States Census Bureau, City of Redlands, QuickFacts, Persons per household, 2017-2021. Website: http://www.census.gov/quickfacts/reedlandscitycalifornia/ (accessed October 27, 2023). 2.77 persons per household * 541 units = 1,498.6.

[49] 1,441 residents / 73,288 total population = 0.0197 (rounded to 0.02)

[50] Southern California Association of Governments (SCAG), *SCAG 6th Cycle Final RHNA Allocation Plan*, March 4, 2021.

percent of the City's very-low-income unit RHNA allocation[51], 40.1 percent of the City's above-moderate income unit RHNA allocation[52] and approximately 15.4 percent of the total RHNA allocation for the City.[53]

The proposed Project also includes the construction of a public street extension. The extension of Pennsylvania Avenue along the northern boundary of the Project site would either end in a cul-de-sac or connect to the existing Pennsylvania Avenue and residential community to the east. Therefore, the proposed Project could induce indirect population growth in the area through the extension of this public road. However, use of the Pennsylvania Street extension is expected to be predominantly used by local traffic and residents of the Project site and surrounding residential neighborhoods. Addition, the proposed Project does not include construction of addition public infrastructure such as wastewater treatment facilities. As such, the indirect population growth induced would be minimal.

The increase in population at the Project site would be consistent with planned population growth and housing development in the City, as anticipated by the General Plan and regional planning documents, and the proposed public street is not expected to cause substantial indirect population growth. Since population generated by the proposed Project would incrementally increase the population of the City and not exceed local and regional population growth projections, population growth generated by the proposed Project would not be substantial. Impacts are **less than significant,** and no mitigation is required.

b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact

Discussion of Effects: As discussed above, the Project site is currently undeveloped and does not contain any residential units. Implementation of the Project would result in the development of a total of 541 living units on the Project site. As such, the proposed Project would not displace existing housing, but create more housing for residents of the City. **No impact** would occur, and no mitigation is required.

[51] 27 units / 967 very low income units = 0.0279
[52] 541 units/ 1,282 above moderate income units= 0.4009
[53] 541 units / 3,516 total RHNA = 0.1539.

3.15 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision 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 any of the public services:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

Less Than Significant Impact

Discussion of Effects:

Fire Protection. Fire protection services within the City are provided by the Redlands Fire Department (RFD). Development of the proposed Project may incrementally increase the demand for fire protection services as it would increase the Project site's population by 1,499 residents. In its review of new development plans, the RFD evaluates project plans on its ability to provide proper fire protection to the development. Additionally, the proposed Project would be required to pay service and development fees to the RFD. Such fees would be used to fund capital costs associated with acquiring land for new fire stations, constructing new fire stations, purchasing fire equipment, and providing for additional staff as needed and as identified by the City. Any construction of future fire protection facilities would require project-level environmental review and site-specific mitigation as appropriate in order to ensure significant environmental impacts are avoided or mitigated.

The RFD aims to meet National Fire Protection Association standards of a four-minute response time for first responders 90 percent of the time, but as of 2015, RFD 90 percent response time was approximately nine minutes.[54] Therefore, the City is pursuing a more realistic objective of arriving within seven minutes 90 percent of the time, in accordance with the 2008 High-Level Fire Department Review for the RFD.

The RFD has determined that it would need to increase the number of fire stations in order to meet increased future citywide service demands. In the City's Strategic Plan for Fiscal Year 2022/2023 through 2027/2028, the construction of additional fire stations to maintain critical response times and provision of additional emergency response personnel were established as strategic objectives to enhance public

[54] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.13-18. City of Redlands. July 21, 2017.

health and safety within the City.[55] As such, the City has begun identifying locations for additional fire stations and developing a fire staffing plan.

The Project site is located adjacent to established residential neighborhoods in the City and in a Local Responsibility Area (LRA) Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ).[56] The closest fire stations to the Project site are Redlands Fire Station 263, located at 10 West Pennsylvania Avenue, approximately 0.7 mile east of the Project site, and Redlands Fire Station 264, located at 1270 West Park Avenue, approximately 0.8 mile southwest of the Project site.[57] Average travel time between the Fire Station 263 and the Project site and Fire Station 264 and the Project site is approximately two and four minutes, respectively. Through compliance with California Vehicle Code 21806(A)(1), which requires all vehicles to yield to emergency vehicles, travel time between the fire stations and the Project site is expected to be reduced. Additionally, the City maintains mutual aid agreements with surrounding cities (i.e., Yucaipa and Loma Linda), as well as with the County of San Bernardino and the United States Forest Service, which allow for the services of nearby fire departments to assist the City during major emergencies.

Project design features incorporated into the structural design and layout of the residential units would keep service demand increases to a minimum. For example, the Project would be constructed in accordance with the current California Building Code (at the time of the writing the 2022 CBC), which requires all on-site structures to incorporate construction techniques and materials such as roofs, eaves, exterior walls, vents, appendages, windows, and doors resistant to and/or to perform at high levels against ignition during the exposure to fires. Fire sprinklers would be incorporated into each residential unit to further reduce fire risk and service demand. Access to the Project site would be from West Lugonia Avenue and the proposed West Pennsylvania Avenue extension, and the internal streets on the Project site would be developed to City and Fire Code Standards to allow emergency vehicles ease of access and maneuverability. Finally, fire hydrants would be placed within the Project site, at specific distances required by fire service and City requirements.

Based on the proposed Project site's location in a LRA Non-Very High Fire Hazard Severity Zone in proximity to existing RFD facilities capable of responding to emergencies at the Project site within the City's stated response time objective of seven minutes 90 percent of the time, the development of the proposed Project would not cause fire staffing, facilities, or equipment to operate at a deficient level of service. The Project itself would not require the construction of new or physically altered fire protection facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay Development Impact Fees (DIFs) to fund future fire facilities and services, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand fire protection services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

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[55] City of Redlands. *City of Redlands Strategic Plan FY 22-23 through FY 27-28.* Website: https://www.cityofredlands.org/sites/main/files/file-attachments/redlandsstrategicplan_final.pdf?1651172526 (accessed October 27, 2023).

[56] CALFIRE, Fire Hazard Severity Zones Maps, City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed October 27, 2023).

[57] City of Redlands. *Fire Station Locations.* Available at: https://www.cityofredlands.org/pod/fire-station-locations-0. (accessed October 27, 2023).

Police Protection. Police protection services within the City are provided by the Redlands Police Department (RPD). Development of the proposed Project may incrementally increase the demand for police protection services due to the increased population of residents on the site. In its review of new development plans, the RPD evaluates project plans on its ability to provide proper police protection to the development. Additionally, the Applicant would be required to pay service and development fees to the RPD. Such fees would be used to fund capital costs associated with acquiring land for new police stations, constructing new police stations, purchasing crime-fighting equipment for new police stations, and providing for additional staff as needed and as identified by the City. Any construction of future police facilities would require project-level environmental review and site-specific mitigation as appropriate in order to ensure significant environmental impacts are avoided or mitigated.

The RPD does not base service standards on an industry standard; instead, the City aims for a response time of 4.5 minutes. The RPD has determined that it would need to increase the number of police stations in order to meet increased future citywide service demands. The Project site is located adjacent to established residential neighborhoods in the City, which are already served by the RPD. The closest police station to the Project site is Redlands Police Department located at 1270 West Park Avenue, approximately 0.8 mile southwest of the Project site. Average travel time between the nearest police station and the Project site is approximately five minutes. Through compliance with California Vehicle Code 21806(A)(1), which requires all vehicles to yield to emergency vehicles, travel time between the nearest police station and the Project site is expected to be reduced below 4.5 minutes. Additionally, the City maintains mutual aid agreements with surrounding cities (i.e., Yucaipa and Loma Linda), as well as with the County of San Bernardino, which allow for the services of nearby police and sheriff departments to assist the City during major emergencies.

The Project would incorporate Crime Prevention through Environmental Design (CPTED) features to keep service demand increases to a minimum. For example, the Project includes informal surveillance design such as architecture, landscaping, and lighting designed to minimize visual obstacles and eliminate places of concealment for potential assailants.

Based on the proposed Project's location in proximity to existing RPD facilities capable of responding to emergencies at the Project site within the City's stated response time objective of 4.5 minutes, development of the proposed Project would not cause law enforcement staffing, facilities, or equipment to operate at a deficient level of service. The Project itself would not require the construction of new or physically altered law enforcement protection facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay DIFs to fund future law enforcement facilities and services, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand law enforcement protection services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Schools. The Project site is located within the Redlands Unified School District (RUSD). RUSD currently has 16 elementary schools (serving kindergarten through fifth grade); four middle schools (servings grades sixth through eighth); and three high schools (serving grades ninth through twelfth). The three closest schools to the Project site are as follows:

- Lugonia Elementary School located at 202 East Pennsylvania Avenue approximately 0.7 mile east of the Project site;

- Clement Middle School located at 501 East Pennsylvania Avenue approximately 1 mile east of the Project site; and

- Citrus Valley High School located at 800 West Pioneer Avenue approximately 0.5 mile north of the Project site.

Based on the proximity of the above-mentioned schools to the Project site, students generated by the Project are anticipated to attend these three schools. **Table AD: Redlands Unified School District Enrollment and Capacity Data** shows the current enrollment and capacity of the Redlands School District, Lugonia Elementary School, Clement Middle School, and Citrus Valley High School.

Table AD: Redlands Unified School District Enrollment and Capacity Data

District/School	Enrollment Capacity	Optimum Enrollment	2021-2022 Enrollment	Excess Room
Redlands Unified School District	26,125	20,302	20,162	5,963
Lugonia Elementary School	773	696	556	217
Clement Middle School	1,264	1,406	1,059	205
Citrus Valley High School	2,940	2,646	2,215	725

Source: Enrollment Capacity and Optimum Enrollment were obtained from the City of Redlands, *Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan*, Chapter 3.13: Public Facilities and Services, Table 3.13-3: Redlands Unified School District Enrollment, pg. 3.13-10. 2021-2022 Enrollment Data obtained from the California Department of Education, Data Quest Website: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=3667843&agglevel=district&year=2021-22. Accessed October 27, 2023.

As of the 2021–2022 school year, the Redlands Unified School District has capacity for an additional 5,963 students; Lugonia Elementary School has a capacity for an additional 217 students; Clement Middle School has a capacity for an additional 205 students; and, Citrus Valley High School has a capacity for an additional 725 students.

The proposed Project would include the development of 451 apartment units, 72 townhome units, and 18 single-family residences, which would generate school-aged children that would be anticipated to attend Redlands Unified School District's Lugonia Elementary School, Clement Middle School, and Citrus Valley High School. The proposed Project would increase the population in the community and would consequently add students to the local school system. The RUSD has accounted for the generation of its student population through its facilities planning activities based on the City's buildout; as such, RUSD does not anticipate further growth in its boundary that would exceed planned development associated with the City's buildout. The Project itself would not require the construction of new or physically altered educational facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay DIFs to fund future educational services provided by RUSD, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand educational services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Parks/Recreational Facilities. The City of Redlands has 21 parks totaling approximately 424.2 acres of land. The closest park to the Project site is Texonia Park, located at the intersection of Texas Street and Lugonia Avenue approximately 0.13 mile east of the Project site. Texonia Park is a 10.7-acre neighborhood

park and features a lighted soccer field, basketball courts, picnic, and playground facilities. [58] The City General Plan establishes a park standard of 5.0 acres of parkland for every 1,000 residents. As of 2021, the City had an estimated population of 73,288[59] residents, pursuant to the City's park standard, would require 366.44 acres of parkland within the City.[60] Under current conditions, the City of Redlands has a surplus of 57.76 acres of parkland, per the City's parkland standard.

The proposed Project is estimated to add 1,499 residents to the site and to the City's population. Based on the park standard of 5.0 acre of parkland for every 1,000 residents, the proposed Project would need to develop approximately 7.5 acres of parkland.[61] The proposed Project would provide a total of 201,550 square feet (sf) of private open space in the apartment complex neighborhood; a total of 32,029 sf of private open space in the townhome neighborhood; and each single family lot would include private front and back yards. However, the common open space areas would be for use by residents only and would not be open to the public. The proposed Project would also provide a private open space parklet in the northeastern corner of the Project site, which would be used by residents of the proposed single-family neighborhood.

In addition, the proposed Project on-site recreational amenities including a central green belt which includes 40 to 60-foot wide east/west garden and turf lawn, an enclosed dog park, tot lot, and a pool area. As such, it is anticipated that impacts to surrounding parks and recreational facilities would be further reduced as residents of the Projects site are expected to use on-site amenities. Nevertheless, some residents and/or their visitors may use other public recreational facilities. As a result, the Project would create an incremental increase in the use of area parks. The proposed Project would be required to adhere to Chapter 3.32.000, Open Space and Park Fees, of the City's Municipal Code which requires the payment of an Open Space and Park Development Impact Fee for residential development. With payment of these in-lieu fees, as required by **Standard Condition PS-1**, below, impacts to parks with implementation of the proposed Project would be **less than significant** and no mitigation is required.

Standard Condition PS-1 **Payment of Open Space and Park Development Impact Fee.** Prior to the issuance of building permits, the Director of the City of Redlands Department of Development Services, or designee, shall confirm that the Project Applicant has paid all required park in-lieu/park impact fees as established in Chapter 3.32.000 of the City of Redland's Municipal Code.

Other Public Facilities. The proposed Project is estimated to generate approximately 1,499 additional residents, which would be added to the City of Redlands population. This increase in population would incrementally increase the need for a number of public services including those listed above and others such as libraries and City administrative facilities. The proposed Project would be required to adhere to Chapter 3.60.000, Public Facilities Fees, of the City's Municipal Code which requires the payment of Public Facilities Fees for residential development. With payment of these in-lieu fees, as required by **Standard**

[58] City of Redlands. *Texonia Park.* Available at: https://www.cityofredlands.org/post/texonia-park. (accessed October 27, 2023).

[59] United States Census Bureau, Redlands City, California, QuickFacts, Estimated population, 2021. Website: http://www.census.gov/quickfacts/fact/table/redlandscitycalifornia,US/PST045222,PST045221 (accessed October 27, 2023).

[60] 73,288 / 1,000 = 73.288 * 5 = 366.44.

[61] 1,499 / 1,000 = 1.499 * 5 = 7.495.

Condition PS-2, below, impacts to other public facilities with implementation of the proposed Project would be **less than significant** and no mitigation is required.

Standard Condition PS-2 **Payment of Public Facilities Development Impact Fee.** Prior to the issuance of building permits, the Director of the City of Redlands Department of Development Services, or designee, shall confirm that the Applicant has paid all required public services in-lieu/public services impact fees as established in Chapter 3.60.000 of the City of Redland's Municipal Code.

3.16 RECREATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

a. 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?

Less Than Significant Impact

Discussion of Effects: The proposed Project includes the construction of 451 apartment units, 72 townhome units, and 18 single-family residences on the Project site. As discussed in Section 3.14, Population and Housing, the proposed Project is estimated to add 1,499 residents to the Project site and to the City's population, which would incrementally increase the public use of surrounding parks, such as Texonia Park. However, this increase is not anticipated to be such that substantial physical deterioration of the facility would occur. It is anticipated that development of the on-site recreational amenities including an internal greenbelt area in the apartment complex that includes a 40-foot to 60-foot-wide linear east/west garden, a seating area framed by a central turf oval and trees , an enclosed dog park, tot lot, and a pool area would minimize the use of nearby parks as residents of the Project would more than likely use the on-site recreational amenities. Further, the proposed Project would provide a private open space parklet at the northeastern corner of the Project site, which would be used by residents of the proposed single-family neighborhood.

The proposed Project would also be required to adhere to Chapter 3.32.000, Open Space and Park Fees, of the City's Municipal Code which requires the payment of an Open Space and Park Development Impact Fee for residential development (**Standard Condition PS-1**). Twenty-five percent of this fee would be deposited into the City's Open Space Fund to be used solely for the purposed of acquisition, improvement, preservation, and expansion of open space areas within the City.[62] As such, impacts associated with the deterioration of surrounding recreational facilities would be **less than significant**, and no mitigation is required.

[62] City of Redlands. *Annual Report of Development Impact Fees.* December 21, 2021.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less Than Significant Impact

Discussion of Effects: As discussed above, the proposed Project would include private, on-site amenities such as an internal greenbelt area in the apartment complex that includes a 40-foot to 60-foot-wide linear east/west garden, a seating area framed by a central turf oval and trees, an enclosed dog park, tot lot, and a pool area. In addition, the Project would provide a public open space parklet located between the intersection of Karon Street and current Pennsylvania Avenue and the cul-de-sac terminus of the proposed Pennsylvania Avenue extension. The construction of these recreational facilities is part of the proposed Project, and any potential and adverse effects associated with implementation of the proposed Project's recreational facilities have been considered throughout the analysis of this IS/MND. As discussed elsewhere in this document, all of the proposed Project's significant impacts can be mitigated to **less than significant** levels. As discussed above under Threshold 3.16(a), the proposed Project would not cause or accelerate the substantial physical deterioration of existing recreational facilities, so it would not require the construction or expansion of off-site recreational facilities. No mitigation is required.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐
b. Conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

The information and analysis in this section is based on the *Traffic Study* prepared by Michael Baker International on January 13, 2023, *LOS Study Addendum* prepared by Michael Baker International on June 23, 2023, and the *VMT Assessment* prepared by Michael Baker International on January 23, 2023. These reports are provided in **Appendices H-1, H-2, and H-3** respectively.

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effects: The proposed Project would develop the Project site with 451 apartment units, 72 townhome units, and 18 single family units. Vehicular access to the Project site would be provided via two driveways from West Lugonia Avenue (a signalized intersection at New York Street/West Lugonia Avenue and a right-in/right-out driveway on the southwest corner of the Project site), two driveways from the proposed Pennsylvania Avenue extension, and Karon Street. Because the proposed Pennsylvania Avenue extension would either end in a cul-de-sac just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street (Scenario A) or would extend from Karon Street west to Tennessee Street, creating a complete connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street (Scenario B), the *Traffic Study* analyzed Project-related traffic under the two scenarios.

The proposed Project is forecast to generate 3,728 daily vehicle trips to and from the Project site, including 228 trips during the a.m. peak hour and 288 trips during the p.m. peak hour. Because the proposed Project would generate more than 100 peak hour trips and would add more than 50 peak hour trips, the *Traffic Study* analyzed the proposed Project's impact on City intersections under both Scenario A and B.

Under existing conditions, all City intersections operate at overall acceptable LOS C or better during the a.m. peak hour. During the p.m. peak hour, all City intersections operate at overall LOS C or better except for Tennessee Street and West Lugonia Avenue (operating at an overall LOS D) and West Lugonia Avenue and Texas Street (operating at an overall LOS F). However, under both Scenario A and B, the City intersection at Texas Street and West Lugonia Avenue would operate at the same LOS as existing conditions. Although the proposed Project would contribute to the existing deficiency at Texas Street and West Lugonia Avenue (operating at an overall LOS D), no mitigation is necessary, as the proposed Project would not degrade operations below existing conditions.

At the intersection of Tennessee Street and West Lugonia Avenue, the proposed Project would degrade operations below existing conditions during the PM Peak Hour. Under existing conditions, the intersection operates at an overall LOS D during the PM peak hour. Under the Existing With Project scenario, operations at the intersection would be degraded to a LOS of E under both Scenarios A and B. This would represent a conflict with Guiding Policy 5.20c of the City's General Plan Connected City Element, which states that where the current level of service at a location within the City of Redlands is below the Level of Service (LOS) C standard, a development project shall not be approved until mitigated so that it does not reduce the existing level of service at that location. In order to mitigate the LOS degradation resulting from the proposed project, the *LOS Study Addendum* recommended the existing signal timing parameters be evaluated and the signal timing be optimized at the intersection of Tennessee Street and West Lugonia Avenue. With Applicant-funded signal timing modifications, as detailed in **Mitigation Measure (MM) TRA-1**, potentially significant impacts to the intersection of Tennessee Street and West Lugonia Avenue would be reduced to a less than significant level.

In addition, all Caltrans intersections operate at acceptable overall LOS D or better during both the a.m. peak hour and p.m. peak hour. As such, the *Traffic Study* identified no adverse effects at any of the study intersections with the addition of project related traffic under both Scenario A and B.

Based on the information provided in the *Traffic Study* and summarized above, the proposed Project would remain compliant with the City of Redlands's Measure "U" Principles of Managed Development, which states that the following must remain true with development of a project: (1) Levels of traffic service throughout the City shall be maintained; (2) collector and local street standards shall be maintained; (3) circulation patterns shall protect residential neighborhoods from increased traffic congestions; and (4) designated scenic highways within the City shall be maintained.

Because all of the Project study intersections would operate at acceptable LOS C or maintain the existing overall LOS, and the adverse Project effects at the intersection of Tennessee Street and West Lugonia Avenue are expected to be reduced to less than significant levels with the modification of signal timing (**MM TRA-1)**, the proposed Project would not impact the surrounding local and collector roadways, the proposed Project would distribute traffic directly to the collector roadways, and the proposed Project would not distribute traffic onto or impact the Scenic Highways within the City of Redlands, the proposed project is consistent with the City of Redlands's Measure "U" Principles of Managed Development. Additionally, pursuant to the requirements of the City of Redlands, Development Impact Fees (DIFs) will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements.

Therefore, with implementation of **MM TRA-**1, the proposed Project would not conflict with a program, plan, ordinance or policy pertaining to transit, bicycle and pedestrian facilities. Final design plans would

be subject to review and approval by City staff prior to issuance of building permits, and adherence to applicable City requirements would ensure the proposed Project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system and impacts would be **less than significant with incorporation of mitigation**.

MM TRA-1 Prior to submission of building permits, the Applicant shall coordinate with the City's Engineering Division to determine the anticipated cost of evaluating and optimizing signal timing parameters at the intersection of Tennessee Street and West Lugonia Avenue. The Applicant shall submit payment to the Engineering Division covering the determined cost in full, consistent with County guidelines. The Building and Safety Division shall confirm the completion of payment prior to issuing building permits. Upon conclusion of Project construction, the Building and Safety Division shall not issue a Certificate of Occupancy to the Applicant until receiving confirmation from the City that signal optimization has been completed.

b. Conflict or be inconsistent with *CEQA Guidelines Section 15064.3, subdivision (b)*?

Less Than Significant Impact

Discussion of Effects: As part of the *CEQA Guidelines* 2019 updates, Section 15064.3 was added and codifies that project-related transportation impacts are typically best measured by evaluating the Project's vehicle miles traveled (VMT). Specifically, subdivision (b) focuses on specific criteria related to transportation analysis and is divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. Subdivision (b)(1) provides guidance on determining the significance of transportation impacts of land use projects using VMT; projects located within 0.5 mile of high-quality transit should be considered to have a less than significant impact. Subdivision (b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. Subdivision (b)(4) stipulates that Lead Agencies have the discretion to formulate a methodology that would appropriately analyze a project's VMT. Therefore, the *City of Redlands CEQA Assessment VMT Analysis Guidelines*, adopted July 2020 (VMT guidelines) was used to determine the Project VMT impacts. The City's VMT Guidelines provide several screening criteria for projects within the City. Projects that cannot be screened out by the screening criteria should conduct further VMT analysis to identify Project-related VMT impacts. One of the screening criteria included in the VMT guidelines is for Low VMT Areas. The City's VMT Guidelines state the following:

> *Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary.*

Using the SBCTA VMT screening tool referenced in the City's VMT Guidelines, the *VMT Assessment* determined that the Project site is within a Low VMT Area. Therefore, based on the City's VMT Guidelines, the proposed Project would not result in any significant VMT impacts. Impacts would be **less than significant**, and no mitigation is required.

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact

Discussion of Effects: Vehicular access to the Project site would be provided via two driveways from West Lugonia Avenue (a signalized intersection at New York Street/West Lugonia Avenue and a right-in/right-out driveway on the southwest corner of the Project site), two driveways from the proposed Pennsylvania Avenue extension, and Karon Street. The proposed Pennsylvania Avenue extension would either end in a cul-de-sac just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street (Scenario A) or would extend from Karon Street west to Tennessee Street, creating a complete connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street (Scenario B).

Roadway frontage improvements in and around the Project site would be designed and constructed to satisfy all City requirements for street widths, corner radii, and intersection control, as well as incorporate design standards tailored specifically to site access requirements.

All final site plans would be subject to review and approval by the City's Municipal Utilities & Engineering Department prior to issuance of building permits, and adherence to applicable requirements would ensure the proposed development would not include any sharp curves, dangerous driveway intersections, or visual obstructions for drivers negotiating roadway curves. Therefore, impacts related to a substantial increase in hazards due to a design feature or incompatible use would be **less than significant**. No mitigation is required.

d. Result in inadequate emergency access?

Less Than Significant Impact

Discussion of Effects: The Applicant would be required to design, construct, and maintain structures, roadways, and facilities that would provide for adequate emergency access and evacuation. Construction activities, which may temporarily restrict vehicular traffic, would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures.

Vehicular access to the Project site would be provided via two driveways from West Lugonia Avenue (a signalized intersection at New York Street/West Lugonia Avenue and a right-in/right-out driveway on the southwest corner of the Project site), two driveways from the proposed Pennsylvania Avenue extension, and Karon Street. The proposed Pennsylvania Avenue extension would either end in a cul-de-sac just west of the existing three-legged intersection of Pennsylvania Avenue and Karon Street (Scenario A) or would extend from Karon Street west to Tennessee Street, creating a complete connection between Tennessee Street and the existing Pennsylvania Avenue east of Karon Street (Scenario B). Final site plans would be subject to review and approval by the City's Fire and Police Departments to ensure adequate emergency vehicle access to and within the Project site prior the issuance of building permits. Adherence to the emergency access measures required by the City would ensure impacts related to inadequate emergency access would be **less than significant**. No mitigation is required.

3.18 TRIBAL CULTURAL RESOURCES

Would the project 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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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)?	☐	☒	☐	☐
b. 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?	☐	☒	☐	☐

a. 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)?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effect: Chapter 532, Statutes of 2014 (i.e., AB 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource."

Per AB 52 (specifically PRC 21080.3.1), Native American consultation is required upon request by a California Native American tribe that has previously requested that the City provide it with notice of such projects. Pursuant to provisions of AB 52, the City contacted the following Native American Tribes.

- Gabrieleño Band of Mission Indians – Kizh Nation;
- Morongo Band of Mission Indians;
- Soboba Band of Luiseño Indians;

- Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians); and
- Torres Martinez Desert Cahuilla Indians.

Chapter 905, Statutes of 2004 (i.e., SB 18), requires Lead Agencies to consult with California Native American tribes to aid in the potential of traditional tribal cultural places through local land use planning. Tribal consultation pursuant to SB 18 is required when a project proposes amendments or adoptions of a general plan or a specific plan, or the designation of open space. As the proposed Project would include a general plan amendment, zone change, and specific plan amendment the City contacted the following Native American Tribes pursuit to the provisions of SB 18.

- Agua Caliente Band of Cahuilla Indians;
- Augustine Band of Cahuilla Mission Indians;
- Cabazon Band of Mission Indians;
- Cahuilla Band of Indians;
- Los Coyotes Band of Cahuilla and Cupeno Indians;
- Morongo Band of Mission Indians;
- Quechan Tribe of the Fort Yuma Reservation;
- Ramona Band of Cahuilla;
- San Fernando Band of Mission Indians;
- Soboba Band of Luiseño Indians;
- Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians);
- Santa Rosa Band of Cahuilla Indians;
- Serrano Nation of Mission Indians; and
- Torres Martinez Desert Cahuilla Indians.

The City received requests for consultation from Gabrieleño Band of Mission Indians – Kizh Nation and the Morongo Band of Mission Indians. On July 28, 2023, the Gabrieleño Band of Mission Indians – Kizh Nation withdrew its request for further consultation. Consultation with the Morongo Band of Mission Indians concluded upon agreement of required mitigation measures on August 23, 2023.

The Morongo Band of Mission Indians (Consulting Tribe[s]) expressed interest in the Project.[63] The Morongo Band of Mission Indians indicated that the Project site is potentially sensitive for tribal cultural resources, regardless of the presence or absence of remaining surface artifacts and features. As such, the tribe requested archaeological and native monitors observe construction related ground disturbing activities, which may expose previously unknown tribal cultural resources and provided mitigation measures to reduce potential impacts to less than significant levels. Given there is the potential for the proposed Project to inadvertently discover or unearth previously undocumented Native American tribal cultural resources during ground-disturbing activities, **Mitigation Measures TCR-1 through TCR-8** are proposed.

Mitigation Measure TCR-1 **Native American Treatment Agreement.** Prior to the issuance of grading permits, the Applicant shall enter into a Tribal Monitoring Agreement with the Consulting Tribe(s) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited

[63] Email dated November 21, 2022, from the City of Redlands to LSA.

to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.

Mitigation Measure TCR-2 **Retention of Archaeologist**. Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a qualified archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The archaeologist shall conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session shall focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.

Mitigation Measure TCR-3 **Cultural Resource Management Plan**. Prior to any ground-disturbing activities the Project archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the Project site. This Plan shall be written in consultation with the Consulting Tribe(s) and shall include the following: approved Mitigation Measures (MM)/Conditions of Approval (COA), contact information for all pertinent parties, parties' responsibilities, procedures for each MM or COA, and an overview of the Project schedule.

Mitigation Measure TCR-4 **Pre-Grade Meeting.** The retained qualified archeologist and Consulting Tribe(s) representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.

Mitigation Measure TCR-5 **On-site Monitoring**. During all ground-disturbing activities the qualified archaeologist and the Native American monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and Native American monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in

consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.

Mitigation Measure TCR-6 **Inadvertent Discovery of Cultural Resources**. In the event that previously unidentified cultural resources are unearthed during construction, the qualified archaeologist and the Native American monitor shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.

If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the qualified archaeologist and Tribal Monitor[s]. The archaeologist shall notify the Lead Agency and Consulting Tribe(s) of said discovery. The qualified archaeologist, in consultation with the Lead Agency, the Consulting Tribe(s), and the Native American monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the qualified archaeologist in consultation with the Tribe[s] and the Native American monitor[s] and be submitted to the Lead Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference:

A. Full avoidance.

B. If avoidance is not feasible, Preservation in place.

C. If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction.

D. If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1)

Mitigation Measure TCR-7 **Inadvertent Discovery of Human Remains**. The Consulting Tribe(s) requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the Consulting Tribe(s).

A. Should human remains and/or cremations be encountered on the surface or during any and all ground-disturbing activities (i.e.,

clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98.

B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5.

C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98

D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial shall not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations shall be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the City Planning Department.

Mitigation Measure TCR-8 **Final Report**. The final report[s] created as a part of the Project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the City and Consulting Tribe(s) for review and comment. After approval of all parties, the final reports shall be submitted to the Eastern Information Center, and the Consulting Tribe(s).

With implementation of **Mitigation Measures TCR-1 through TCR-8,** impacts to tribal cultural resources would be **less than significant**

b. 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?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effect: As discussed above in Response 3.18(a), the Morongo Band of Mission Indians indicated that the Project site is potentially sensitive for tribal cultural resources regardless of the presence or absence of remaining surface artifacts and features. As such, there is the potential for the proposed Project to inadvertently discover or unearth previously undocumented Native American tribal cultural resources during ground-disturbing activities. With implementation of **Mitigation Measures TCR-1 through TCR-8**, impacts to tribal cultural resources would be **less than significant**.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm drainage, electrical power, natural gas or telecommunication facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.	☐	☐	☒	☐

The most recent version of CalEEMod (Version 2022.1) was used to estimate the Project's water demand and the amount of wastewater and solid waste that would be generated during operation of the proposed Project (**Appendix A-2**).

a. Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm drainage, electrical power, natural gas or telecommunication facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact

Discussion of Effects: Local governments and water districts are responsible for complying with federal regulations, both for wastewater plant operation and the collection systems (e.g., sanitary sewers) that convey wastewater to the wastewater treatment facility. Proper operation and maintenance are critical for sewage collection and treatment, as impacts from these processes can degrade water resources and

affect human health. For these reasons, publicly owned treatment works (POTWs) are subject to Waste Discharge Requirements (WDRs) to ensure that such wastewater facilities operate in compliance with water quality regulations set forth by the State. WDRs, issued by the State, establish effluent limits on the kinds and quantities of pollutants that POTWs can discharge. These permits also contain pollutant monitoring, recordkeeping, and reporting requirements. Each POTW that intends to discharge into the nation's waters must obtain a WDR prior to initiating its discharge.

All new development within the City is required to comply with all provisions of the NPDES program and the City's MS4, as enforced by the RWQCB. The proposed Project would result in typical wastewater discharges that would not require new methods or equipment for treatment that are not currently permitted for the Redlands Wastewater Treatment Facility, which would serve the proposed Project. Based on the CalEEMod results, the Project is estimated to produce 20,294,564 gallons of wastewater a year (55,601.5 gallons per day).[64] The City's wastewater treatment plant, Redlands Wastewater Treatment Facility, currently treats approximately 6 million gallons per day (mgd) and has the capacity to process up to 9.5 mgd.[65] The proposed Project would contribute approximately 0.9 percent[66] of the current wastewater treatment rate of the Redlands Wastewater Treatment Facility. The proposed Project would connect to existing wastewater infrastructure, which is currently operating within capacity. Sewer service to the Project site would be provided via lines that would connect to the existing 10-inch sewer line along West Lugonia Avenue and the existing 8-inch sewer line along Karon Street. Compliance with condition or permit requirements established by the City, WDRs outlined by the RWQCB, as well as requirements included in the NPDES permit, SWPPP, WQMP, and wastewater conveyance standards would ensure that wastewater discharges coming from the Project site and treated by the wastewater treatment facility system would not exceed applicable existing capacities. As such, implementation of the proposed Project would not require or result in the relocation or construction of new or expanded wastewater treatment infrastructure.

The City operates two surface water treatment plants and uses 15 wells, 37 booster pumps, 18 reservoirs, and 400 miles of transmission and distribution lines to provide water to its customers. Of this infrastructure, one booster station is used for non-potable water. The capacity of the City's 18 reservoirs is a total of 54.45 million gallons. The City's water treatment plants include the Henry Tate Water Treatment Plant and the Horace Hinckley Surface Water Treatment Plant. The Henry Tate Water Treatment Plant is a conventional water treatment plant built in 1967. The design capacity of the Tate plant is 20 million gallons per day (mgd). The City added enhancements to the Tate WTP to provide more water supply reliability by allowing State Water Project water to be mixed with Mill Creek water for treatment. The Horace Hinckley Surface Water Treatment Plant started operation in 1987 and has a permitted capacity of 14.5 mgd. The 10-year average flow (up to and including 2016) is 6,363 af at the Henry Tate Plant, and 6,697 af at the Horace Hinckley Plant.[67]

The vast majority of potable water demand originated from single-family residential uses (47 percent of the total), with the next-highest demand coming from multi-family residential uses (12 percent of the

[64] In the absence of an official wastewater generation rate, wastewater can be reasonably assumed to be 90 percent of water use. 22,549,516 of gallons per year * .9 = 20,294,564.4. 20,294,564.4 gpy = 55,601.5 gpd

[65] City of Redlands. Waste Water Treatment. Website. https://www.cityofredlands.org/post/wastewater-treatment (accessed October 27, 2023).

[66] 55,501.5 gal per day / 6 mgd = .00925.

[67] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.13-18. City of Redlands. July 21, 2017.

total). In 2015, single-family and multi-family residential water usage totaled 14,506 afy. Domestic water service to the Project site would be provided via existing lines beneath Karon Street and West Lugonia Avenue. The proposed Pennsylvania Avenue extension along the northern Project site boundary would include pipeline connections that would tie into the existing water line in Karon Street. Based on the CalEEMod results, the Project's estimated water usage would be 26,687,668 gpy (81.96 afy.[68] The proposed Project would contribute approximately 0.6 percent of the total single-family and multi-family residential water usage for the City based on the 2015 water usage data. As such implementation of the proposed Project would not require or result in the relocation or construction of new or expanded water supply infrastructure.

The Project site, in its existing undeveloped condition, is covered entirely by pervious surfaces and is generally flat. Because there are no storm drain connections available on the Project site, the overall drainage concept of the proposed Project is to reduce storm flows from the Project site through underground detention systems which would ultimately discharge the reduced flows onto the surrounding public streets. Storm flows from the underground detention/infiltration systems would discharge through sidewalk culverts on Lugonia Avenue and the proposed Pennsylvania Avenue extension. The underground detention chamber for storm flows draining north would have a total storage volume of 4,610 cubic feet (cf), and the underground detention chamber for southern drainage would have a total storage volume of 11,530 cf. As discussed in Section 3.10, Hydrology and Water Quality, the implementation of the proposed drainage system would comply with all applicable regulatory compliance measures and would not result in significant environmental effects from the construction of new or expanded storm drainage facilities.

Section 3.6, Energy, of this IS/MND discusses the Project's energy requirements (i.e., electricity, fuel consumption, and natural gas consumption). The proposed Project would consume nominal amounts of electricity and natural gas when compared to what is currently being generated and being consumed within the City of Redlands and within the region. The energy suppliers would have enough electricity and natural gas to adequately serve the proposed Project once it is developed and operational. According to the Project site plans, no existing electrical/natural gas infrastructure would need to be moved on site, and the proposed Project would connect into the existing utilities. Electrical service would be provided by SCE through connections to the existing overhead lines along Karon Street and West Lugonia Avenue. Two power poles on Lugonia Avenue, one power pole at the corner of Lugonia Avenue and Karon Street, and two power poles on Karon Street would be removed or relocated as part of the proposed Project. All other existing power poles in the vicinity of the Project site would be protected in place. Natural gas service would be provided by Southern California Gas Company (SoCalGas) through connections to the existing 2-inch line beneath West Lugonia Avenue. As such, implementation of the proposed Project would not require or result in the relocation or construction of new or expanded electricity or natural gas supply infrastructure, and there would be **no impact.**

Overall, impacts would be **less than significant,** and no mitigation measures are warranted.

[68] 1 US gal/yr = .0000031 afy

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact

Discussion of Effects: Water services are provided to the City and the Project site by the City's Municipal Utilities Department, which is party to the Upper Santa Ana River Watershed Integrated Regional Water Management Plan, which indicates the region is highly dependent on local water supplies. In particular, precipitation stored as groundwater provides approximately 67 percent of supplies during average years and over 70 percent of supplies during drought years.[69] Based on the CalEEMod results, the Project's estimated water usage would be 81.96 afy.

According to the City's General Plan EIR, during normal year water supply, the City would have a surplus of 28,383 acre feet in the year 2035.[70] During multiple dry years, the City would have a surplus of between 23,118 acre feet (third year) and 32,556 acre feet (first year) in the year 2035. Based on the Project's anticipated water demand of 81.96 afy, the proposed Project would demand up to 0.4 percent of the City's surplus water in 2035 during the third year of a worst-case multiple dry year scenario.[71] Since the City has sufficient water supplies to meet current and future development consistent with its General Plan through the year 2035, additional water storage and treatment facilities are not anticipated to be required through build out of the General Plan in 2035.[72] Impacts would be **less than significant,** and no mitigation is required.

c. Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact

Discussion of Effects: Please refer to the discussion under Response 3.19(a) above. Based on modeled flows, the proposed Project would contribute approximately 0.01 percent of the current wastewater treatment rates of the Redlands Wastewater Treatment Facility. The Redlands Wastewater Treatment Facility would have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, and impacts would be **less than significant.**

d. Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact

Discussion of Effects: Solid waste in the City of Redlands is primarily disposed of at the California Street Landfill, which is operated by the City's Facilities and Community Services Department and the San

[69] *Upper Santa Ana River Watershed Integrated Regional Water Management Plan.* Page ES-2. City of Redlands Municipal Utilities and Engineering Department, January 2015.

[70] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.14-20. City of Redlands. July 21, 2017.

[71] 69.95 afy of project demand ÷ 23,118 afy water surplus in 2035 during the third year of a worst-case multiple dry year scenario = 0.246 percent of the City's surplus water.

[72] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Pages 3.14-20, 3.14-27, and 3.14-28. City of Redlands. July 21, 2017.

Timoteo Sanitary Landfill operated by San Bernardino County. The California Street Landfill, located at 2151 Nevada Street in Redlands, accepts a maximum of 829 tons of solid waste per day, and as of July 25, 2018, has a remaining capacity of 5,168,162 cubic yards. The maximum permitted capacity is 11,400,000 cubic yards and it is anticipated to reach full capacity by 2042. This landfill currently accepts the following types of solid waste: construction/demolition debris, mixed municipal, other designated, and sludge (biosolids).[73] The San Timoteo Sanitary Landfill, located at San Timoteo Canyon Road in Redlands, accepts a maximum of 2,000 tons of solid waste per day, and as of April 30, 2019, has a remaining capacity of 12,360,396 cubic yards. The San Timoteo Sanitary Landfill's maximum permitted capacity is 22,685,785 cubic yards and it is anticipated to reach full capacity by 2039.[74]

The Project site is currently undeveloped and under existing conditions, produces no solid waste. Implementation of the proposed Project would increase the Project site's population by 1,441 residents. Based on the CalEEMod results for the proposed Project, the proposed Project would generate an estimated 101.08 tons of solid waste per year (0.3 tons per day). The 0.3 tons per day of solid waste generated by the proposed Project would be 0.04[75] percent of the maximum solid waste accepted per day by the California Street Landfill and 0.02[76] percent of the maximum solid waste accepter per day at the San Timoteo Sanitary Landfill. Overall, the proposed Project solid waste generation contribution to these landfills would be nominal and would not exceed the daily permitted capacities of these facilities. Impacts would be **less than significant,** and no mitigation measures are warranted.

e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact

Discussion of Effects: All land uses within the City that generate waste are required to coordinate with a waste hauler to collect solid waste on a common schedule as established in applicable local, regional, and State programs. Additionally, all development within the City, including the proposed Project, is required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), AB 939 (CalRecycle), and other local, State, and federal solid waste disposal standards.

The proposed Project would be required to comply with applicable provisions of AB 1327, AB 939, and AB 341 related to solid waste as a matter of policy. Impacts would be **less than significant,** and no mitigation measures are warranted.

[73] CalRecycle. 2022. Solid Waste Information System (SWIS) Facility Detail, California Street Landfill (36-AA-0017). Website: https://www2.calrecycle.ca.gov/SolidWaste/Site/Details/2637 (accessed October 27, 2023).

[74] Ibid.

[75] 0.3 tons per day / 829 tons per day = 0.00036188.

[76] 0.3 tons per day / 2,000 tons per day = 0.00015

3.20 WILDFIRE

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact

Discussion of Effect: Please refer to Response 3.9(f) of this IS/MND for a discussion on impacts pertaining to the Project's potential to substantially impair an adopted emergency response plan or emergency evacuation plan. **Less than significant impacts** would occur, and no mitigation is required.

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

Discussion of Effect: The Project site is within a LRA Non-Very High Fire Hazard Severity Zone according to CALFIRE mapping.[77] The General Plan EIR, Figure 3.7-3, indicates that the Project site is located in an area designated as a Moderate Fire Level Threat.[78] No hillside areas or natural areas prone to wildfires are

[77] CAL FIRE. Fire Hazard Severity Zones Maps, City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed October 27, 2023).

[78] City of Redlands, Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan, Chapter 3.7: Hazards and Hazardous Materials, Figure 3.7-3: Fire Hazards and Fire Safety Services.

located in the immediate vicinity of the Project site as this area of Redlands is urbanized with residential neighborhoods and commercial areas. Winds may push wildfire smoke into the area of the proposed Project; however, these conditions would be temporary and if conditions warranted, the local air quality control district would warn residents of potential impacts due to wildfire smoke. The proposed Project would be required to implement and abide to Redlands General Plan policies (specifically Policies 7-A.83 through 7-A.106) that promote fire safety through agency cooperation and management of risk factors; adhere to applicable building and fire codes; and implement existing programs such as weed abatement and education under the Redlands Fire Department; all of which would reduce the wildfire risk at the Project site. Due to the nature of the Project site and surrounding areas, on-site and adjacent areas have minimal capability to support a wildfire. Impacts related to this issue would be **less than significant**; therefore, no mitigation is warranted.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may result in temporary or ongoing impacts to the environment?

No Impact

Discussion of Effect: The Project site is located an urbanized area served by existing water and roadway infrastructure and does not require the installation or maintenance of wildland protection features such as fire roads, fuel breaks, or emergency water sources. In the absence of any need for such features, **no impact** (temporary or ongoing) would result from development of the proposed uses. No mitigation is required.

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?

No Impact

Discussion of Effect: Similar to adjacent properties, the Project site is flat. No hillside areas or natural areas prone to wildfire fire are located in the immediate Project vicinity. Although the Project site is adjacent to fallow agriculture fields, this area is not prone to wildfires. As the Project would not expose persons or structures to post-fire slope instability or post-fire drainage, **no impact** would occur. In the absence of any impact, no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation Incorporated.

Discussion of Effects: The proposed Project's impacts to biological resources and cultural resources were analyzed in this IS/MND, and all direct, indirect, and cumulative impacts were determined to have **no impact**, a **less than significant impact**, or reduced to a **less than significant impact with mitigation incorporated**.

As discussed in Section 3.4, Biological Resources, no special-status plant species or special-status vegetation communities were observed within the Project site during the field survey. One special-status wildlife species, the Loggerhead shrike (*Lanius ludovicianus*; a State SSC), was observed during the field survey. However, due to a lack of nesting habitat and this species' status as a breeding bird along the Southern California coastal slope, the bird that was observed was more likely a transient or lingering

wintering bird that hadn't yet made it back to its breeding territory. In addition, the implementation of the proposed Project would not cause fish or wildlife populations to drop below self-sustaining levels or restrict the movement/distribution of rare or endangered species. With implementation of **Mitigation Measure BIO-1**, potential impacts to any threatened or endangered species would be reduced to a **less than significant** level. In addition, potential impacts to migratory and nesting birds would be reduced to a **less than significant** level with implementation of **Mitigation Measure BIO-2.**

As discussed in Section 3.5, Cultural Resources, development of the proposed Project would not affect known historic archaeological or paleontological resources. There are no known unique ethnic or cultural values associated with the Project site, nor are known religious or sacred uses associated with the Project site. Implementation of **Mitigation Measures CUL-1** and **CUL-2** would reduce impacts to known, unknown, or potential cultural resources that may be located within the Project site to **less than significant** levels. Furthermore, as discussed in Section 3.18, Tribal Cultural Resources, the Morongo Band of Mission Indians indicated that the Project site is potentially sensitive for tribal cultural resources regardless of the presence or absence of remaining surface artifacts and features. As such, the tribe requested that archaeological and native monitors observe construction related ground disturbing activities which may expose previously unknown tribal cultural resources and provided mitigation measures to reduce potential impacts to less than significant levels. Implementation of **Mitigation Measures TCR-1** through **TCR-8** would reduce impacts to previously unknown tribal cultural resources that may be located within the Project site to **less than significant** levels. Additionally, the Applicant is required to comply with California Code of Regulations (CCR) Section 15064.5(e), California Health and Safety Code Section 7050.5, and Public Resources Code (PRC) Section 5097.98 as a matter of policy in the event human remains are encountered at any time. To ensure an exclusionary buffer of 100 feet around any encounter with human remains, **Regulatory Compliance Measure CUL-1** is required. Adherence to **Mitigation Measures CUL-1, CUL-2, TCR-1 through TCR-8**, and **Regulatory Compliance Measure CUL-1**, as well as regulations governing human remains, would reduce potential impacts to cultural and paleontological resources to **less than significant with mitigation incorporated**.

With the aforementioned mitigation measures and regulatory compliance measures, impacts to biological resources and cultural resources would be **less than significant with mitigation incorporated**.

b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Less Than Significant Impact

Discussion of Effects: The proposed Project has either **no impact**, a **less than significant impact**, or a **less than significant impact with mitigation incorporated** with respect to all environmental issues pursuant to CEQA. Due to the limited scope of direct physical impacts to the environment associated with the proposed Project, the Project's impacts are primarily project specific in nature.

The cumulative effects resulting from build out of the City's General Plan were previously identified in the General Plan EIR. The type, scale, and location of the proposed Project is consistent with the General Plan. Because of this consistency, the potential cumulative impacts of the proposed Project would fall within the impacts identified in the City's General Plan EIR. The Applicant is required to pay "fair share"

development impact fees associated with the proposed Project. The proposed Project would have a **less than cumulatively considerable impact**.

c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Based on the analysis provided throughout this IS/MND, with incorporation of mitigation measures and regulatory compliance measures, the proposed Project would not result in any environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Potential impacts on human beings would be **less than significant with mitigation incorporated.**

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4.0 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 MITIGATION MONITORING REQUIREMENTS

Public Resources Code (PRC) Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that where significant effects have been identified, the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes that have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

- The lead agency shall specify the location and custodian of the documents or other materials that constitute the record of proceedings upon which its decision is based.

- A public agency shall provide measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents that address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

- Prior to the close of the public review period for a Draft Mitigated Negative Declaration (MND), a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either (1) submit to the lead agency complete and detailed performance objectives for mitigation measures that would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or (2) refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures that mitigate impacts to resources that are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance with that requirement by a responsible agency or agency having jurisdiction over natural resources affected by a project shall not limit the authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

4.2 MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City of Redlands (City) to ensure that all mitigation measures adopted as part of the proposed Neighborhoods at Lugonia Village Project (Project) will be carried out as described in the Final IS/MND.

Table 4.A lists each of the mitigation measures (MM) and regulatory compliance measures (RCM) specified in the Draft IS/MND and identifies the party or parties responsible for implementation and monitoring of each measure.

Table 4.A: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measure or Regulatory Compliance Measures		Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
3.1: Aesthetics				
The proposed project would not result in any significant adverse impacts related to aesthetics. No mitigation is required.				
3.2: Agricultural and Forestry Resources				
The proposed project would not result in any significant adverse impacts related to agriculture and forestry resources. No mitigation is required.				
3.3: Air Quality				
The proposed project would not result in any significant adverse impacts related to air quality. No mitigation is required.				
3.4: Biological Resources				
MM BIO-1	A pre-construction burrowing owl clearance survey shall be conducted no less than 14 days prior to any vegetation removal or ground-disturbing activities to avoid impacts to burrowing owls and/or occupied burrows. The pre-construction clearance survey shall be conducted by a qualified biologist and in accordance with the methods outlined in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012). A second clearance survey shall be conducted within 24 hours prior to ground disturbance. Documentation of surveys and findings shall be submitted to the City of Redlands for review and file. If no burrowing owls or occupied burrows are detected, Project activities may begin, and no additional avoidance and minimization measures shall be required. If an occupied burrow is found outside, but within 500 feet, of the development footprint, the qualified biologist shall establish a "no-disturbance" buffer around the burrow location(s). The size of the "no-disturbance" buffer shall be determined in consultation with the California Department of Fish and Wildlife (CDFW) and be based on the species status (i.e., breeding, non-breeding) and proposed level of disturbance. If an occupied burrow is found within the development footprint and cannot be avoided, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to CDFW for approval prior to initiating Project activities.	Qualified Biologist / Director of the City of Redlands Department of Development Services, or designee	No less than 14 days prior to any vegetation removal or ground-disturbing construction activities. A second clearance survey shall be conducted within 24 hours prior to ground disturbance.	☐
MM BIO-2	Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey shall be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.	Qualified Biologist / Director of the City of Redlands Department of Development Services, or designee	No more than 3 days prior to any vegetation removal or ground disturbing activities.	☐

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	If Project-related activities are to be initiated during the nesting season (January 1 to August 31), a pre-construction nesting bird clearance survey shall be conducted by a qualified biologist no more than three (3) days prior to the start of any vegetation removal or ground disturbing activities. The qualified biologist shall survey all suitable nesting habitat within the Project impact area, and areas within a biologically defensible buffer zone surrounding the Project impact area. If no active bird nests are detected during the clearance survey, Project activities may begin, and no additional avoidance and minimization measures shall be required. If an active bird nest is found, the species shall be identified, and a "no-disturbance" buffer shall be established around the active nest. The size of the "no-disturbance" buffer shall be increased or decreased based on the judgement of the qualified biologist and level of activity and sensitivity of the species. The qualified biologist shall periodically monitor any active bird nests to determine if Project-related activities occurring outside the "no-disturbance" buffer disturb the birds and if the buffer should be increased. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, Project activities within the "no-disturbance" buffer may occur following an additional survey by the qualified biologist to search for any new bird nests in the restricted area.			
3.5: Cultural Resources				
MM CUL-1	Prior to the issuance of a grading permit, the Applicant shall provide the Director of the City of Redlands Department of Development Services, or designee, with evidence that it has retained the services of a qualified archaeologist that meets the Secretary of the Interior standards on an on-call basis. Archaeological monitoring shall occur during all excavation activities down to a depth of 3 feet within 100 feet of the former residence location. In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 100-foot buffer) shall cease and the project archaeologist shall assess the find and determine appropriate treatment. Work on the other portions of the Project outside of the buffered area may continue during this assessment period.	Qualified Archaeologist / Director of the City of Redlands Department of Development Services, or designee	Prior to the issuance of a grading permit.	☐
MM CUL-2	If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the qualified archaeologist shall develop a Monitoring and Treatment Plan for the remainder of the Project site. The Monitoring and Treatment Plan shall be developed in coordination with the Applicant and the City. The Applicant shall secure a monitoring agreement with the archaeologist prior to the recommencement of work, and the archaeologist shall monitor during the remainder of the ground disturbance activities on the Project site and implement the Plan accordingly.	Qualified Archaeologist / Director of the City of Redlands Department of Development Services, or designee	Prior to the recommencement of work, and for the remainder of the ground disturbing activities.	☐

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
RCM CUL-1	In the event that human remains or funerary objects are encountered on the Project site during any construction activities associated with the Project, work within 100 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the Applicant shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Redlands Department of Development Services, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.	Construction Contractor and County Coroner / Director of the City of Redlands Department of Development Services, or designee	During construction activities.	☐
3.6: Energy				
The proposed project would not result in any significant adverse impacts related to energy. No mitigation is required.				
3.7: Geology and Soils				
SC GEO-1	Compliance with applicable California Building Code and Project-specific geotechnical recommendations. Prior to the approval of grading and/or building permits, the Applicant shall provide evidence to the City of Redlands for review and approval that on-site structures, features, and facilities have been designed and will be constructed in conformance with applicable provisions of the California Building Code in effect at the time of City review and the recommendations cited in the Project-specific Geotechnical Engineering Investigation Report. This measure shall be implemented to the satisfaction of the Director of the City of Redlands Department of Development Services, Building and Safety Division, or designee.	Applicant / City of Redlands, or designee	Prior to the approval of grading and/or building permits.	☐
MM GEO-1	Prior to commencement of any grading activity on the Project site, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the Director of the City of Redlands Department of Development Services, Planning Division, or designee. The qualified paleontologist shall be present at the pre-grade conference and shall establish procedures	Qualified Paleontologist / Director of the City of Redlands Department of Development	Prior to the commencement of any grading activities.	

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	for paleontological resource surveillance and procedures for temporarily halting and redirecting work to permit sampling and identification and evaluation of fossils. If the resources are deemed to be significant, the paleontologist shall determine appropriate actions, in cooperation with the Applicant, which ensure proper exploration and/or salvage. Full-time monitoring and salvage efforts will be necessary whenever previously undisturbed sediments are being disturbed (8 hours per day during grading or trenching activities). Once the earth moving is 50 percent completed, monitoring may be reduced if no fossils are being recovered. The paleontologist shall be empowered to temporarily divert or direct grading operations to facilitate assessment and salvaging of exposed fossils. Collection and processing of matrix samples through fine screens will be necessary to salvage any micro-vertebrate remains. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP).	Services, Planning Division, or designee	During all rough grading and other significant ground-disturbing activities.	☐
3.8: Greenhouse Gas Emissions				
The proposed project would not result in any significant adverse impacts related to greenhouse gas emissions. No mitigation is required.				
3.9: Hazards and Hazardous Materials				
The proposed project would not result in any significant adverse impacts related to hazards and hazardous materials. No mitigation is required.				
3.10: Hydrology and Water Quality				
RCM HYD-1	**Construction General Permit.** Prior to issuance of a grading permit, the Applicant shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The Applicant shall provide the Waste Discharge Identification Number (WDID) to the Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee, to demonstrate proof of coverage under	Applicant / Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee	Prior to issuance of a grading permit.	

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the proposed Project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.			☐
RCM HYD-2	Prior to the commencement of any land disturbing activities, the Applicant shall obtain coverage under the Construction General Permit and develop a Stormwater Pollution Prevention Plan to the City for review and approval that incorporates Best Management Practices to protect water quality during construction activities pursuant to Section 13.54 of the City Municipal Code.	Applicant / Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee	Prior to the commencement of any land disturbing activities.	☐
RCM HYD-3	Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (Final WQMP) to the Director of the City of Redlands Department of Development Services review and approval in compliance with the requirements of the Santa Ana RWQCB's NPDES Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit). The Final WQMP shall specify the BMPs to be incorporated into the Project design to target pollutants of concern in storm water runoff from the Project site and the necessary operation and maintenance activity for each BMP. The City shall ensure that the BMPs specified in the Final WQMP are incorporated into the final Project design. The proposed BMPs specified in the Final WQMP shall be incorporated into the grading and development plans submitted to the City for review and approval. Project occupancy and operation shall be in accordance with the schedule outlined in the WQMP.	Applicant / Director of the City of Redlands Department of Development Services, Planning Division, or designee	Prior to issuance of a grading permit.	☐
3.11: Land Use and Planning				
The proposed project would not result in any significant adverse impacts related to land use and planning. No mitigation is required.				
3.12 Mineral Resources				
The proposed project would not result in any significant adverse impacts related to mineral resources. No mitigation is required.				

Table 4.A: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measure or Regulatory Compliance Measures		Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
3.13: Noise				
SC NOI-1	Compliance with Sections 8.06.090F (Noise Disturbances Prohibited) and Chapter 8.06.120 (Exemptions) of the City of Redland's (City) Municipal Code. Construction activities, including operating or causing the operation of any tools or equipment used in site preparation, construction, drilling, repair, alteration, grading, paving, and/or architectural coating shall be restricted to the hours of 7:00 a.m. to 8:00 p.m. Mondays through Saturdays, and are prohibited at any time on Sundays and holidays unless permission is given by the City and noise levels remain below the City's noise level standards. All mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order and shall be maintained so that vehicles and their loads are secured from rattling and banging.	Construction Contractor / City of Redlands	During all construction activities.	☐
3.14: Population and Housing				
The proposed project would not result in any significant adverse impacts related to population and housing. No mitigation is required.				
3.15: Recreation				
The proposed project would not result in any significant adverse impacts related to recreation. No mitigation is required.				
3.16: Public Services				
The proposed project would not result in any significant adverse impacts related to public services. No mitigation is required.				
3.17: Transportation				
MM TRA-1	Prior to submission of building permits, the Applicant shall coordinate with the City's Engineering Division to determine the anticipated cost of evaluating and optimizing signal timing parameters at the intersection of Tennessee Street and West Lugonia Avenue. The Applicant shall submit payment to the Engineering Division covering the determined cost in full, consistent with County guidelines. The Building and Safety Division shall confirm the completion of payment prior to issuing building permits. Upon conclusion of Project construction, the Building and Safety Division shall not issue a Certificate of Occupancy to the Applicant until receiving confirmation from the City that signal optimization has been completed.	Applicant / City of Redlands Building and Safety Division	Prior to submission and issuance of building permits.	☐
3.18: Tribal Cultural Resources				
MM TCR-1	**Native American Treatment Agreement.** Prior to the issuance of grading permits, the Applicant shall enter into a Tribal Monitoring Agreement with the Consulting Tribe(s) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to	Applicant / Consulting Tribe(s) and Tribal Monitor	Prior to the issuance of grading permits.	☐

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.			
MM TCR-2	**Retention of Archaeologist.** Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a qualified archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The archaeologist shall conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session shall focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.	Qualified Archaeologist / Consulting Tribe(s)	Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits.	☐
MM TCR-3	**Cultural Resource Management Plan.** Prior to any ground-disturbing activities the Project archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the Project site. This Plan shall be written in consultation with the Consulting Tribe(s) and shall include the following: approved Mitigation Measures (MM)/Conditions of Approval (COA), contact information for all pertinent parties, parties' responsibilities, procedures for each MM or COA, and an overview of the Project schedule.	Project Archaeologist / Consulting Tribe(s)	Prior to any ground-disturbing activities.	☐
MM TCR-4	**Pre-Grade Meeting.** The retained qualified archeologist and Consulting Tribe(s) representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.	Qualified Archaeologist / Consulting Tribe(s)	Prior to any ground-disturbing activities.	☐
MM TCR-5	**On-site Monitoring.** During all ground-disturbing activities the qualified archaeologist and the Native American monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and	Construction Contractor, Qualified Archaeologist, and Native American	During all ground-disturbing activities.	☐

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	Native American monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.	Monitor / Consulting Tribe(s)		
MM TCR 6	**Inadvertent Discovery of Cultural Resources.** In the event that previously unidentified cultural resources are unearthed during construction, the qualified archaeologist and the Native American monitor shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed. If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the qualified archaeologist and Tribal Monitor[s]. The archaeologist shall notify the Lead Agency and Consulting Tribe(s) of said discovery. The qualified archaeologist, in consultation with the Lead Agency, the Consulting Tribe(s), and the Native American monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the qualified archaeologist in consultation with the Tribe[s] and the Native American monitor[s] and be submitted to the Lead Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference: A. Full avoidance. B. If avoidance is not feasible, Preservation in place. C. If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction. D. If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1)	Construction Contractor, Qualified Archaeologist, and Native American Monitor / Consulting Tribe(s)	During construction.	☐
MM TCR-7	**Inadvertent Discovery of Human Remains.** The Consulting Tribe(s) requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the Consulting Tribe(s).	Construction Contractor / Consulting Tribe(s)	During construction.	

Table 4.A: Mitigation and Monitoring Reporting Program

	Draft IS/MND Mitigation Measure or Regulatory Compliance Measures	Responsible Party / Approving Agency	Timing for Mitigation Measure	Tracking
	A. Should human remains and/or cremations be encountered on the surface or during any and all ground-disturbing activities (i.e., clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98. B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5. C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98 D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial shall not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations shall be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the City Planning Department.			☐
MM TCR-8	**Final Report.** The final report[s] created as a part of the Project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the City and Consulting Tribe(s) for review and comment. After approval of all parties, the final reports shall be submitted to the Eastern Information Center, and the Consulting Tribe(s).	Qualified Archaeologist / Consulting Tribe(s)	Upon completion of tribal cultural resource monitoring activities.	☐
3.19: Utilities and Service Systems				
The proposed project would not result in any significant adverse impacts related to utilities and service systems. No mitigation is required.				
3.20: Wildfire				
The proposed project would not result in any significant adverse impacts related to wildfire. No mitigation is required.				

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