Tentative Tract Map No. 20571 – Madera at Citrus Trail Residential Project

Initial Study
and
Mitigated Negative Declaration

Lead Agency:

City of Redlands
35 Cajon St., Ste. 20/P.O. Box 3005
Redlands, CA 92373
Office 909.798.7555 ext. 7344

Prepared by:

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1650 Spruce Street, Suite 106
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- This document is designed for double-sided printing -

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1 Introduction

The City of Redlands ("Lead Agency") received a development proposal from Soni 2012 Irrevocable Trusts ("applicant") for a Tentative Tract Map (No. 20571) that would develop 103 new single-family homes, as well as a 0.63-acre community park (together these comprise the "project"), on a 9.01-acre parcel located at the northwest corner of Colton Avenue and Wabash Avenue in the City of Redlands, California. The development proposal and associated land use applications constitute a *project* that is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code §§ 21000, *et seq.*), and the CEQA Guidelines (14 California Code of Regulations §§ 15000, *et. seq.*).

This Initial Study was prepared to assess the short-term, long-term, and cumulative environmental impacts resulting from the proposed project. This report was prepared to comply with CEQA Guidelines § 15063, which sets forth the required contents of an Initial Study. These include:

- A description of the project, including the location of the project (See Section 2);
- Identification of the environmental setting (See Section 2.10);
- Identification of environmental effects by the use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (See Section 4);
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (See Section 4.13);
- Discussion of ways to mitigate significant effects identified, if any (See Section 5); and,
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (See Section 6).

1.1 – Purpose of CEQA

CEQA § 21000 of the California Public Resources Code provides as follows:

The Legislature finds and declares as follows:

a) The maintenance of a quality environment for the people of this state now and in the future, is a matter of statewide concern.
b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.
f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.
g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the state to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.
j) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.
k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.
n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs, and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in CEQA § 21002, quoted below:

> The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event that specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.

1.2 – Public Comments

Comments from all agencies and individuals are invited regarding the information contained in this Initial Study. Such comments should explain any perceived deficiencies in the assessment of impacts in the Initial Study. To request an appointment to review these materials, please contact:

Ryan Murphy
Senior Planner
City of Redlands
35 Cajon St., Ste. 20
Redlands, CA 92373
Office 909.798.7555 ext. 7308
Email: rmurphy@cityofredlands.org

Following a 30-day period of circulation and review of the Initial Study, all comments would be considered by the City of Redlands prior to adoption.

1.3 – Availability of Materials

All materials related to the preparation of this Initial Study are available for public review. To request an appointment to review these materials, please contact Ryan Murphy, Senior Planner, via telephone at (909) 798-7555 ext. 7308, or via email at RMurphy@CityofRedlands.org. The Initial Study and Mitigated Negative Declaration are also made available online at the City of Redlands website.

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2 Project Description

2.1 – Project Title

Specific Plan No. 66 – Madera at Citrus Trail Residential Project

2.2 – Lead Agency Name and Address

City of Redlands
Planning Department
35 Cajon Street, Suite 15-A
Redlands, California 92373
909-798-7555

2.3 – Contact Person and Phone Number

Ryan Murphy, Senior Planner
909-798-7555, ext. 2

2.4 – Project Location

The City of Redlands is located in southwest San Bernardino County adjacent to the San Bernardino/Riverside County line, approximately 12 miles northeast of downtown Riverside (see Exhibit 1, Regional Context Map). The project site is comprised of a single undeveloped, 9.01-acre parcel located on the northwest corner of Colton Avenue and Wabash Avenue in the City of Redlands, California (see Exhibit 2, Project Vicinity Map). The site is located approximately 1.5 miles northeast of Interstate 10 (I-10), 3.5 miles east of Interstate 210 (I-210), and 1.3 miles south of Redlands Municipal Airport. The surrounding uses include a mobile home park to the west, single-family residences to the north, industrial land uses to the east (across Wabash Avenue), and a mobile home park and the Orange Blossom Trail to the south (across East Colton Avenue).

- Latitude 34° 03’ 47” North, Longitude 117° 08’ 21” West
- APN# 0168-291-02

2.5 – Project Sponsor’s Name and Address

Soni 2012 Irrevocable Trusts
1423 Georgina Avenue
Santa Monica, CA 90402
(949)-922-7075
Contact: Vanita Soni Puri

2.6 – General Plan Land Use Designation

The current general plan land use designation is Low Density Residential, which is described as follows, according to the General Plan Land Use Element:

- Low-Density Residential: This land use category designates areas intended to be developed at densities of up to 6 du/ac. This category is not intended to be applied in areas where slopes

exceed 15 percent. The intent of this land use category is to provide for areas of single-family residential developments. Consistent lots sizes include 7,200 square feet (6.0 units per gross acre) and 10,000 square feet (4.3 units per gross acre).

A General Plan Amendment is proposed as part of the project to change the land use designation from Low Density Residential to Medium Density Residential which is described as follows, according to the General Plan Land Use Element:

- Medium-Density Residential designates areas intended to be developed at up to 15 du/ac. The intent of this land use category is to provide areas for the development of attached, detached, and/or mixed residential uses with a range of densities and housing types. Areas designated Medium Density are generally more suitable for development in the low- to mid-level of the permitted density range for this category. Housing types may include detached single-family dwellings with one or more dwellings per lot, two-family dwellings (two attached dwellings), and multi-family dwellings (three or more attached dwellings).

2.7 – Zoning District

The current zoning designation of the project site is Single Family Residential (R-1). A Specific Plan is proposed, which will change the zoning designation from Single Family Residential (R-1) to Madera at Citrus Trail Specific Plan, which would be a new Specific Plan, and is included as a component of the project.

2.8 – Project Description

The proposed project includes Tentative Tract Map No. 20571, which would include the construction of 103 new single-family homes, consisting of approximately 216,567 square feet of gross building space, along with associated landscaping and roadway improvements (see Exhibit 3, Conceptual Site Plan). Development of the project would also include 206 garage parking stalls and 70 guest parking stalls; totaling 276 parking stalls. Approximately 65,470 square feet of the site would be landscaped. The remainder of the site would be paved, including sidewalks, streets within the neighborhood, and driveways. Based on the preliminary estimates, grading for the project would require cut of approximately 33,287 cubic yards (cy), and fill of 40,918 cy, requiring approximately 7,631 cubic yards of soil import during grading.

Additional components of the project include: General Plan Amendment (GPA) from Low Density Residential to Medium Density Residential; New Specific Plan (residential development, with applicable development standards); and Tentative Tract Map (subdivision for new residential tract). Other project details are described below.

<u>Architecture</u>
All of the proposed plan types would have two stories and two-car garages. The proposed single-family homes would range in height from 27 feet to 30 feet (see Exhibit 4, Project Elevations). The proposed single-family homes would be designed in three plan types (P1, P2, and P3), with various architectural styles associated with each plan (see Exhibit 5, Floor Plans). Plan P1 is a 1,544-square foot house, with 3 bedrooms, 2.5 bathrooms, and an attached 408-square foot garage. Plan P2 is a 1,700-square foot house, with 3 bedrooms, 2.5 bathrooms, and an attached 409-square foot garage. Plan P3 is a 1,858-square foot house, with 4 bedrooms, 3.5 bathrooms, and an attached 407-square foot garage. Forty (40) of the proposed housing units would be plan type P1, twenty-seven (27) of the proposed units would be plan type P2, and thirty-six (36) of the proposed units would be plan type P3.

Landscaping
Approximately 65,470 square feet of the site would be landscaped (see Exhibit 6, Conceptual Landscape Plan). Landscaping includes the front, side, and backyards of the housing units, sidewalk landscaping within the development area and on outwardly facing Colton Avenue and Wabash Avenue, as well as the community park located within the center of the project site.

Proposed Private Park
The project involves the development of a 0.63 acre private park (see Exhibit 7, Proposed Private Park). The park would be located off of "A Street" in the center of the proposed community and would include: an area for children with recreational "climb and slide" equipment, an enclosed dog park, open turf, and a sitting area with shaded benches and two outdoor grills. Newly planted trees would also encircle the community park.

Access and On-Site Circulation
Passenger vehicle access to and from the project site would be provided via three new streets connecting to Colton Avenue and Wabash Avenue. "A" Street would run in a north – south direction, and connect with Colton Avenue. "B" and "C" Streets would run in an east – west direction, both connecting to Wabash Avenue and "A" Street. From these streets, there would be drive aisles that would provide direct access to residential units. The additional information on street characteristics is provided below.

A Street:
- 32-foot-wide street provides access to six aisles.
    - All aisles are 20 feet wide.
    - One aisle provides access to three housing units, five aisles provide access to six housing units each.
    - Access to two housing units located at the northern end of the street would be provided via driveways connecting directly to A Street.
- 20 parking stalls for the community open space park located in the center of the development.
- Street parking is available.

B Street:
- 36-foot-wide street provides access to six aisles.
    - One aisle is 20 feet wide, providing access to three housing units.
    - Two aisles are 24 feet wide, providing access to eight housing units each.
    - Three aisles are 20 feet wide, providing access to six housing units each.
- Street parking is available.

C Street:
- 36-foot-wide street provides access to six aisles.
    - All aisles are 20 feet wide.
    - One aisle provides access to three housing units.
    - Two aisles provide access to six housing units each.
    - Three aisles provide access to four housing units each.
- Street parking is available.

There would be 276 parking spaces provided on the project site, 70 of which would be allocated for guest parking spaces, equating to approximately 2.7 spaces per residence.

Fencing
There would be four types of fencing as well as pilasters connecting the fencing.

- Around the perimeter of the project facing Colton Avenue and Wabash Avenue there would be 2-sided concrete masonry unit (CMU) walls.
- Privacy vinyl fencing would be built between housing units and connect to sections of the outside facing walls. Vinyl fencing would be white and would be 5 foot 6 inches in height.
- Connecting the vinyl fencing and perimeter walls would be perimeter stucco pilasters. The pilasters would be 7 feet tall and would line the perimeter of the development.
- Privacy stucco walls would separate the outward facing portions of the houses. The walls would be 6 feet tall, 8 inches wide, and would be built with 6 inch CMU blocks, with 2 inch thick stucco finish.
- A black tubular steel fence would surround an enclosed dog park within the open space community park within the development.

Drainage and Wet Utilities
The proposed project would install new onsite water and sewer lines that would connect to existing lines in the surrounding streets. The proposed project would have two drainage areas, the first comprising the majority area of the site, the second being smaller, located at the southwest corner of the site. Stormwater would be captured and infiltrated on site through two subsurface infiltration facilities. Flows would be collected by catch basins and conveyed, via the on-site storm drain, to the underground infiltration facility where filters would remove sediment, debris, and various pollutants.

Construction Schedule
Project construction is anticipated to begin in early-2024 and last approximately 14 months, based on default assumptions generated by the California Emissions Estimator Model (CalEEMod). As mentioned above, approximately 7,631 cubic yards of soil would need to be imported during the grading phase. The proposed project's estimated construction schedule and anticipated equipment usage is listed in Table 1 (Project Construction Schedule). The project is anticipated to be operational by early 2025.

Table 1
Project Construction Schedule

Construction Phase	Duration (Days)[(A)]	Typical Equipment Used[(B)]
Site Preparation	10	Dozer, Tractor/Loader/Backhoe
Grading	20	Excavator, Grader, Dozer, Backhoe
Building Construction	230	Crane, Forklift, Backhoe, Generator, Welder
Paving	20	Paver, Roller, Paving Equipment
Architectural Coating	20	Air Compressor

Source: MIG, 2023. See Appendix A.
(A) Days refers to total active workdays in the construction phase, not calendar days.
(B) The typical equipment list does not reflect all equipment that would be used during the construction phase. Not all equipment would operate eight hours per day each workday.

2.9 – Surrounding Land Uses

Surrounding land uses are summarized in Table 2 (Surrounding Land Uses), below.

Table 2
Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Existing: Low-Density Residential Proposed: Medium Density Residential	Existing: R-1 (Single Family Residential) Proposed: Specific Plan	Undeveloped Land
North	Low-Density Residential	R-1 (Single Family Residential)	Single Family Housing
South	Medium-Density Residential	R-1 (Single Family Residential)	Mobile Home Park; Crafton Park; Single-Family Housing
East	Light Industrial	M-1 (Industrial); IC (Industrial) in unincorporated County area	Surface Parking/ Industrial Warehouse Building; Industrial buildings & uses (in unincorporated area)
West	Medium-Density Residential; Low-Density Residential	R-1 (Single Family Residential)	Mobile Home Park; Single Family Housing

2.10 – Environmental Setting

The project site is located on an approximately 9.01-acre, undeveloped parcel of land covered in non-native grass and vegetation in a developed portion of the City of Redlands, California. The site is located at the northwestern corner of Colton Avenue and Wabash Avenue, in an area of the City characterized by residential, commercial, and light industrial land uses. The project site is flat, with an elevation ranging from approximately 1,604 to1,618 feet above mean sea level (AMSL). Single family residences are located to the north, south, and west of the project site. To the east of the project site are commercial uses including Mission Steel Fabrication, C&S Powder Coating, and STOR-N-LOCK Self Storage. The project site is 80 feet north of the Orange Blossom Trailhead, and approximately 350 feet north of Crafton Park. The project site is located approximately 0.8 miles west of Redlands East Valley High School, and approximately 960 feet north of Crafton Elementary School.

2.11 – Required Approvals

The permits from the lead agency that are necessary include:

- Planning Commission Review and Approval
- Tentative Tract Map No. 20571
- General Plan Amendment
- Specific Plan No. 66
- Compliance with the requirements of CEQA
- Grading Permits and Encroachment Permits
- Building Permits

2.12 – Other Public Agency Whose Approval is Required

- None

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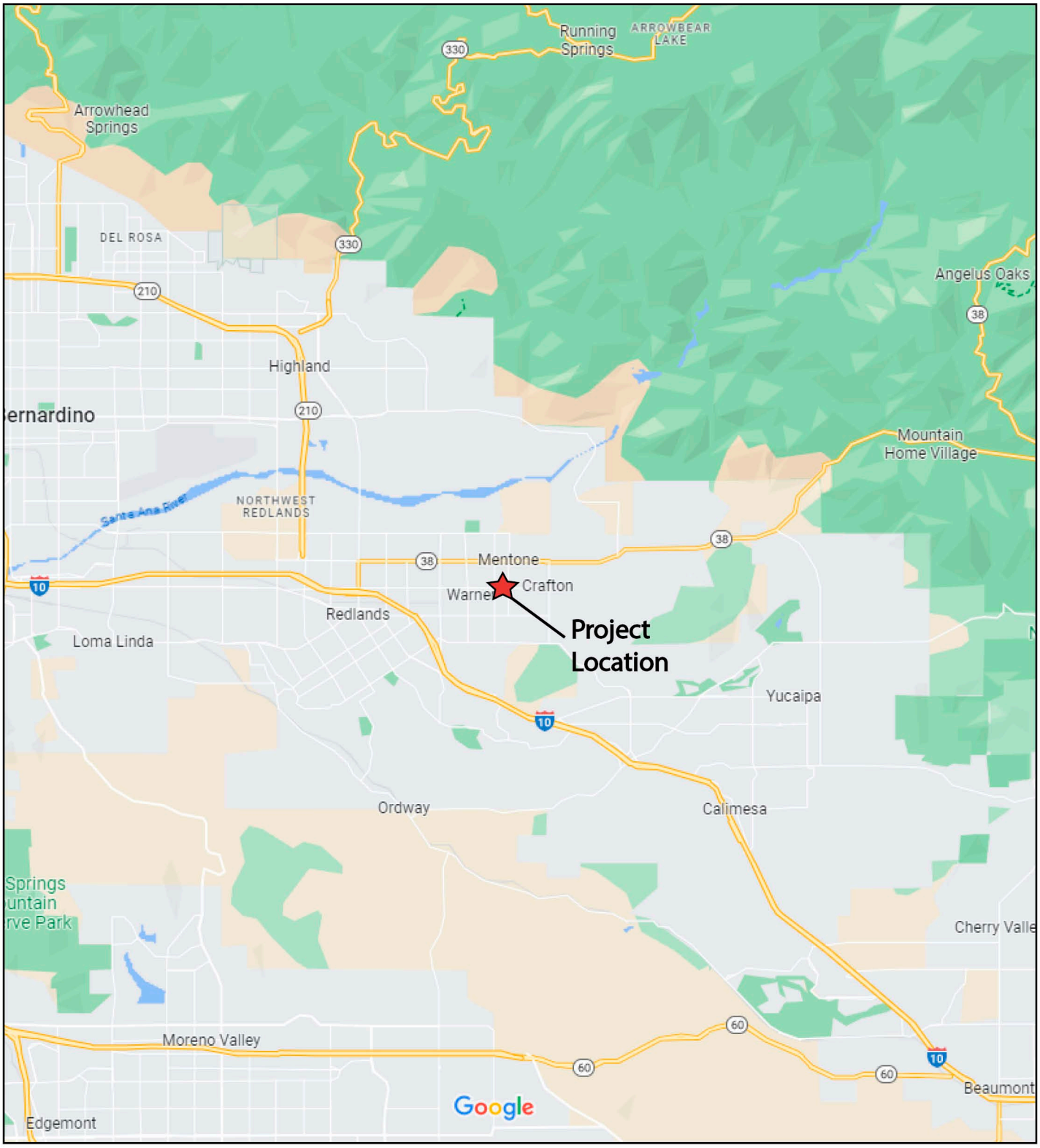

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Source: Google Maps

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Exhibit 1 Regional Context Map

Madera at Citrus Trail Residential Project
Redlands, California

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- Project Site

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Source: Google Maps

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Exhibit 2 Project Vicinity Map

Madera at Citrus Trail Residential Project
Redlands, California

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PROJECT SUMMARY

6.715 ACRES
15.33 DU/ACRE
103 TOTAL UNITS

PRODUCT 1
40 UNITS
1,544 SF

PRODUCT 2
27 UNITS
1,700 SF

PROCUCT 3
36 UNITS
1,858 SF

PARKING SUMMARY
70 GUEST STALLS
206 GARAGE STALLS
276 TOTAL STALLS

MIX SUMMARY
PRODUCT 1 – 40 UNITS 38.8%
PRODUCT 2 – 27 UNITS 26.2%
PRODUCT 3 – 36 UNITS 35.0%

Not to Scale

Source: CA Engineering, Inc.
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Exhibit 3 Conceptual Site Plan

Madera at Citrus Trail Residential Project
Redlands, California

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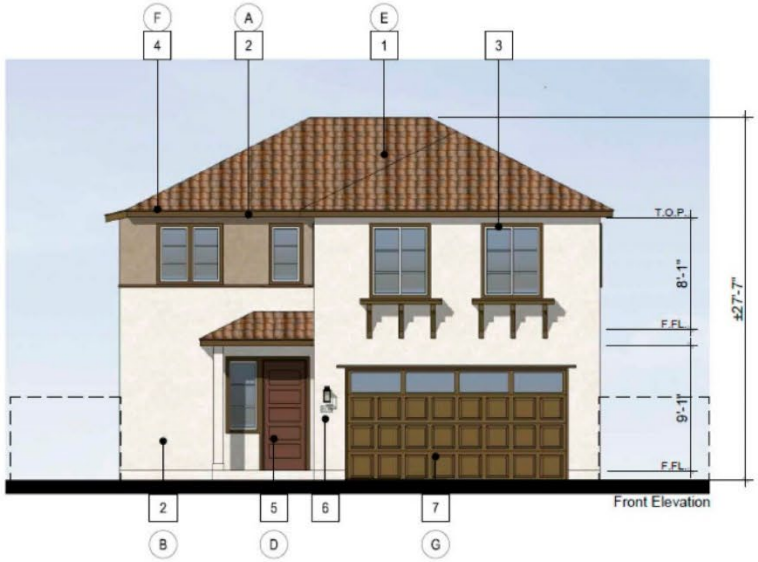
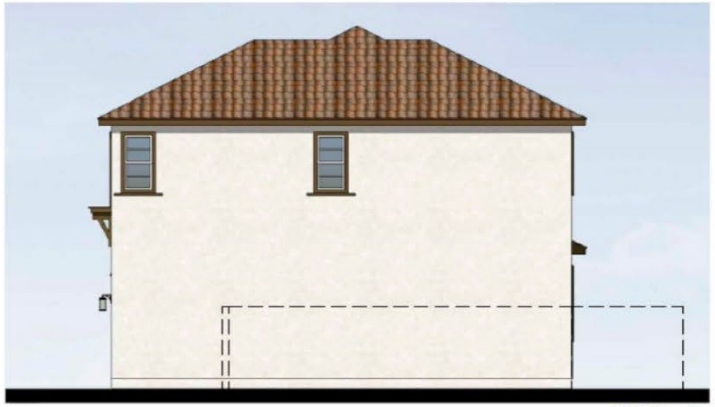
Left Elevation



Front Elevation



Right Elevation

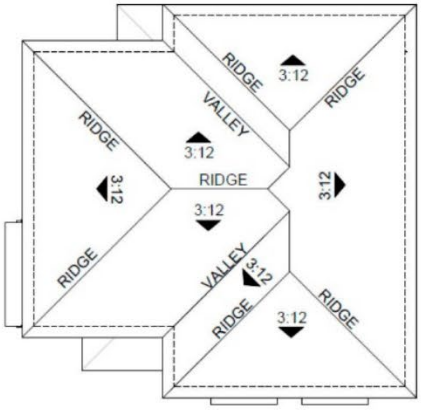
Rear Elevation

MATERIAL LEGEND STYLE A

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 1

A	STUCCO 1: SW 6203 SPARE WHITE
B	STUCCO 2: SW 7504 KEYSTONE GRAY
C	ENTRY DOOR: SW 6055 FIERY BROWN
D	-
E	ROOFING: BARCELONA • CASA GRANDE BLEND
F	TRIM / ACCENT: SW 7041 VAN DYKE
G	GARAGE DOOR: SW 6103 TEA CHEST



Source: CA Engineering, Inc.

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Exhibit 4 Project Elevations (Plan 1, Style A)

Madera at Citrus Trail Residential Project

Redlands, California

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Left Elevation

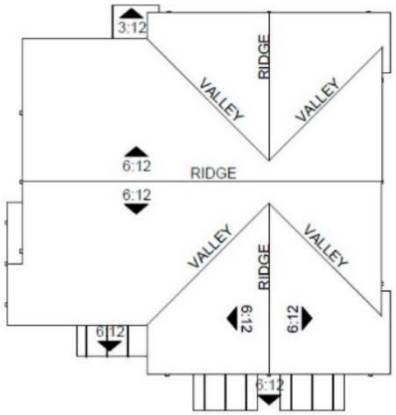
Front Elevation

Right Elevation

Rear Elevation

MATERIAL LEGEND STYLE B	
1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 1	
A	LAPSIDING: HARDIE BOARD CHARCOAL GRAY
B	STUCCO 1: SW 7008 ALABASTER
C	STUCCO 3: SW 27006 EXTRA WHITE
D	ENTRY DOOR 1: SW 6509 GEORGIAN BAY
E	ROOFING: SLATE 900 SHADOW BLACK
F	TRIM / ACCENT: SW 902 NIGHT OWL
G	GARAGE DOOR: SW 6167 GARDEN GATE
H	SHUTTERS: SW 7006 EXTRA WHITE



Source: CA Engineering, Inc.

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Exhibit 4 Project Elevations (Plan 1, Style B)

Madera at Citrus Trail Residential Project

Redlands, California

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Left Elevation

Front Elevation

Right Elevation

Rear Elevation

MATERIAL LEGEND STYLE C

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	STACKED BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS
20	MCELROY METAL STANDING SEAM ROOF

COLOR LEGEND - SCHEME 1

A	STUCCO 1: SW 9622 WHITE SAIL
B	STUCCO 2: SW 6184 SVELTE SAGE
C	BRICK: BELDEN BRICK - THIN - TITANIUM VELOUR
D	ENTRY DOOR: SW 6178 CLARY SAGE
E	ROOFING: BARCELONA VERONA CLAY
F	TRIM / ACCENT: SW 2841 WEATHERED SHINGLE
G	GARAGE DOOR: SW 2846 ROYCRAFT BRONZE GREEN

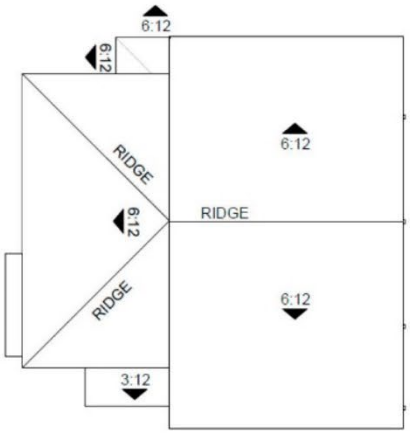

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Exhibit 4 Project Elevations (Plan 1, Style C)

Madera at Citrus Trail Residential Project

Redlands, California

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Front Elevation - Style A

Front Elevation - Style B

Rear Elevation - Style B

Rear Elevation - Style A

MATERIAL LEGEND STYLE A

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 7551 GREEK VILLA
B	STUCCO 2: SW 9180 AGED WHITE
C	STUCCO 3: SW 7548 PORTICO
D	ENTRY DOOR: SW 9146 FADED FLAXFLOWER
E	ROOFING: BARCELONA - SMOKEY TOPAZ
F	TRIM / ACCENT: SW 9115 COWBOY BOOTS
G	GARAGE DOOR: SW 9092 ICED MOCHA

MATERIAL LEGEND STYLE B

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 7064 PASSIVE
B	STUCCO 2: SW 6226 LANGUID BLUE
C	STUCCO 3: SW 7076 GRIZZLE GRAY
D	ENTRY DOOR / TRIM: SW 7060 ATTITUDE GRAY
E	ROOFING: SLATE 900 CHARCOAL BLEND
F	STUCCO WINDOW TRIM: SW 6232 MISTY
G	GARAGE DOOR: SW 6167 GARDEN GATE
H	SHUTTERS: SW 6227 MEDITATIVE

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Exhibit 4 Project Elevations (Plan 2, Styles A & B)

Madera at Citrus Trail Residential Project

Redlands, California

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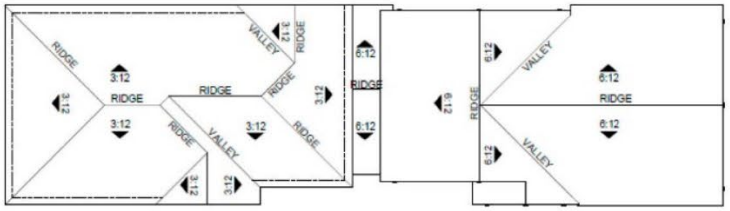
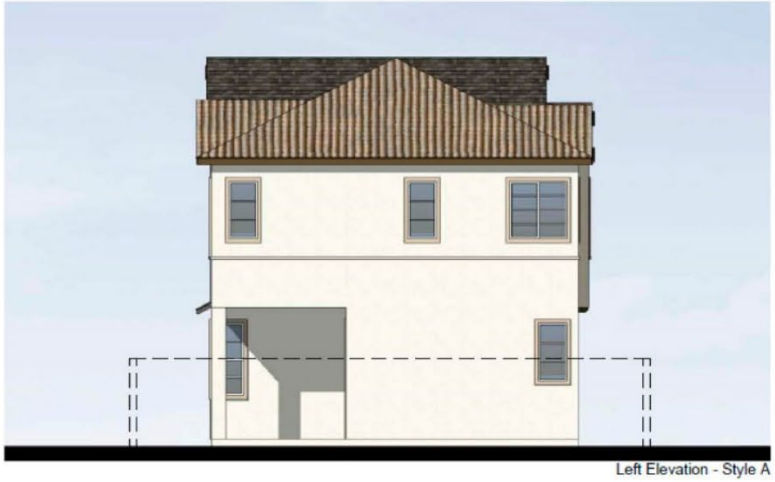


Roof Plan 1/8" = 1'-0"



Left Elevation - Style A

Right Elevation - Style B

MATERIAL LEGEND STYLE A

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 7551 GREEK VILLA
B	STUCCO 2: SW 9180 AGED WHITE
C	STUCCO 3: SW 7548 PORTICO
D	ENTRY DOOR: SW 9146 FADED FLAXFLOWER
E	ROOFING: BARCELONA - SMOKEY TOPAZ
F	TRIM / ACCENT: SW 9115 COWBOY BOOTS
G	GARAGE DOOR: SW 9092 ICED MOCHA

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 7064 PASSIVE
B	STUCCO 2: SW 6226 LANGUID BLUE
C	STUCCO 3: SW 7076 GRIZZLE GRAY
D	ENTRY DOOR / TRIM: SW 7060 ATTITUDE GRAY
E	ROOFING: SLATE 900 CHARCOAL BLEND
F	STUCCO WINDOW TRIM: SW 6232 MISTY
G	GARAGE DOOR: SW 6167 GARDEN GATE
H	SHUTTERS: SW 6227 MEDITATIVE

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Exhibit 4 Project Elevations (Plan 2, Styles A & B cont.)

Madera at Citrus Trail Residential Project
Redlands, California

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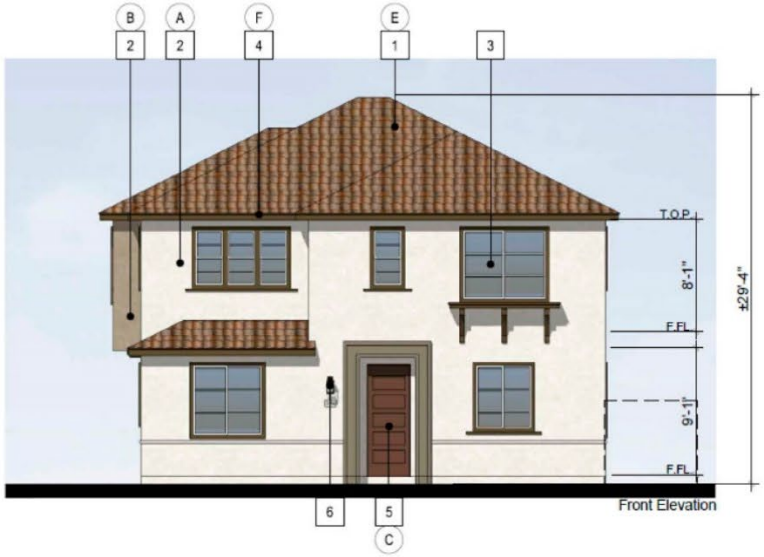
Left Elevation



Front Elevation

Right Elevation

Rear Elevation

MATERIAL LEGEND STYLE A

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 1

A	STUCCO 1: SW 6203 SPARE WHITE
B	STUCCO 2: SW 7504 KEYSTONE GRAY
C	ENTRY DOOR: SW 6055 FIERY BROWN
D	-
E	ROOFING: BARCELONA - CASA GRANDE BLEND
F	TRIM / ACCENT: SW 7041 VAN DYKE
G	GARAGE DOOR: SW 6103 TEA CHEST

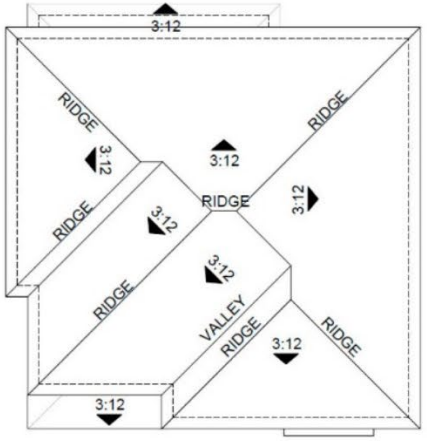


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Exhibit 4 Project Elevations (Plan 3, Style A)

Madera at Citrus Trail Residential Project
Redlands, California

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Left Elevation

Front Elevation

Right Elevation

Rear Elevation

MATERIAL LEGEND STYLE B

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 1

A	LAPSIDING: HARDIE BOARD CHARCOAL GRAY
B	STUCCO 1: SW 7008 ALABASTER
C	STUCCO 3: SW 27006 EXTRA WHITE
D	ENTRY DOOR 1: SW 6509 GEORGIAN BAY
E	ROOFING: SLATE 900 SHADOW BLACK
F	TRIM / ACCENT: SW 902 NIGHT OWL
G	GARAGE DOOR: SW 6167 GARDEN GATE
H	SHUTTERS: SW 7006 EXTRA WHITE

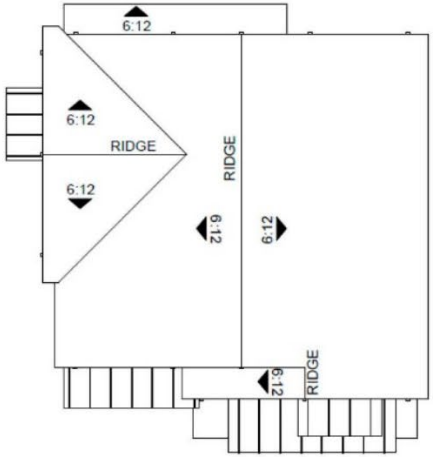

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Exhibit 4 Project Elevations (Plan 3, Style B)

Madera at Citrus Trail Residential Project
Redlands, California

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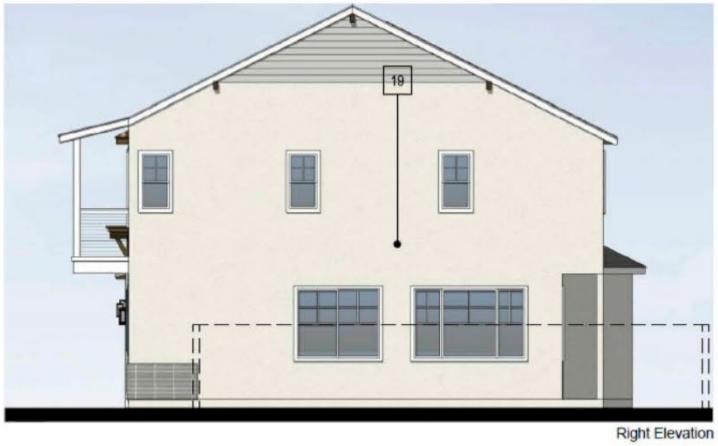

MATERIAL LEGEND STYLE C

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	STACKED BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS
20	MCELROY METAL STANDING SEAM ROOF

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 7009 PEARLY WHITE
B	STUCCO 2: SW 7653 SILVERPOINTE
C	BRICK: BELDEN BRICK - THIN - ENGLISH GRAY VELOUR
D	ENTRY DOOR: SW 6230 RAINSTORM
E	ROOFING: SLATE 900 - OCEANA
F	TRIMS / WINDOW TRIM: SW 7757 HIGH REFLECTIVE WHITE
G	GARAGE DOOR: SW 7670 GRAY SHINGLE
H	METAL ROOF: MAXIMA STANDING SEAM - SLATE GRAY

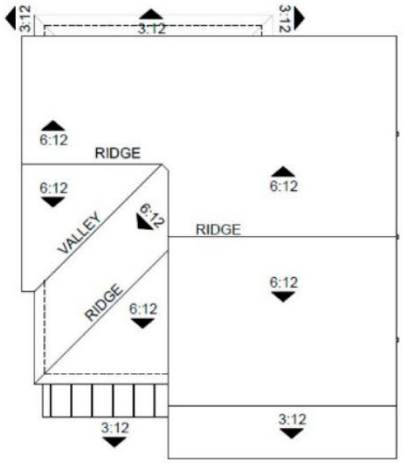

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Exhibit 4 Project Elevations (Plan 3, Style C)

Madera at Citrus Trail Residential Project
Redlands, California

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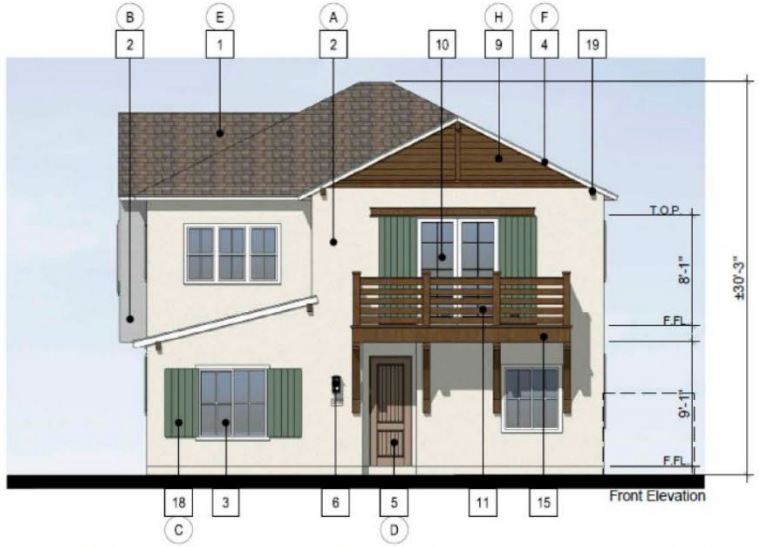
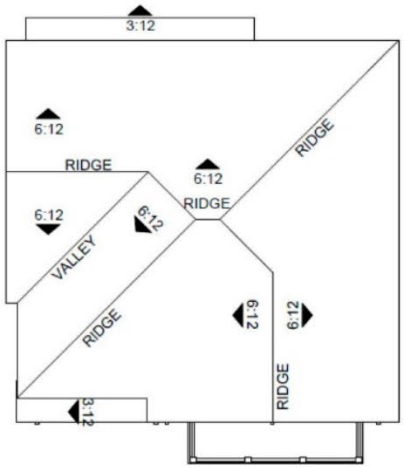


MATERIAL LEGEND STYLE D

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 1

A	STUCCO 1: SW 7000 IBIS WHITE
B	STUCCO 2: SW 7065 ARGOS
C	SHUTTER: SW 6439 GREENFIELD
D	ENTRY DOOR: SW 9112 SONG THRUSH
E	ROOFING: SLATE 900 - SADDLEBACK
F	TRIM / ACCENT: SW 7757 HIGH REFLECTIVE WHITE
G	GARAGE DOOR: SW 9113 MUDSLIDE
H	LAP SIDING: HARDIE PLANK - KHAKI BROWN



Source: CA Engineering, Inc.
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Exhibit 4 Project Elevations (Plan 3, Style D, Scheme 1)

Madera at Citrus Trail Residential Project
Redlands, California

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Left Elevation

Front Elevation

Right Elevation

Rear Elevation

MATERIAL LEGEND STYLE D

1	ROOFING, WESTLAKE ROYAL ROOFING
2	STUCCO, LIGHT SAND FINISH
3	VINYL WINDOWS
4	STUCCO TRIM
5	ENTRY DOOR
6	LIGHT FIXTURE
7	GARAGE DOOR WAYNE DALTON - 9100 SERIES
8	VINYL SLIDING DOOR
9	SIDING
10	FRENCH DOOR
11	WOOD RAILING
12	STONE VENEER
13	BOARD & BATTEN
14	BRICK
15	BALCONY
16	AWNING
17	STUCCO SILL
18	SHUTTERS
19	CORBELS

COLOR LEGEND - SCHEME 2

A	STUCCO 1: SW 9105 ALMOND ROCA
B	LAP SIDING: HARDIE PLANK IRON GRAY
C	SHUTTERS: SW 7675 SEALSKIN
D	ENTRY DOOR: SW 7579 ALAEA
E	ROOFING: SLATE 900 - APPALACHIAN BLEND
F	TRIM / STUCCO WINDOW TRIM: SW 7675 SEALSKIN
G	GARAGE DOOR: SW 6110 STEAD BROWN

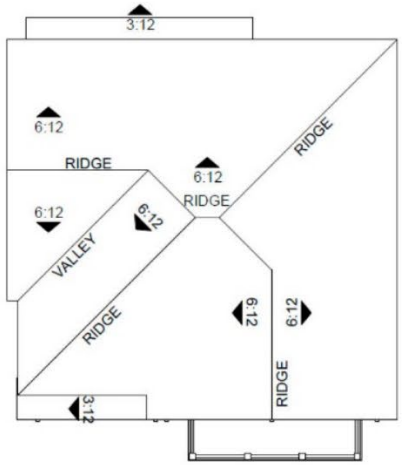

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Exhibit 4 Project Elevations (Plan 3, Style D, Scheme 2)

Madera at Citrus Trail Residential Project
Redlands, California

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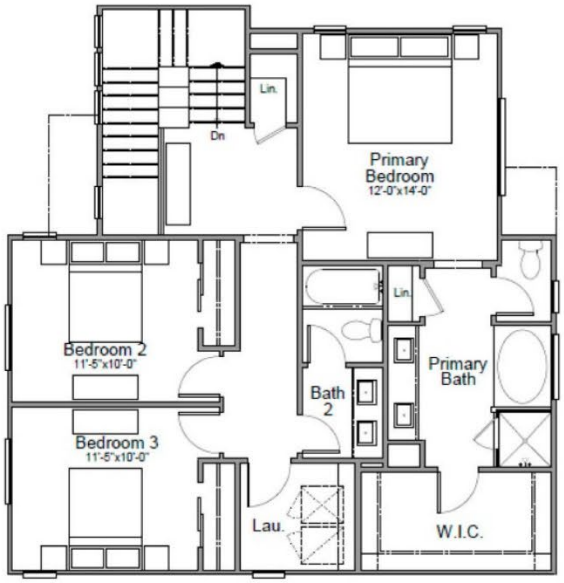
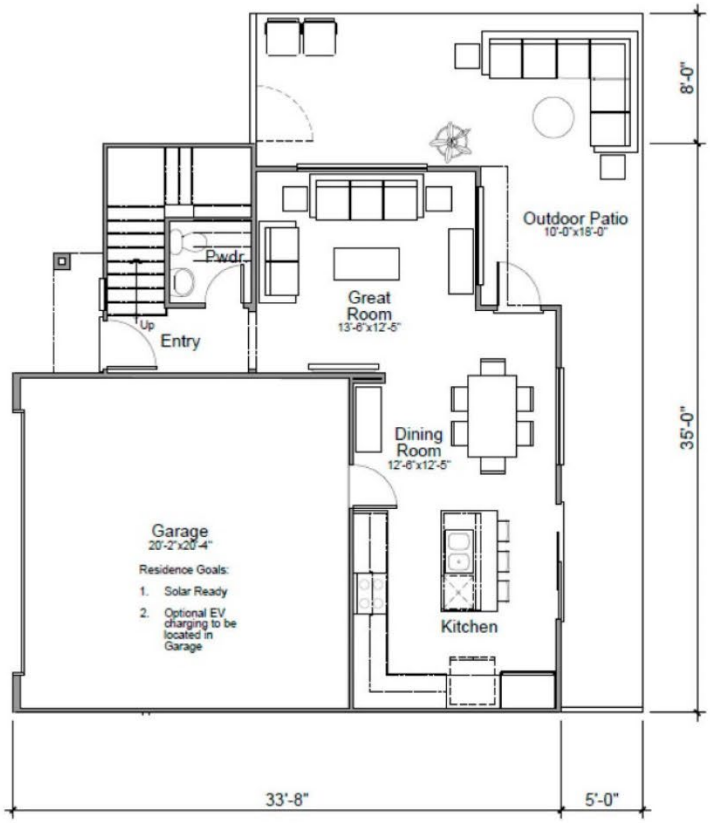


Second Floor

PLAN 1 (3 BED / 2.5 BATH)	
FIRST FLOOR	606 SQ. FT.
SECOND FLOOR	938 SQ. FT.
TOTAL	1,544 SQ. FT.



First Floor

Source: CA Engineering, Inc.
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Exhibit 5 Floor Plans (Plan 1)

Madera at Citrus Trail Residential Project
Redlands, California

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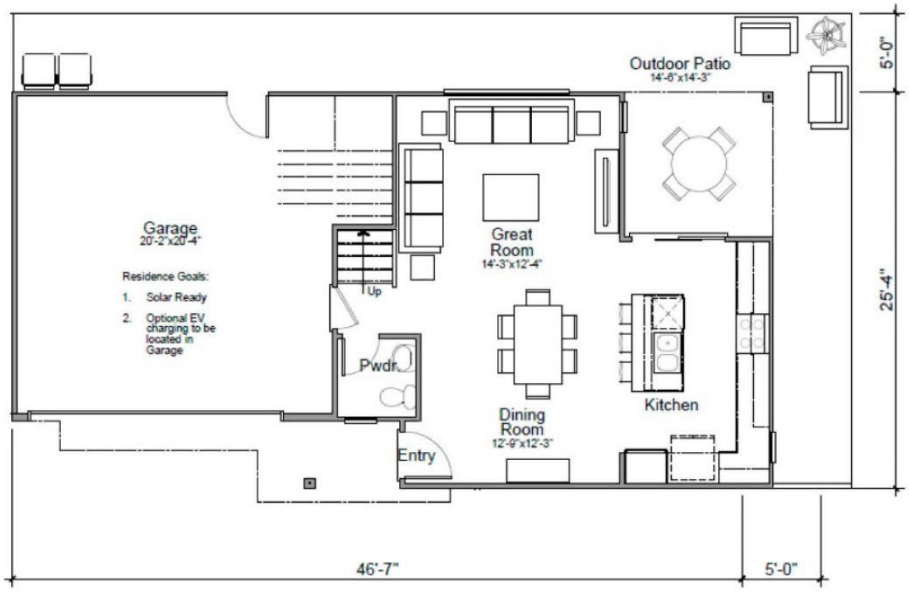
Second Floor



First Floor

PLAN 2 (3 BED / 2.5 BATH)	
FIRST FLOOR	631 SQ. FT.
SECOND FLOOR	1069 SQ. FT.
TOTAL	1,700 SQ. FT.

Source: CA Engineering, Inc.

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Exhibit 5 Floor Plans (Plan 2)

Madera at Citrus Trail Residential Project

Redlands, California

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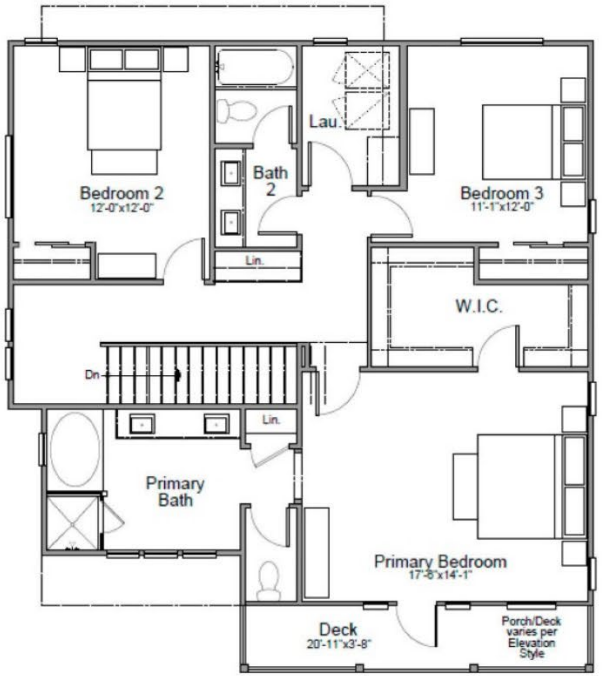
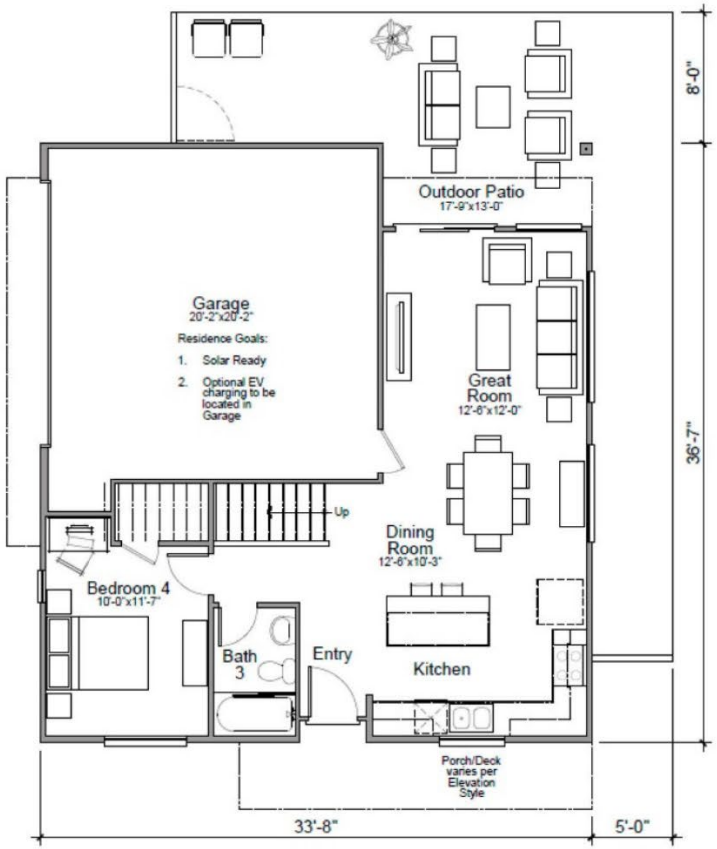


Second Floor



First Floor

PLAN 3 (4 BED / 3 BATH)	
FIRST FLOOR	730 SQ. FT.
SECOND FLOOR	1127 SQ. FT.
TOTAL	1,858 SQ. FT.

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Exhibit 5 Floor Plans (Plan 3)

Madera at Citrus Trail Residential Project
Redlands, California

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PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	WUCOLS (Zone 3)	SIZE
	TREES			
	Acacia stenophylla	Shoestring Acacia	L	24" Box
	Magnolia grandiflora 'Alta'	Southern Magnolia	M	24" Box
	Cercidium hyb. 'Desert Museum'	Hybrid Palo Verde	L	24" Box
	Arbutus 'Marina'	Strawberry Tree	L	24" Box
	Bauhinia purpurea	Orchid Tree	M	24" Box
	Lagerstroemia hybrids 'Natchez'	Crape Myrtle (White)	M	24" Box
	Cupressus sempervirens 'Monshel'	Tiny Tower Cypress	L	24" Box
	Strelitzia nicholai	Giant Bird-of-Paradise	M	24" Box
	Cedrus deodara	Deodar Cedar	L	24" Box
	Citrus sinensis	Orange Trees	M	24" Box
	Geijera parviflora	Australian Willow	L	24" Box
	Jacaranda mimosifolia	Jacaranda	M	36" Box
	Schinus molle	California Pepper Tree	L	36" Box
	Ulmus parvifolia 'True Green'	Evergreen Elm	M	24" Box
	PALMS			
	Phoenix dactylifera	Date Palm	L	16' BTH
	Washingtonia robusta	Mexican Fan Palm	L	24" Box
	Brahea armata	Mexican Blue Palm	L	24" Box
	Syagrus romanzoffianum	Queen Palm	M	24" Box
	SHRUBS			
	Agave 'Blue Flame'	Blue Flame Agave	L	5G
	Agave desmettiana ' Variegata'	Dwarf Century Plant	L	5G
	Aloe arborescens	Tree Aloe	L	15G
	Bougainvillea 'La Jolla'	Bougainvillea	L	5G
	Buxus microphylla japonica	Japanese Boxwood	M	1G
	Carex divulsa	Berkeley Sedge	L	5G
	Carissa grandiflora 'Green Carpet'	Natal Plum	L	1G
	Chondropetalum tectorum	Cape Rush	L	5G
	Cordyline australis 'Red Star'	Red Grass Palm	L	15G
	Dianella revoluta 'DR5000'	Little Rev Flax Lily	M	1G
	Dianella tasmanica 'Silver Streak'	Silver Streak Flax Lily	M	5G
	Hesperaloe parviflora	Red Yucca	L	5G
	Ilex crenata 'Sky Pencil'	Sky Pencil Ilex	M	15G
	Juniperus scopulorum 'Skyrocket'	Skyrocket Juniper	M	15G
	Lantana hybrids 'New Gold'	New Gold Lantana	L	5G
	Ligustrum japonicum 'Texanum'	Wax Leaf Privet	M	5G
	Miscanthus sinensis 'Strictus'	Porcupine Grass	M	5G
	Olea europaea 'Montra' P.P.#6266	Little Ollie Dwarf Olive	L	5G
	Podocarpus elongatus 'Monmal'	Icee Blue Yellow-Wood	M	15G
	Rhaphiolepis indica 'Clara'	Dwarf Indian Hawthorne	M	5G
	Rosa f. 'Trumpeter'	Trumpeter Rose	M	5G
	Senecio mandraliscae	Blue Chalk Sticks	L	Root Cut
	Stipa tenuissima	Mexican Feather Grass	L	5G
	Tecoma stans 'Sierra Apricot'	Sierra Apricot	L	5G
	Trachelospermum jasminoides	Star Jasmine	M	5G
	Westringia 'Wynyabbie Gem'	Coast Rosemary	L	5G
	Yucca gloriosa	Spanish Dagger	L	5G
	Yucca recurvifolia	Pendulous Yucca	L	5G

LEGEND

1. COMMUNITY PARK
   - TOT LOT
   - DOG PARK
   - BBQ AREA
   - VINE COVERED SHADE STRUCTURE
2. COMMON AREA LANDSCAPE (TYP.)
3. PRIVATE OPEN SPACE (TYP.)
4. MOTOR COURT (SEE SHEET L2 FOR ENLARGEMENT)
5. COMMUNITY MONUMENTATION
6. ENTRANCE TO "ORANGE-BLOSSOM TRAIL"

Source: CA Engineering, Inc.
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Exhibit 6 Conceptual Landscape Plan

Madera at Citrus Trail Residential Project
Redlands, California

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LEGEND

1. TOT LOT WITH CLIMB-N-SLIDE EQUIPMENT
2. SPINNING PLAY
3. ENCLOSED DOG PARK W/ DRINKING FOUNTAIN
4. OPEN PLAY TURF
5. MATCHING STEEL SHADE STRUCTURE
6. SOLID ROOF "FARM HOUSE" STRUCTURE W/ TABLE SEATING BELOW
7. OUTDOOR KITCHEN W/ (2) GRILLS AND COUNTER TOP SEATING
8. CITRUS GROOVE IN RAISED PLANTER

Source: CA Engineering, Inc.

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Exhibit 7 Proposed Private Park

Madera at Citrus Trail Residential Project

Redlands, California

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3 Determination

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

3.2 – Determination

☐	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.

Name: Ryan Murphy, Senior Planner Date

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4.1 – Aesthetics

Except as provided in Public Resources Code Section 21099, 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 view from a state scenic highway?	☐	☐	☐	☑
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public view 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 which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

a) Less than Significant Impact. Scenic vistas can generally be defined as natural landscapes that form views of unique flora, geologic, or other natural features that are generally free from urban intrusions. Such resources can be impacted when a structure is built that blocks the view of the vista, or if a development is built on the vista itself. Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces, and bodies of water. Scenic vistas generally play a large role in the way a community defines itself and effects development patterns as projects are designed to take advantage of viewsheds.

Redland's visual character is tied to its surrounding open space areas, and as such is incorporated into the City's General Plan. The City has over time acquired open space land around Redlands and incorporated it into a concept called the "Emerald Necklace"; a series of open space and park areas surrounding the City connected by scenic trails and roads. Areas within the City's Planning Area include 254 acres of the San Timoteo Canyon south of the City called the "San Timoteo Nature Sanctuary". Also, to the south, the City owns 338 acres of Live Oak Canyon, 245 acres of which is specifically set aside for conservation. The 4,000 acres of the Santa Ana River Wash makes up the northern boundary of the City, and is owned by multiple stakeholders including Federal, State, and local governments,

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utilities, and private groups. The Crafton Hills Open Space makes up part of the eastern portion of the City's Planning Area, and with a general elevation above 2,400 feet, the area is valuable to the City as natural habit and scenic resource. The General Plan ensures the preservation of Redlands' open space corridors and limits development on and around those areas to preserve its visual character and limit encroachment. The General Plan does not designate any scenic vistas within the City.

The project site is located in a developed, mostly residential, area of the city and is zoned for single-family, low-density housing uses. Surrounding zoning uses include light industrial, and low- to medium-density residential uses. The project is located in an urbanized area. Furthermore, the project would comply with the City's Zoning and Building Codes, and houses built on the project site would not exceed the City's 35-foot height limit on single or multi-family dwellings.[1] The project would fit the character of the area, and would comply with applicable zoning regulations, with the approval of the General Plan Amendment and Zone Change. The proposed project would not constitute any significant loss of visibility to Redlands' scenic vistas as the area's developed residential and industrial setting already limits visibility of existing scenic vistas. Additionally, the project would comply with Redlands' building height regulations. As such, impacts to the visibility of scenic vistas in Redlands would be less than significant.

b) No Impact. There are no State Scenic Highways on or near the project site, and the site is not visible to a designated state scenic highway as identified on the California Scenic Highway Mapping System.[2] The nearest officially designated scenic highways are California State Route 243 just outside of Banning, and California State Route 38 near Big Bear Lake; the former starting approximately 22 miles southeast of the project site. As of this document being written, State Route 38 in Redlands has not been officially designated but is eligible. A number of corridors within the city have been designated as scenic highways, drives, and historic streets. Designated streets and those under consideration for designation are listed in the "Distinctive City" Element of the City's General Plan.[3] The project site is not located on or near any such corridors and would not impact the quality of those streets during construction or during long-term operations. No impacts would occur.

c) Less than Significant Impact. The project site in its current is an undeveloped parcel of land in an urbanized environment. The proposed housing development and community park has been designed according to City design guidelines. The project would be consistent with the City's Zoning and Building Codes, and houses built on the project site would not exceed the City's 35-foot height limit on single or multi-family dwellings. Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant.

d) Less than Significant Impact. Excessive or inappropriately directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused by unshielded or misdirected lighting sources, or reflective surfaces. Impacts associated with glare range from a simple nuisance to potentially dangerous. Sources of daytime glare are typically concentrated in commercial areas and associated parking areas that contain reflective materials such as hi-efficiency window glass, highly polished surfaces, and expanses of pavement.

The City of Redlands Code of Ordinances does not include specific regulations regarding the effects potential sources of glare from new residential development. However, development of the proposed project would comply with Chapter 18.164; Article I. of the Redlands Code of Ordinances, which outlines specific parking requirements for all residential development in the City.[4] The code specifies that a single family dwelling unit with more than two bedrooms must provide two covered parking spaces. Project plans include 206 covered parking stalls for the 103 proposed dwelling units. The use of covered parking would help alleviate any potential glare from reflective car surfaces. Glare is not

expected to result from the increase in pavement or impermeable surfaces. Adhering to Redlands Code of Ordinances would ensure any impacts related to excessive reflective lighting would be less than significant.

4.2 – Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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 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) No Impact. The California Important Farmland Finder prepared by the California Department of Conservation does not identify the project site as being located on prime farmland, unique farmland, or farmland of Statewide Importance.[5] The project site is not zoned for agricultural uses. The City of Redlands General Plan does identify portions of the northeastern city for Agricultural and Open Space

uses, however, the project site is located away from any land zoned for agricultural uses. There would be no conversion of farmlands to non-agricultural uses, and as a result no impacts would occur.

b) No Impact. The project site is not located on land that is used for or conflicts with nearby agriculturally zoned land. The project site is currently single family residential (R-1) which does not allow for agricultural uses.[6] The parcels comprising the project site are not involved in an active Williamson Act contract. There would be no conflict with existing zoning for agricultural use or a Williamson Act contract and therefore there would be no impact.

c) No Impact. Public Resources Code Section 12220(g) identifies forest land as *land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits*. The project site and surrounding properties are not currently being managed or used for forest land as identified in Public Resources Code Section 12220(g). The project site is currently zoned for single family residential for the building of low-density housing. As such, development of the project would have no impact on any timberland or forestland zoning.

d) No Impact. As indicated in 4.2 c), the area is not designated as forest land; thus, there would be no loss of forest land or conversion of forest land to non-forest use as a result of the project. No impacts would occur.

e) No Impact. The project site is currently undeveloped, vacant land, zoned for single family residential housing uses. The surrounding zoning designations include light industrial zoning and low to medium density residential uses. None of the surrounding sites contain existing agricultural or forest uses. The development of this proposed project would not change the existing environment in a manner that would result in the conversion of forest land to non-forest use. No impact would occur.

4.4 – Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. 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?	☐	☐	☑	☐

An *Air Quality and Health Risk Assessment Report* was prepared for the proposed project by MIG, dated June 2023 (See Appendix A). The report estimates the potential air quality emissions for the proposed project and evaluates project emissions against applicable South Coast Air Quality Management District (SCAQMD)-recommended California Environmental Quality Act (CEQA) significance thresholds for construction and operation.

a) Less than Significant Impact. The proposed project is located within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD Air Quality Management Plan (AQMP) is based on regional growth projections developed by Southern California Association of Governments (SCAG). Pursuant to the methodology provided in Chapter 12 of the SCAQMD CEQA Air Quality Handbook, consistency with the AQMP is affirmed if the project:

1. is consistent with the growth assumptions in the AQMP.
2. would not increase the frequency or severity of an air quality standards violation or cause a new violation

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the AQMP. Projects that are consistent with the AQMP growth assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. The proposed project would generate approximately 333 new residents, which would be well within the SCAG 2020 RTP/SCS growth projections for the City of Redlands (i.e., 11,300 residents

between 2016 and 2045).[7] Therefore, the proposed project would not exceed the growth assumptions contained in the AQMP.

Consistency Criterion 2 refers to the California Ambient Air Quality Standards (CAAQS). In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable.[8] As described below in Section 4.3.b, the proposed project would not generate construction or operational emissions in excess of SCAQMD criteria air pollutant thresholds.

Based on the consistency analysis presented above, the proposed project would be consistent with the regional AQMP, and impacts would be less than significant.

b) Less than Significant Impact. The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- Attainment. A region is "in attainment" if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.
- Nonattainment. If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- Unclassified. An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 3 (Summary of Ambient Air Quality Standards and Attainment Status) summarizes the Basin's attainment status for criteria pollutants. The Basin is currently in nonattainment for state and federal ozone, state PM_{10}, and state and federal $PM_{2.5}$ standards. Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

Table 3
Summary of Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time[B]	California Standards[A]		National Standards[A]	
		Standard[C]	Attainment Status[D]	Standard[C]	Attainment Status[D]
Ozone	1-Hour (1979)	--	--	240 µg/m^3	Nonattainment
	1-Hour (Current)	180 µg/m^3	Nonattainment	--	--
	8-Hour (1997)	--	--	160 µg/m^3	Nonattainment
	8-Hour (2008)	--	--	147 µg/m^3	Nonattainment
	8-Hour (Current)	137 µg/m^3	Nonattainment	137 µg/m^3	Nonattainment
PM_{10}	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment
	Annual Average	20 µg/m^3	Nonattainment	--	--
$PM_{2.5}$	24-Hour	--	--	35 µg/m^3	Nonattainment
	Annual Average (1997)	--	--	15 µg/m^3	Attainment
	Annual Average (Current)	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
Carbon Monoxide	1-Hour	23,000 µg/m^3	Attainment	40,000 µg/m^3	Attainment
	8-Hour	10,000 µg/m^3	Attainment	10,000 µg/m^3	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m^3	Attainment	188 µg/m^3	Unclassifiable/ Attainment
	Annual Average	57 µg/m^3	Attainment	100 µg/m^3	Attainment
Sulfur Dioxide	1-Hour	655 µg/m^3	Attainment	196 µg/m^3	Attainment
	24-Hour	105 µg/m^3	--	367 µg/m^3	Unclassifiable/ Attainment
	Annual Average	--	--	79 µg/m^3	Unclassifiable/ Attainment
Lead	3-Months Rolling	--	--	0.15 µg/m^3	Nonattainment (Partial)
Hydrogen Sulfide	1-Hour	42 µg/m^3	Attainment	--	
Sulfates	24-Hour	25 µg/m^3	Attainment	--	
Vinyl Chloride	24-Hour	26 µg/m^3	Attainment	--	

Source: SCAQMD 2018b, modified by MIG.

(A) This table summarizes the CAAQS and NAAQS and the Basin's attainments status. This table does not prevent comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The Basin is unclassified for visibility reducing particles.

(B) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the Basin does not meet attainment.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m^3) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m^3). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(D) A= Attainment, N= Nonattainment, U=Unclassifiable.

The SCAQMD's recommended thresholds of significance for criteria pollutants and incremental increases in health risk are shown in Table 4 (SCAQMD-Recommended CEQA Thresholds).

Table 4
SCAQMD-Recommended CEQA Thresholds

Pollutant	Maximum Daily Emissions (lbs/day)	
	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Source: SCAQMD, 2019b		

<u>Construction Emissions</u>
Construction of the proposed project would generate equipment exhaust and dust emissions from the use of heavy-duty off-road equipment during site preparation, grading, building construction, paving, and architectural coating activities, as well as worker and vendor vehicle trips. The proposed project's potential construction emissions were modeled using CalEEMod, Version 2022.1.1. The project's construction activities, duration, and typical equipment used during construction are shown in Table 5 (Construction, Activity, Duration, and Typical Equipment). The construction phases, duration, and the type and amount of equipment used during construction was generated using CalEEMod default assumptions, and modified to reflect the following project-specific characteristics:

- **Demolition:** The Demolition phase was removed to reflect the fact that the project site is undeveloped.
- **Fugitive Dust Abatement During Construction:** The model was updated to reflect compliance with the watering requirements of SCAQMD Rule 403 during construction activities.
    - **Rule 403 (Fugitive Dust)** prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres.
- **Electricity Use:** A 25 kilowatt (kW) generator was added to the model and assumed to operate 11-hours daily during construction to account for electricity consumption from the potential operation of a construction trailer on-site.

Table 5
Construction, Activity, Duration, and Typical Equipment

Construction Activity	Duration (Days)(A)	Typical Equipment Used(B)
Site Preparation	10	Dozer, Tractor/Loader/Backhoe
Grading	20	Excavator, Grader, Dozer, Backhoe
Building Construction	230	Crane, Forklift, Backhoe, Generator, Welder
Paving	20	Paver, Roller, Paving Equipment
Architectural Coating	20	Air Compressor

Source: MIG, 2023 (See Appendix A).
(A) Days refers to total active workdays in the construction phase, not calendar days.
(B) The typical equipment list does not reflect all equipment that would be used during the construction phase. Not all equipment would operate eight hours per day each workday.

The proposed project's maximum daily unmitigated construction emissions are shown in Table 6 (Unmitigated Construction Emissions Estimates). The construction emissions estimates incorporate measures to control and reduce fugitive dust as required by SCAQMD Rule 403. As shown in Table 6, the proposed project's maximum daily unmitigated construction emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants. Thus, the proposed project would not generate construction-related emissions that exceed SCAQMD CEQA thresholds.

Table 6
Unmitigated Construction Emissions Estimates

Season	Maximum Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer 2024	1.4	11.7	15.7	<0.1	0.9	0.6
Winter 2024	3.7	36.0	33.8	0.1	9.4	5.5
Winter 2025	68.2	7.5	10.7	<0.1	0.5	0.4
SCAQMD CEQA Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2023 (see Appendix A) and SCAQMD 2019b.

As shown in Table 6, construction emissions associated with the project would not exceed the SCAQMD maximum daily emission thresholds. In addition to the construction period thresholds of significance, the project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. This would further reduce generation of dust, and the potential to exceed daily emission thresholds. Construction of the proposed project would not lead to new or substantially more severe significant impacts associated with construction-related air quality, and as such, impacts would be less than significant.

Operational Emissions
Once operational, the proposed project would generate emission from the following sources:

- **Small "area" sources** including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Energy use** in the form of natural gas combustion for building water and space heating needs.
- **Mobile sources** including trips made to and from the site by new residents and visitors.

Similar to construction emissions, criteria air pollutant emissions from operational activities were estimated in CalEEMod, Version 2022.1.1 based on default model assumptions, with the following modifications made to reflect project-specific characteristics:

- **Area Sources:** Woodstoves and fireplaces were removed pursuant to SCAQMD Rule 445. The quantity of wood-burning fireplaces assumed by CalEEMod were added to natural-gas powered fireplaces.
- **Mobile Sources:** The default, weekday trip generation rate for the proposed land use was updated to reflect the trip generation rate provided in the Traffic Impact Analysis prepared for the proposed project by Ganddini Group (Appendix I).

The proposed project's maximum daily unmitigated operational emissions, as estimated using CalEEMod Version 2022.1.1 are shown in Table 7 (Unmitigated Operational Emissions Estimates (Year 2025)). The emissions presented are for the proposed project's first year of operation, which is presumed to be 2025.

Table 7
Unmitigated Operational Emissions Estimates (Year 2025)

Source	Maximum Daily Pollutant Emissions (Pounds Per Day)(A)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	5.6	1.6	6.5	<0.1	0.1	0.1
Energy	0.1	0.8	0.4	<0.1	0.1	0.1
Mobile	3.6	3.4	29.3	0.1	2.3	0.5
Total Project Emissions(B)	9.3	5.8	36.2	0.1	2.5	0.7
SCAQMD CEQA Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2023 (See Appendix A) and SCAQMD, 2019b.
(A) Maximum daily ROG, CO, SO_X emissions occur during the summer. Maximum daily NO_X, PM_{10}, and $PM_{2.5}$ emissions occur during the winter. See Appendix A.
(B) Totals may not equal due to rounding.

As shown in Table 7, the proposed project's maximum daily unmitigated operational emissions would be below the SCAQMD's regional pollutant thresholds for all pollutants. Impacts related to the operation of the proposed project would be less than significant. In developing its CEQA significance thresholds, the SCAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable.[9] As described above the proposed project's construction emissions would be below applicable SCAQMD regional thresholds for criteria air pollutants. Therefore, the proposed project would not result in a cumulatively considerable increase in criteria air pollutants, therefore, impacts would be less than significant.

c) Less than Significant Impact with Mitigation Incorporated. Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (SCAQMD, 2017a; CARB, 2005).[10] The sensitive air quality receptors in proximity of the proposed project include:

- Single-family residences north of the site along Mendocino Way, south of the site along Orchard Drive, and west of the site as part of the Redlands Ranch neighborhood.
- Individuals at the Crafton Park, approximately 350 feet south of the project site.
- Students at the Crafton Elementary School, approximately 960 feet south of the project site.

The existing sensitive air quality receptors located adjacent or in close proximity to the project site, are exposed to air pollution associated with motor vehicles operating on the roadways (e.g., Wabash Avenue, Colton Avenue), industrial facilities in proximity of the site, and overhead aircraft.

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. While CalEnviroScreen was originally developed as part of Senate Bill (SB) 535 and used to identify disadvantaged communities for the purposes of allocating funding from the State's Cap-and-Trade regulation, its application and scope have expanded over the years. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state.

Percentiles are assigned to each census tract based on the census tract's score in relation to the rest of the state. An area with a high percentile is one that experiences a much higher pollution burden than areas with low scores. For example, if a census tract has an indicator in the 40th percentile, it means that indicator's percentile is higher than 40 percent of the census tracts in the state. CalEnviroScreen also provides a total (or cumulative) score, which helps contextualize how multiple contaminants from multiple sources affect people, while considering their living conditions (e.g., nonchemical factors such as socioeconomic and health status). Communities that are within the top 25th percentile for total CalEnviroScreen scores are considered disadvantaged communities pursuant to SB 535.[11]

According to the Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 4.0 Map, the proposed project is in the census tract north of East Citrus Avenue, between Wabash Avenue and Judson Street (census tract: 6071008402). This census tract includes student receptors at Crafton Elementary School and Crafton Park, and shows an average pollution indicator percentile of 41% based on the CalEnviroScreen indicators (e.g., exposure, environmental effects, population characteristics, socioeconomic factors) (Appendix A). Table 8 summarizes the CalEnviroScreen indicators for census tract 6071008402.

As shown in Table 8 (CalEnviroScreen Health Risk Information), census tract 6071008402 is within the bottom 50% of total CalEnviroScreen percentiles throughout the State. Though it is not substantially burdened by exposure to most pollution and socioeconomic factors as described in Table 8, this census tract was at the highest 100% score for air quality ozone exposure, which puts this community in the highest percentile for exposure to ozone levels compared with the rest of California. However, since this census tract is not within the top 25% in total scoring, according to the CalEnviroScreen methodology, it is not considered a disadvantaged community pursuant to SB 535.

Table 8
CalEnviroScreen Health Risk Information

Indicator	Census Tract Indicator Values Tract 6071008402
Exposure Indicators	
Air Quality: Ozone	100
Air Quality: $PM_{2.5}$	55
Children's Lead Risk from Housing	12
Diesel Particulate Matter	39
Drinking Water Contamination	61
Pesticide Use	78
Toxic Releases from Facilities	42
Traffic Density	9
Environmental Effect Indicators	
Cleanup Sites	0
Groundwater Threats	0
Hazardous Waste Generators and Facilities	17
Impaired Water Bodies	0
Solid Waste Sites and Facilities	0
Sensitive Population Indicators	
Asthma	61
Cardiovascular Disease	57
Low Birth Weight Infants	84
Socioeconomic Factor Indicators	
Educational Attainment	30
Housing Burden	14
Linguistic Isolation	22
Poverty	30
Unemployment	67
Cumulative Percentiles	
Pollution Burden Percentile	27
Population Characteristics Percentile	50
CalEnviroScreen Percentile (Total)	**41**
SB 535 Disadvantaged Community?	**No**
Source: MIG, 2023 (See Appendix A)	

Individual Cancer Risk from Exposure to DPM

The predicted locations of the annual, unmitigated point of maximum impact (PMI), the maximally exposed individual resident receptor (MEIR), and maximally exposed student receptor (MESR) for DPM exposure during construction are shown Exhibit 8 (Construction: Modeled Annual Average DPM Concentrations), along with contours of pollutant concentrations in proximity of the project site. The predicted PMI is located east of the project site, in Wabash Avenue. Since the PMI for DPM exposure

is located on land that is not occupied by a receptor on a permanent basis, lifetime excess cancer risks and chronic non-cancer health hazards, which are based on exposure to annual average pollutant concentrations, were not estimated for the modeled PMI location.

Accordingly, health risks were assessed at the modeled residential MEIR location, which is located north of the Project site at 1774 Mendocino Way. The HRA for residential receptors evaluated worst-case carcinogenic and non-carcinogenic risks to child (3rd trimester, 0-2 years, and 2-16 years) and adult (16-30 years and 30-70 years) receptors. Potential health risks were also assessed for student receptors near Redlands East Valley High School, east of the project site. The worst-case individual cancer risk from exposure to DPM during construction is summarized in Table 9 (Unmitigated Cancer Risk at PMI, MEIR, and MESR). The worst-case risk is based on a receptor that is in the 3rd trimester at the start of construction activities.

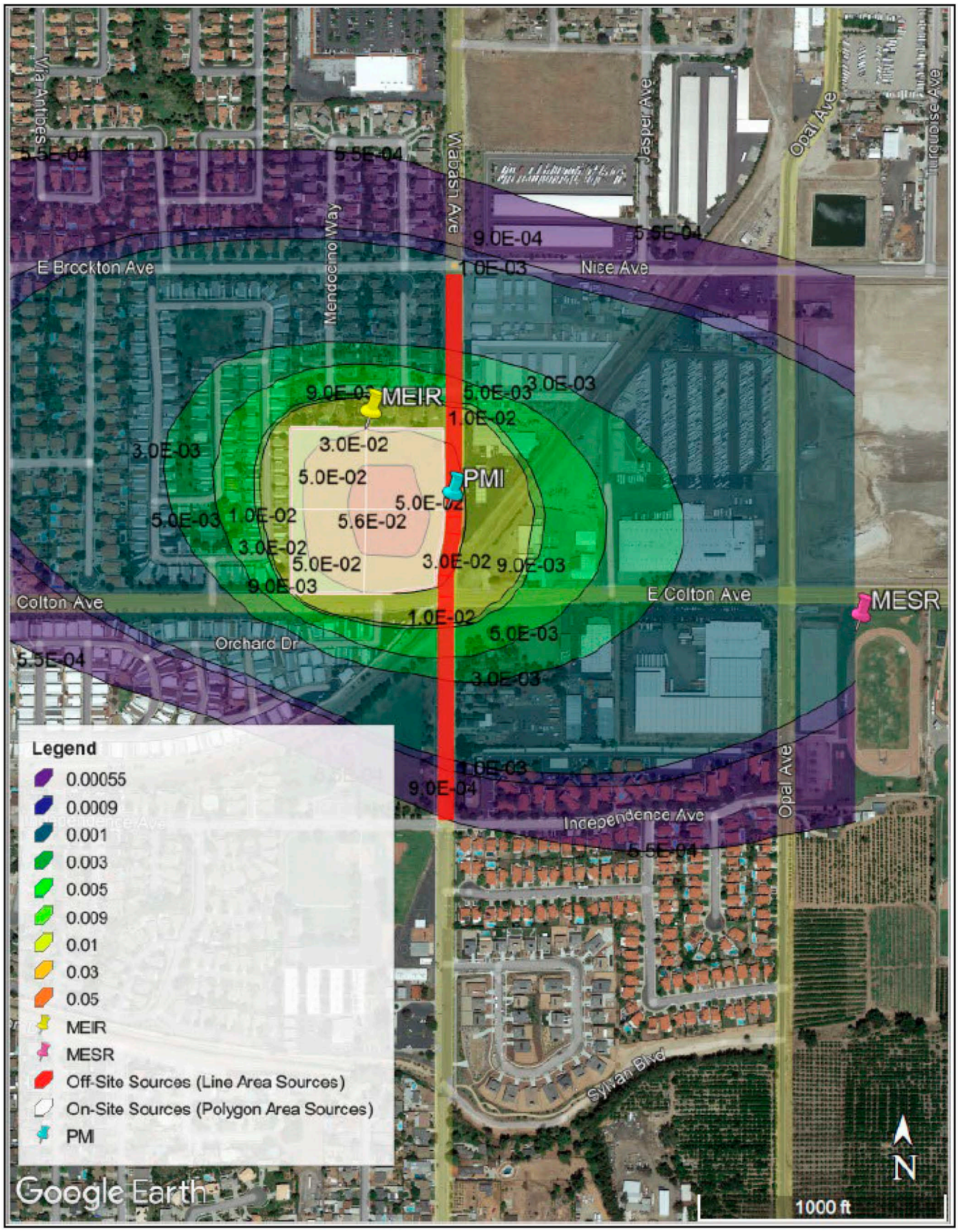
Table 9
Unmitigated Cancer Risk at PMI, MEIR, and MESR

Receptor	UTM Location		Annual Average DPM Concentration ($\mu g/m^3$)[(A)]		Excess Cancer Risk (per million population)		
	Easting	Northing	Construction Year 1	Construction Year 2	Construction Year 1	Construction Year 2	Total
PMI[(A)]	487175.45	3769241.18	0.21381	0.00941	--	--	--
MEIR	487075.45	3769341.18	0.14218	0.00625	21.5	0.9	22.4
MESR	487675.45	3769091.18	0.00567	0.00025	<0.1	<0.1	<0.1

Source: MIG, 2023 (see Appendix A)
(A) The PMI is located along Wabash Avenue, which is not occupied by a long-term sensitive receptor.

As shown in Table 9, the maximum construction unmitigated health risk for the MEIR location would be approximately 22.4 excess cancers in a million, which would exceed the SCAQMD cancer risk threshold of 10 in a million. Therefore, the proposed project would include the implementation of **Mitigation Measure AIR-1** to reduce construction-related DPM emissions and associated adverse health risks.

Mitigation Measure AIR-1 would reduce PM_{10} exhaust emissions by approximately 79.4%, as accounted for in the CalEEMod emissions modeling (see Appendix A). Table 10 (Mitigated Cancer Risk at PMI, MEIR, and MESR) summarizes potential cancerogenic health risks after the implementation of **Mitigation Measure AIR-1**. As shown in Table 10, with the implementation of **Mitigation Measure AIR-1**, potential excess cancer risk from project activities at the MEIR location would be reduced to approximately 4.7 excess cancers in a million, which is less than the SCAQMD's threshold of 10 in a million.



Source: MIG, Inc.

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Exhibit 8 Construction: Modeled Annual Average DPM Concetrations

Madera at Citrus Trail Residential Project
Redlands, California

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Table 10
Mitigated Cancer Risk at PMI, MEIR, and MESR

Receptor	UTM Location		Annual Average DPM Concentration (µg/m³)(A)		Excess Cancer Risk (per million population)		
	Easting	Northing	Construction Year 1	Construction Year 2	Construction Year 1	Construction Year 2	Total(B)
PMI(C)	487175.45	3769241.18	0.04423	0.00335	--	--	--
MEIR	487075.45	3769341.18	0.02936	0.00222	4.4	0.3	4.7
MESR	487675.45	3769091.18	0.00117	9.00E-5	<0.1	<0.1	<0.1

Source: MIG, 2023 (see Appendix A)
(A) The annual average DPM concentration for construction is based on the first year of construction.
(B) Totals may not equal due to rounding.
(C) The PMI is located along Wabash Avenue, which is not occupied by a long-term sensitive receptor.

The average cancer risk based on the lifetime exposure scenario (70 years), when taking into account **Mitigation Measure AIR-1** to address construction risks, is 1.34E-06 (approximately 1.34 cases per million people). The product of cancer risk and the estimated population (1,066) is 0.001429 and does not exceed the SCAQMD threshold of 0.5 excess cancer cases. The maximum annual average DPM concentration at any receptor location under unmitigated conditions would be approximately 0.14218 µg/m^3, which would occur at the MEIR location. Based on the chronic inhalation REL for DPM (5 µg/m^3), the calculated chronic hazard quotient during the maximum exposure to DPM concentration would be 0.0284, which is below the SCAQMD's non-cancer hazard index threshold value of 1.0. With implementation of Mitigation Measure AIR-1, potential exposure of pollutants to sensitive receptors would be less than significant.

d) Less than Significant Impact. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed project does not include such sources but would result in the construction of new single-family homes and parking area that could generate odors related to vehicle parking and refuse collection (e.g., oils, lubricants, fuel vapors, short-term waste odors). These activities would not generate sustained odors that would affect substantial numbers of people, and as such, impacts would be less than significant.

Mitigation Measures

AIR-1: To reduce potential short-term adverse health risks associated with PM10 exhaust emissions, including emissions of diesel particulate matter (DPM), generated during project construction activities, the City shall require the applicant and/or its designated contractors, contractor's representatives, or other appropriate personnel to comply with the following construction equipment restriction for the project:

- All construction equipment with a rated power-output of 50 horsepower or greater shall meet U.S. EPA and CARB Tier IV Interim Emission Standards. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV Interim emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., oxidation catalyst, particulate filter) capable of reducing exhaust PM10 emissions to levels that meet Tier IV standards.

As an alternative to using equipment that meets Tier IV Interim Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the applicant may prepare and submit a refined construction health risk assessment to the City once additional Project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment shall demonstrate and identify any measures necessary such that the proposed Project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

4.4 - 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 Game 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, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
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?	☐	☐	☐	☑

A *Biological Technical Report* was prepared for the proposed project by Ecorp Consulting Inc., dated June 2022 (See Appendix B). The report analyzes the potential impacts of the construction and operation of the proposed project to biological resources. The information presented below is condensed from the memo prepared by Ecorp and is attached as Appendix B.

a) Less than Significant Impact with Mitigation. The project site is a previously disturbed, undeveloped, vacant parcel of land. The site is within a developed environment, repeatedly disturbed by human activities; such disturbances identified include vehicle tracks and trash scattered on site. Vegetation identified at the project site was identified as disturbed ruderal grassland, with native vegetation being sparse. The Biological Technical Report identified 72 special-status plant species and 47 special status wildlife species that could occur on or near the project site. However, as described above, due to the level of human disturbance present at the project site and lack of habitat for special-status plants and wildlife, these special-status species are presumed absent from the site. Considering the highly developed and disturbed nature of the project site the proposed project would not result in any significant impacts to sensitive species or their habitats.

Special-Status Plants
No special-status plant species are expected to be present on the project site due to the extent of human disturbance and subsequent lack of suitable habitat; therefore, no impacts to special-status plants are anticipated as a result of project implementation.

Special Status Wildlife Species
Special-status wildlife species include those species listed as endangered or threatened under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); candidates for listing by the U.S. Fish and Wildlife Services or California Department of Fish and Wildlife (USFWS & CDFW respectively); and species of special concern to the CDFW; and birds protected by the CDFW under California Fish and Game Code (CFGC) Sections 3503 and 3513.

The Biological Technical Report identified 47 special-status wildlife species that have been reported in other studies in the vicinity of the project site. Given the site's history of disturbances through previous agricultural uses (discing, mowing) and proximity to residential, industrial, and commercial developments make the site likely undesirable for habitation by any special-status wildlife species. Of the 47 identified special-status species, 46 were presumed absent and not expected to be present on the project site due to a lack of suitable habitat and constant human disturbance. One species was determined to have a low potential to occur on site; the burrowing owl.

Burrowing Owls
The burrowing owl typically inhabits open flat landscapes, such as grasslands and deserts, using abandoned ground squirrel or other small mammal burrows for roosting and nesting cover. The project site in its current state is marginally suitable to support burrowing owls' nests. The combination of low growing vegetation and soil type, presence of existing burrows, and mobility of the bird species, lend to the possibility for burrowing owl to be move into the site. No owls were observed on site however, and a historic record taken for the Biological Technical Report identified

the species occurring within five miles of the project site in 1983. Based on the evidence outlined in the Biological Technical Report, it was determined that the burrowing owl has a low potential of occurring on site. If, however, burrowing owls are found on the project site prior to construction, ground disturbance, vegetation removal, habitat loss, and mortality would be direct impacts to the birds, as well as indirect impacts such as construction noise and vibrations. Construction of the project site and operation of the proposed project would have a less than significant impact on burrowing owls with implementation of **Mitigation Measures Bio-1 and Bio-2.**

Nesting Birds

The oak tree located on the project site as well as the trees immediately adjacent to the project site could provide nesting habitat for nesting birds and raptors protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Furthermore, the project site could provide nesting habitat for ground-nesting bird species. If construction of the proposed project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat on the project site, and indirectly through increased noise, vibrations, and increased human activity. However, impacts to nesting birds would be less than significant with the implementation of **Mitigation Measure BIO-2**.

b) No Impact. The project site is located in a developed area of Redlands, and no riparian vegetation or other sensitive natural habitats are present on the project site as indicated in the City's General Plan[12] and in the Biological Technical Report. No impacts would occur.

c) No Impact. No state or federally protected wetlands or similar waterways are present on the project site. No wetlands were identified by the National Wetlands Inventory, or the City's General Plan at or near the project site.[13] Therefore; there would be no impacts related to wetlands.

d) No Impact. The project site is located in an urbanized area and is surrounded by human development (e.g., residential, industrial, and commercial development and paved roads). There is insufficient vegetation cover on site to facilitate wildlife movement through the project site, and is isolated away from larger contiguous portions of wildlife habitats. According to the Biological Technical Report, no migratory wildlife corridors or native wildlife nursery sites were identified within the project site. As such, no impacts to these resources are expected to occur.

e) Less than Significant Impact. The project would not conflict with local policies or ordinances protecting biological resources. During construction operations, trees and other plant varieties would need to be removed to accommodate current building designs and construction. The removal of trees and plants during construction activities would not interfere with Redlands' Tree Protection Guidelines as outlined in the City's Municipal Code.[14] The Guidelines are applicable to "Native or Specimen trees, Landmark trees, and Public Trees" as defined by the City. Trees on the project site have not been designated as native or specimen by the City, are not of any historic significance that would warrant a landmark designation, and trees on the project site are not located on public land, and do not qualify as public trees. Impacts would be less than significant.

f) No Impact. The City of Redlands is an active participant in the Upper Santa Ana River Wash Habitat Conservation Plan (the Wash Plan).[15] The project site is located southeast of the plan, outside of its boundaries. The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other local, regional, or state habitat conservation plan. No impacts would occur.

Mitigation Measures

BIO-1: **Pre-Construction Burrowing Owl Surveys**: Preconstruction surveys for burrowing owl shall be conducted. The surveys shall follow the methods described in the CDFW's Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). Two surveys shall be conducted, with the first survey being scheduled between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls and/or suitable burrowing owl burrows are identified on the project site during the survey, the Project shall consult with CDFW and follow the methods listed in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012) for avoidance and/or passive relocation. If burrowing owls or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified on the project site during the survey, these features must be completely avoided. If impacts to those features are unavoidable then the project proponent must also develop an owl mitigation plan in consultation with CDFW. Mitigation methods may include passive relocation conducted outside of the owl breeding season (between September 1 and February 28). If an active owl burrow is identified, and construction is to proceed, then a qualified biologist (with two or more years of burrowing owl experience) can establish an appropriate disturbance-limit buffer around the burrow using flagging or staking. Construction activities shall not occur within any buffer zones until the burrow is deemed inactive by the qualified biologist.

BIO-2: **Pre-Construction Nesting Bird Survey**: If construction or other project activities are scheduled to occur during the nesting bird season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests shall not be disturbed or destroyed. The survey shall be completed no more than three days prior to initial ground disturbance. The nesting bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly, due to construction activity, noise, human activity, or ground disturbance. If an active nest is identified, a qualified avian biologist shall establish an appropriately sized non-disturbance buffer around the nest using flagging or staking. Construction activities shall not occur within any non-disturbance buffer zones until the nest is deemed inactive by the qualified avian biologist. If initial ground-disturbing activities are scheduled to occur during the nesting bird season, then a biological monitor shall be present during all vegetation removal activities to ensure no impacts to nesting birds occur.

4.5 – 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 dedicated cemeteries?	☐	☑	☐	☐

A *Cultural Resources Inventory and Evaluation Report* was prepared by Ecorp Consulting Inc., dated July 2022 (Revised September 2023), to assess possible cultural and historical impacts associated with the construction and operation of the project (see Appendix C).

a) No Impact. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a historic resource listed or eligible for listing in the California Resources of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). CEQA Guidelines state the term “historical resources” applies to resources that meet any of the following criteria for listing on the California Register of Historical Resources:

(1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) 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.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c)).

A field survey and records search conducted for the Cultural Report of this project identified two historic-period concrete standpipes located at the project site, which was once an agricultural field. According to the Report, the standpipes evaluated are not eligible for listing in the California Register of Historical Resources or for local designation, and neither structure qualifies as a “historical resource.” While the City has several historic landmarks and sites listed under its historic preservation program as defined in Public Resources Code Section 5020.1(k), the proposed project site is completely undeveloped and there are no buildings, structures, or features on the site that could be listed as a “historical resource.” The project site was formerly used for agricultural purposes and is not known to be associated with an important historical period or important persons from the past. The project would not have any physical impacts outside the designated project area boundary. Therefore, the project would not result in any

adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. No impact would occur.

b) Less than Significant with Mitigation Incorporated. Given that the project site has been disturbed with agricultural uses over time, any archaeological resources that may exist likely have been previously unearthed, disturbed, or left in place. As such, significant surficial and subsurface archaeological resources are unlikely to occur on the project site or be encountered during earthwork activities. However, in the unlikely event that archeological materials are uncovered during ground-disturbing activities, and at the request of the Morongo Band of Mission Indians, **Mitigation Measures CUL-1** through **CUL-8** have been incorporated. With implementation of **Mitigation Measures CUL-1** through **CUL-8**, impacts would be less than significant as a result of construction of the proposed project.

c) Less than Significant with Mitigation Incorporated. No known human remains are anticipated to be located on or beneath the project site. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the project, and it is possible to encounter buried human remains during construction. In addition, the Morongo Band of Mission Indians requested incorporation of **Mitigation Measures CUL-1** through **CUL-8** to reduce potentially significant impacts to previously undiscovered human remains. With implementation of **Mitigation Measures CUL-1** through **CUL-8**, impacts would be less than significant as a result of construction of the proposed project.

Mitigation Measures

CUL-1: **Native American Treatment Agreement.** Prior to the issuance of grading permits, the applicant shall enter into a Tribal Monitoring Agreement with the Morongo Band of Mission Indians 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 temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.

CUL-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 will 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 will 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.

CUL-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.

CUL-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.

CUL-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.

CUL-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)

CUL-7: **Inadvertent Discovery of Human Remains.** The Morongo Band of Mission Indians 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 will 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 will be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the City Planning Department.

CUL-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 Lead Agency and Consulting Tribe[s] for review and comment. After approval of all parties, the final reports are to be submitted to the Eastern Information Center, and the Consulting Tribe[s].

4.6 – 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 or energy resources, during project construction or operation?	☐	☐	☑	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☑	☐

An *Greenhouse Gas and Energy Analysis Memo* was prepared for the proposed project by MIG, dated May 2023 (See Appendix D) to evaluate the potential energy and greenhouse gas impacts associated with the construction and operation of the proposed project. The information presented below is condensed from the memo prepared by MIG and is attached as Appendix D.

a) Less than Significant Impact. The proposed project consists of the construction and operation of 103 new single-family residential home. Construction activities associated with the proposed project would require the use of heavy-duty, off-road equipment and construction-related vehicle trips that would combust fuel, primarily diesel and gasoline. Heavy-duty construction equipment would be required to comply with the California Air Resources Board's (CARB's) airborne toxic control measures, which restrict heavy-duty diesel vehicle idling to five minutes. It is estimated that construction activities would consume approximately 28,031 gallons of diesel fuel and 14 kilowatt-hours (kWh) of electricity to power on-site, off-road heavy-duty construction equipment. Worker, vendor, and haul truck trips during construction activities are anticipated to consume 5,017 gallons of gasoline, 5,279 gallons of diesel, and 943 kWh of electricity. Once operational, the proposed project would consume energy for vehicle trips and electricity usage. Operational vehicle trips are anticipated to consume approximately 105,772 gallons of gasoline, 26,881 gallons of diesel, and 38,286 kWh of electricity on an annual basis, upon its first year of operation. As estimated using CalEEMod, the proposed project would consume approximately 784 megawatt-hours (mWh) of electricity and 3,223 million British Thermal Units (BTU) of natural gas per year. Electricity, natural gas, and gasoline fuel consumption are energy sources necessary to operate and maintain the proposed project in a safe manner. Lighting is essential for safety and security and natural gas consumption is needed for heating and other temperature-controlled activities. The proposed project would not cause a substantial environmental impact due to wasteful, inefficient, or unnecessary consumption or energy resources, during project construction or operation. As such, impacts would be less than significant.

b) Less than Significant Impact. The proposed project is consistent with the City of Redlands CAP, as discussed below in Section 4.7.b, Greenhouse Gas Emissions. The proposed project would not conflict with or obstruct any other state or local plan adopted for the purposes of increasing the amount of renewable energy or energy efficiency because no other plans are in place in the project area. Impacts would be less than significant.

4.7 – 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 (1997), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☑

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐

A *Preliminary Geotechnical Investigation Report* was prepared for the proposed project by TGR Geotechnical Inc., dated April 8th, 2022 (See Appendix E) to evaluate the potential seismic, soil, and other geotechnical-related impacts associated with the construction and operation of the proposed project. The information presented below is condensed from the report prepared by TGR and is attached as Appendix E.

a.i) Less than Significant Impact. The City of Redlands, and the Southern California region, is considered a seismically active region. The project site is not located within an Earthquake Fault Zone according to the Alquist-Priolo Earthquake Fault Zoning Map. There are no active or potentially active faults within or adjacent to the project site. The Redlands Fault is the closest fault-line and is located approximately 0.7 southeast of the project site. Other faults near the site include the Reservoir Canyon fault approximately 1.6 miles southeast of the site, the Crafton Hills fault approximately 2.9 miles southeast of the site, and both the Western Heights and South Branch San Andres faults are located 3.1 miles southeast and northeast of the project site respectively. According to the City General Plan, development should be restricted within and near Alquist-Priolo designated fault zones.[16] Furthermore, structures should incorporate design standards recommended by the most current California Building Code (CBC). The project is not located on or near a Alquist-Priolo fault zone, and would adhere to design and repair requirements adopted in the current City of Redlands Code of Ordinances from the 2019 CBC.[17] Design requirements adopted by the city would be sufficient in mitigating seismic hazards to the proposed project, and as such, impacts are determined to be less than significant.

a.ii) Less than Significant Impact. The project site is subject to ground shaking given its proximity to fault zones and Southern California location. Per the City's General Plan, the potential for ground shaking and seismic-related damages are also dependent on the underlying soil composition.[18] The City is built on alluvium materials that can intensify ground shaking. The project site is of no greater risk to ground shaking than another area of Redlands, and while a structure may be damaged during an earthquake, adherence to design requirements adopted from the CBC would minimize damage to property within the structure, as they are designed to not collapse. The CBC is intended to provide minimum requirements to prevent major structural failure and loss of life. Impacts due to ground shaking would be less than significant.

a.iii) Less than Significant Impact. Liquefaction is a form of ground failure that occurs when soil transforms from a solid state to liquefied condition due to intense seismic ground shaking. Liquefaction typically occurs in loose granular materials, such as alluvium-type soils. Saturated soils or areas located near waterways and areas with a high groundwater level are also susceptible to such ground failure. Parts of the City of Redlands are susceptible to liquefaction and ground failure from seismically induced ground shaking. However, the City's General Plan indicates that the project site is not located in an area considered susceptible to liquefaction.[19] Impacts related to seismic-related ground failure and liquefaction would be less than significant.

a.iv) No Impact. The City's General Plan outlines areas in Redlands susceptible to landslides. According to the Healthy Community Element of the Redlands General Plan, the project site is not located in an area with high susceptibility, or even low to medium susceptibility, to landslide or ground subsidence.[20] Therefore, no impacts related to landslides would occur.

b) Less than Significant Impact. Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. The project site is located in an already developed area of Redlands, although there is the potential to expose surface soils to wind and water erosion during demolition and construction activities. However, wind erosion would be minimized through soil stabilization measures required by SCAQMD Rule 403 (Fugitive Dust), such as daily watering.[21] Stormwater related erosion would further be prevented through control practices outlined in the Redlands NPDES program.[22] Following project construction, much of the site would consist of impervious surfaces consisting mainly of houses and roadways. Once completed, the project site would feature pervious surfaces with substantial landscaping; front yards, back yards, community park, and accent landscaping around the perimeter of the development. Trees, shrubbery, palm trees, and other vegetation would keep in place topsoil, and reduce any potential risk of soil erosion. Impacts related to soil erosion would be less than significant with the implementation of existing regulations.

c) Less than Significant Impact. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to a combination of gravity and ground shaking. Lateral spreading has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. As outlined in Sections 4.6.a.iii and 4.6.a.iv above, the project site is not located in an area susceptible to landslides or liquefaction. As the site has a low susceptibility to liquefaction, there is a low potential for lateral spreading to occur on the project site. The project is required to be constructed in accordance with the CBC, and keeping in compliance with existing CBC regulations would limit hazard impacts arising from unstable soils to less than significant levels.

d) No Impact. According to the *Preliminary Geotechnical Investigation Report*, onsite soils tested had an expansion index of 0, equating to a "very low" expansion potential. The proposed project would not be located on expansive soil, and as such, no impacts would occur.

e) No Impact. The project proposes to install new onsite water and sewer lines that would connect to the existing municipal sewer infrastructure in the surrounding streets. The proposed project would connect to this system and would not require the use of septic tanks. No impact would occur.

f) Less than Significant with Mitigation Incorporated. Development of the proposed project would require site preparation, grading, and construction operations. Given that the proposed project site has been previously disturbed, it is considered unlikely that paleontological resources (fossil evidence of life from past geologic time frames) would be found. However, in the event that paleontological materials are uncovered, **Mitigation Measure GEO-1** would ensure that uncovered resources are evaluated and curated as recommended by a qualified paleontologist. Therefore, impacts to paleontological resources would be less than significant.

<u>Mitigation Measures</u>

GEO-1: **Inadvertent Discovery of Paleontological Resources.** If paleontological materials are uncovered during grading or other earth moving activities, the contractor shall be required to halt work in the immediate area of the find, and to retain a professional paleontologist to examine the materials to determine whether it is a significant

paleontological resource. If this determination is positive, the resource shall be left in place, if determined feasible by the project paleontologist. Otherwise, the scientifically consequential information shall be fully recovered by the paleontologist. Work may continue outside of the area of the find; however, no further work shall occur in the immediate location of the find until all information recovery has been completed and a report concerning it filed with the Development Services Director. The applicant shall bear the cost of implementing this mitigation.

4.9 – 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?	☐	☐	☑	☐

A *Greenhouse Gas and Energy Analysis Memo* was prepared for the proposed project by MIG, dated May 2023 (See Appendix D) to evaluate the potential energy and greenhouse gas impacts associated with the construction and operation of the proposed project. The information presented below is condensed from the memo prepared by MIG and is attached as Appendix D.

a) Less than Significant Impact. Gases that trap heat in the atmosphere and affect regulation of the Earth's temperature are known as GHGs. GHG that contribute to climate change are a different type of pollutant than criteria or hazardous air pollutants because climate change is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide), and off-gassing from low oxygen environments such as swamps or exposed permafrost (methane); however, GHG emissions from human activities such as fuel combustion (e.g., carbon dioxide) and refrigerants use (e.g., hydrofluorocarbons) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change.

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHGs – carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride – and two groups of gases – hydrofluorocarbons and perfluorocarbons. These GHG are the primary GHG emitted into the atmosphere by human activities. The six most common GHG's are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

This analysis uses the SCAQMD's interim Tier 3 GHG threshold to evaluate the proposed project's GHG emissions levels. Tier 3 consists of using screening values at the discretion of the Lead Agency; however, the Lead Agency should be consistent for all projects within its jurisdiction. The following thresholds were proposed for consideration:

- 3,000 $MTCO_2e$ per year for all land use types; or
- 3,500 $MTCO_2e$ per year for residential; 1,400 $MTCO_2e$ per year for commercial; 3,000 $MTCO_2e$ per year for mixed use projects.

This analysis also uses an 1,800 MTCO2e project-specific goal for the purposes of helping evaluate the project's GHG emissions levels.[i] The 1,800 $MTCO_2e$ per year project-specific goal takes into account post 2020 GHG emissions targets the state is currently working towards.

The proposed project would generate GHG emission from both short-term construction and long-term operational activities. Construction activities would generate GHG emissions primarily from equipment fuel combustion as well as worker, vendor, and haul trips to and from the project site during site preparation, grading, building construction, paving, and architectural coating activities. Construction activities would cease to emit GHG upon completion, unlike operational emissions that would be continuous year after year until the project is decommissioned. The SCAQMD recommends amortizing construction GHG emissions over a 30-year period and including them with operational emissions estimates. This normalizes construction emissions so that they can be grouped with operational emissions and compared to appropriate thresholds, plans, etc. Once operational, the proposed project would generate GHG emissions from area, stationary, mobile, water/wastewater, refrigerant, and solid waste sources.

The proposed project's potential GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version (V.) 2022.1.1. Project emissions were generated using CalEEMod default assumptions and modified as necessary to reflect the following Project-specific context, information, and details:

- The type and length of construction phases for each site, as well as the equipment used in each phase and the number of worker trips per day, were modified per information provided by the project applicant.
- The default, weekday trip generation rate, average vehicle miles travelled (VMT) distance, and fleet mix were updated to reflect the information provided in the Traffic Impact Analysis (Ganddini Group 2023).

The proposed project's total GHG emissions are shown in Table 11 (Unmitigated Project Greenhouse Gas Emissions).

[i] The 1,800 $MTCO_2e$ per year goal was developed by taking the SCAQMD's Tier 3 threshold of 3,000 $MTCO_2e$ per year, which was the threshold to reduce emissions back to 1990 levels and reducing it by 40 percent (3,000 MTCO2e/yr * (1 - 0.6) = 1,800 $MTCO_2e$/yr). This reduction is consistent with the GHG reductions required by year 2025 to meet GHG reductions required under SB 32 (to reduce GHG emissions to levels 40% below 1990 levels by 2030). This linear reduction approach oversimplifies the threshold development process. MIG is not proposing the City of Redlands adopt or use 1,800 $MTCO_2e$ Project-specific goal as a CEQA GHG threshold for general use; rather, it is only intended for to provide additional context and information on the magnitude of the proposed Project's GHG emissions for this project.

Table 11
Unmitigated Project Greenhouse Gas Emissions

GHG Emissions Source	GHG Emissions ($MTCO_2e$ Per Year)
Operations	
Mobile	1,119
Area	24
Energy	361
Water	15
Waste	31
Refrigerants	<1
Vegetation	4
Subtotal[(A)]	1,555
Construction	
Total Construction Emissions	423
Average Annual Emissions (30 Year Lifetime)[(B)]	14
Total Project Emissions[(A)]	1,569
SCAQMD Tier 3 Screening Threshold	**3,000**
SCAQMD Tier 3 Threshold Exceeded?	***No***
Project-specific 2030 GHG Emissions Goal	**1,800**
Project-specific GHG Emissions Goal Exceeded?	***No***

Source: MIG 2023 (See Appendix D).
(A) Totals may not equal due to rounding.
(B) Construction emissions value has been averaged over a 30-year assumed project lifetime.

As shown in Table 11, the proposed project's potential increase in GHG emissions would be below the SCAQMD's recommended GHG emissions thresholds. Furthermore, the proposed project's GHG emissions would also be below an adjusted project-specific GHG emissions goal of 1,800 $MTCO_2e$ per year, which takes into account post 2020 GHG emissions targets the state is currently working towards. The proposed project, therefore, would not generate GHG emissions that exceed SCAQMD CEQA thresholds. As such, impacts to the environment would be less than significant.

b) Less than Significant Impact. The proposed project would not conflict with or otherwise obstruct implementation of the California Air Resources Board (CARB) 2022 Climate Change Scoping Plan (2022 Scoping Plan) and Redland's Climate Action Plan (CAP).

<u>California Air Resources Board 2022 Scoping Plan</u>
The 2022 Scoping Plan is CARB's primary document used to ensure statewide GHG reduction goals are met. The 2022 Scoping Plan's primary objective is to identify the measures needed to achieve the 2030 reduction target established under SB 32 and have the state achieve carbon neutrality by 2045, as codified by AB 1279. Appendix D to CARB's 2022 Scoping Plan Update identifies potential actions that could be undertaken at a local level to support the State's climate goals. In addition to providing guidance to local lead agencies on long-term climate planning (e.g., developing a qualified climate action plan), this appendix also provides a list of key GHG reducing attributes for residential and mixed-use developments, such as providing electric vehicle (EV) infrastructure, VMT reductions, and prohibiting natural gas infrastructure, that would support achievement of the State long-term GHG reduction goals. The proposed project would not result in significant VMT impacts (see above) but is not proposing to prohibit natural gas hookups or install additional voluntary EV charging infrastructure

beyond that required by the current CalGREEN code; however, the proposed project's potential use of natural gas and installation of standard EV infrastructure would not conflict with the State's 2030 GHG reduction goal or impede achievement of carbon neutrality by 2045 because the proposed project would be consistent with the City's CAP.

City of Redlands Climate Action Plan

The CAP, adopted in December 2017, presents the City's GHG inventories, identifies regulatory measures at the state-level that would have benefits at reducing local GHG emissions and quantifies those reductions, and identifies local measures the City would implement to achieve its identified GHG reduction targets for 2030 and 2035. As identified in Table 3-1 of the CAP, community-wide GHG emissions would need to reach an efficiency goal of 6.0 MTCO2e per capita per year and 5.0 MTCO2e per capita per year, to reach its 2030 and 2035 goals, respectively. As identified in Table 11, the proposed project is estimated to generate approximately 1,569 MTCO2e upon its first year of operation in 2025. Based on an estimated project population of 273 people, the proposed project would have a GHG efficiency of approximately 5.75 MTCO2e per capita per year, which is below the City's 2030 GHG emissions reduction goal. The proposed project, therefore, would be consistent with the Redlands CAP, which is intended to reduce community-wide GHG emissions consistent with State's GHG reduction goals, and the 2022 Scoping Plan's primary objective (achieve the State's 2030 GHG reduction target). As described above, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions, as such, impacts would be less than significant.

4.10 – 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, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☑	☐

A *Phase I Environmental Site Assessment* (ESA), dated May 25th, 2023, was prepared for the project by Hazard Management Consulting (HMC) (see Appendix F). The ESA was performed at the northwest corner of east Colton Avenue & Wabash Avenue, on the project site. The information in this section relates to hazards and hazardous wastes and is based on the information and analysis provided in the Phase I ESA.

a) Less than Significant Impact. Implementation of the project could create significant hazards as a result of the routine transport, use, or disposal of hazardous materials during the construction of the proposed project and subsequent operation of the project.

Short-term Activities (Construction)
Project construction activities would involve the temporary use and transport of fuels, equipment, earth and building materials, among other potentially hazardous materials. The contractor would be required to develop and adhere to a Health and Safety Plan, which pursuant to California state Health and Safety Code Chapter 6.95, Division 20 (§§ 25500-25532), would minimize potentially hazardous effects of handling potentially hazardous materials during construction.[23] The project would be in the jurisdiction of, and in compliance with, the Environmental Protection Agency (EPA) and County of San Bernardino, which manage the inspection, regulation, transportation, use, and disposal of hazardous materials in Redlands. With adherence to local, state, and federal regulations, and implementation of the above measure, potential impacts to the surrounding area from the disposal or transport of onsite hazardous materials or waste would be less than significant.

Long-term Activities (Operation)
With regard to project operation, the site is zoned as Single-Family Residential; however, the project proposes a General Plan Amendment from Low Density Residential to Medium Density Residential and a Zone Change from Single-Family Residential (R-1) to Multi-Family Residential (R-2). The transport, use, and/or disposal of hazardous materials is not associated with or expected with this project because such materials are not utilized by residential land uses. The project would generate limited amounts of Household Hazard Waste (HHW), wastes prohibited or discouraged from being disposed of at local landfills. The San Bernardino County Fire Protection District operates a Household Hazardous Waste Program, with 14 permanent HHW collection facilities. These facilities would allow easy disposal of any HHW generated from future residents of the site. Through adherence to local regulations, the use of common household hazardous materials, created waste, and their disposal do not present a substantial health risk to the community. Impacts associated with the routine transport, use, or disposal of hazardous materials or wastes would be less than significant.

b) Less than Significant Impact. The results of the Phase I ESA found no evidence of Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (cRECs) or Historical RECs (hRECs), which would represent the presence or likely presence of hazardous substance at the property. According to the State Water Resources Control Board and the ESA report prepared, there are no open cases of leaking underground storage tanks (LUST) on site (see section 4.10.d below). There is a LUST site located approximately 2,207 feet north of the project site, however the status of the site is “Completed – Case Closed” according to the State Water Resources Board, and would not impact the project site. A Southern California Edison transformer vault was identified near the southeast corner of the project site, and was observed to be in good condition with no stains or leaks. Stained or shallow contaminated soils should be disposed of if encountered with regard to local requirements. There are no structures on site, and it is unlikely that asbestos containing materials are present on site. The project site was once used for agricultural purposes from the early 1900s to the late 1990s; however, there was is low likelihood of pesticides occurring on site. Therefore, impacts to the public through the accidental release of hazardous materials would be less than significant.

c) Less than Significant Impact. Crafton Elementary School is located approximately 0.18 miles south of the project site. The proposed project involves the development of 103 single-family dwelling units, in addition to a community park and streets. Daily operation of the proposed project would not involve the use of acutely hazardous materials, substances, or wastes. The project would therefore not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school. Impacts would be less than significant.

d) No Impact. The proposed project is not located on a site listed on the state *Cortese List*, a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses.[24] Based upon review of the *Cortese List*, the project site is not:

- listed as a hazardous waste and substance site by the Department of Toxic Substances Control (DTSC),[25]
- listed as a leaking underground storage tank (LUST) site by the State Water Resources Control Board (SWRCB),[26]
- listed as a hazardous solid waste disposal site by the SWRCB,[27]
- currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,[28] or
- developed with a hazardous waste facility subject to corrective action by the DTSC.[29]

Based on the above review of the Cortese List, the proposed project would not create a significant hazard to the public or the environment. No impact would occur.

e) Less than Significant Impact. The proposed project is located approximately 1.3 miles south of the Redlands Municipal Airport. Noise from overhead flights was observed during the ambient noise monitoring conducted for the project (See Appendix H); however, the predominant source of noise was traffic noise from Wabash Avenue and Colton Avenue. As noted in the City's General Plan, aircraft noise is a relatively minor contribution to the City's overall noise environment.[30] The project site is located outside of the 60 CNEL noise contour for the Redlands Municipal Airport and is not located within any other airport planning boundary.[31] The proposed project, therefore, would not expose people living at the site to excessive airport-related noise levels, and as such, impacts would be less than significant.

f) Less than Significant Impact. Construction of the proposed project would not interfere with access for emergency personnel or the evacuation of onsite staff. During construction, access to the project site would come from Colton Avenue and Wabash Avenue. After construction is completed, three streets would intersect the site and provide access in and out of the development for residents (tentatively named A, B, and C). Construction operations conducted at the project site would not significantly impede the flow of traffic on major evacuation routes in and around the City of Redlands, which include Interstates 10, 15, 210, and 215, and State Highways 30, 60, 66, 71, and 83. The project would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan because no permanent public street or lane closures are proposed. Construction work in the street associated with the project would be limited to a nominal potential traffic diversion. Project impacts would be less than significant.

g) Less than Significant Impact. The project site is not located within a State Responsibility Areas (SRA), and the nearest SRA is approximately one mile east of the project site in Crafton. However, there are no wildland conditions in the urbanized area where the project site is located.[32] As such, any potential impacts related to wildland fire would be less than significant.

4.11 – 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 ground water quality?	☐	☐	☑	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable 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 stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☑	☐
iv) impede or redirect flood flows?	☐	☐	☑	☐
d) In flood hazard, tsunami, or seiche zones, 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?	☐	☐	☑	☐

A *Preliminary Water Quality Management Plan* (WQMP) was prepared for the proposed project by CA Engineering Inc., dated October 4th, 2022 to evaluate the potential water quality impacts associated with the construction and operation of the proposed project (See Appendix G). The information presented below is condensed from the memo prepared by MIG and is attached as Appendix G.

a) Less than Significant Impact. The project site is zoned as Single Family Residential (R-1), meant for low density residential housing. The project proposes an amendment to change the zoning to Multiple Family Residential (R-2). This zoning designation allows for a higher density of dwelling units within the area, and allows for a mixture of single, duplex, or multi-family residences. The project site is located in an urbanized area; however, the site is currently undeveloped, but was previously used as agricultural land. The proposed project includes the construction of 103 single family homes, interior streets, sidewalks, and a community park located at the center of the new development. The new streets, sidewalks, and structures on the project site would increase the amount of impermeable surfaces, and flows into storm drains. Landscape coverage in and around the site would provide relief for this. Construction and use of the proposed houses would be required to comply with federal, state and local water guidelines and requirements.

According to the City's General Plan, Redlands belongs to the Upper Santa Ana River Watershed Integrated Regional Water Management Plan (IRWM), a plan with the objective of improving water supply reliability, flood management, stormwater recharge, water quality, and habitats/open space. Development of the proposed project would be required to adhere to benchmarks outlined in the San Bernardino Valley Regional Urban Water Management Plan (RUWMP). Additionally, landscaping associated with the development of the proposed project would be in compliance with Chapter 15-54 of the Redlands Municipal Code, Water Efficient Landscape Requirements. Compliance with such requirements include following irrigation schedules, water efficiency audits, and non-potable irrigation systems among other guidelines. Furthermore, the project would be required to adhere to all Santa Ana Regional Water Quality Control Board (SARWQCB) permitting requirements for construction and NPDES standards for stormwater runoff, as well as adhere to City ordinances requiring the use of Best Management Practices (BMPs) to control the release of potential pollutants entering storm drain systems.[33] Such BMPs include, but are not limited to, routine street sweeping, routine storm drain and catch basin cleaning, regular pavement repair/maintenance, spill prevention practices, etc. Non-structural and structural source control BMPs are included in the preliminary WQMP (Appendix G) and shall be implemented into the project as well. With adherence to SARWQCB permitting requirements, NPDES standards, City guidelines, and implementation of BMPs, impacts to water quality standards or waste discharge requirements would be less than significant.

b) Less than Significant Impact. Construction of the proposed housing development, internal streets and sidewalks, and associated parking has the potential to interfere with groundwater recharge and can potentially deplete supplies. The nearest well is located approximately 1.7 miles north of the project site, adjacent to the Redlands Sports Park and near the Redlands Municipal Airport. The well has a depth of 595 feet, and as of the writing of this document, the latest measurement recorded was a depth to water of 260.7 feet taken March 3rd, 2023.[34] The low water table recorded indicates the project would have a less than significant impact on groundwater supplies. The proposed project includes the development of a new residential development, consisting of some 103 single-family units, totaling approximately 216,567 square feet of gross building space. The project would include 206 garage parking stalls and 63 guest parking stalls; 269 total parking stalls. Approximately 20,100 square feet of the site would be impervious surface for sidewalks. The paving of previously undeveloped land and the increase in building surface area would increase impervious surface coverage on the site, thereby potentially reducing the total amount of infiltration onsite.

However, approximately 65,470 square feet of the site would be landscaped, including a 0.63 acre community park which would be centrally located within the neighborhood. The project would install new onsite water and sewer lines that would connect to the existing infrastructure in the surrounding streets. Two drainage areas would be installed, the first comprising the majority area of the site, the second being smaller, located at the southwest corner of the site. Stormwater would be captured and infiltrated on site through two subsurface infiltration facilities. The project site is not utilized for groundwater recharge and would include landscaping and drainage improvements that would contribute to infiltration. The development of the project site would have a less than significant impact on the groundwater table level.

c.i) Less than Significant Impact. The City of Redlands is located in and around several regional watersheds. The City's existing water system is reliant on the Mill Creek and Santa Ana Watersheds. No rivers or streams intersect the project site. The project would not result in the alteration of drainage and drainage patterns, as the project would install new onsite water and sewer lines that would connect to the existing infrastructure in the surrounding streets. Drainage facilities on-site would be regularly maintained. Development of the proposed project would include construction activities such as site preparation, grading, paving, and construction of housing. According to the City, all grading plans within the city require a standalone Erosion Control Plan.[35] Adherence to the City's erosion plan guidelines during construction of the project and proper maintenance of drainage facilities would decrease the likelihood of erosion of sensitive stream habitats, and as such any impacts to streams or rivers near the project site would be less than significant.

c.ii) Less than Significant Impact. No rivers or streams traverse the project site; thus, the project would not result in the alteration of any stream course. During construction, the project applicant would be required to comply with drainage and runoff guidelines pursuant to Redlands Municipal Code Chapter 15.54.200.[36] With regard to project operation, construction of the project would increase the net area of impermeable surfaces on the site; therefore, increased discharges to the City's existing storm drain system may occur. The proposed drainage for the easterly portion of the site would drain via area drains and access driveways that convey the runoff to two proposed streets that run from the east to the west (Streets "B" and "C"). The runoff would be collected into catch basins at the westerly ends of the streets that would deposit the runoff into an infiltration facility located just westerly of the community park. Most of the westerly portion of the site would drain to a street that runs from north to the south ("A" Street). The street would collect the runoff and convey the flows to a storm drain system that would also connect to said infiltration facility. The remaining small portion of the site located at the southwest corner would surface flow to a drainage channel that would convey the flows to an existing concrete V-gutter that is connected to Colton Avenue via a parkway culvert. This channel would have an inlet that would collect the low flows and direct them to a smaller infiltration facility located at the southwest corner of the development. Surface runoff would be conveyed to the City's storm drainage system, and all drainage plans are subject to City review and approval. Construction of the proposed project would be required to adhere to all SARWQCB permitting requirements and NPDES standards for stormwater runoff, as well as adhere to City ordinances requiring the use of BMPs to control the release of potential pollutants entering storm drain systems as indicated in the City's General Plan. Compliance with local drainage guidelines and implementation of pollutant-related BMPs would make potential impacts less than significant.

c.iii) Less than Significant Impact. Development of the proposed project would increase the net area of impermeable surfaces on the site. As discussed in sections 4.9.c.ii, construction of the proposed project would install new onsite water and sewer lines connecting to the existing infrastructure in the surrounding streets. The proposed project would have two drainage areas, one making up the majority of the site, with the smaller other one located at the southwest corner of the site. Stormwater captured would be infiltrated on site through two subsurface infiltration facilities. Flows would be collected by

catch basins and conveyed via storm drain to an underground infiltration facility. All drainage plans are subject to City review and approval. As discussed in sections 4.9.a and 4.9.c.ii, BMPs would be required to be incorporated to protect water quality. With proper maintenance of drainage facilities and adherence to BMPs, impacts would be less than significant.

c.iv) Less than Significant Impact. According to flood maps prepared by the Federal Emergency Management Agency (FEMA) and the Hydro Report prepared for this project, the project site is located in an area designated as Flood Zone "X" or Zone "D". Zone X represents areas determined to be outside the 0.2% annual chance, Zone "D" Areas in which flood hazards are undetermined, but possible. The project site is currently undeveloped, vacant land. Construction operations including grading, site preparation, and construction of the proposed housing, internal streets and parking, and landscaping would not impede or redirect flood flows. In addition, the proposed project would comply with City of Redlands Municipal Code Chapter 15.32 (Flood Damage Protection), which would ensure flood flows would not be impeded. Impacts would be less than significant.

d) Less than Significant Impact. The City is not exposed to tsunami hazards due to its inland location. In addition, according to the California Department of Water Resources, the project site is not located in a dam inundation area.[37] There are no impacts related to tsunami or dam inundation. The project site is located in Flood Zone X, representing an area determined to be outside the 0.2% annual chance, and Zone "D", an area where flood hazards are undetermined, but possible. Adherence to City ordinances requiring the use of BMPs to control the release of potential pollutants would reduce the potential for the release of pollutants in the event of inundation by a flood. Impacts would be less than significant.

e) Less than Significant Impact. The Santa Ana Regional Water Quality Control Board's (SARWQCB) Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Development of the proposed project would be required to adhere to requirements of the Basin Plan. This includes the incorporation of BMPs to protect water quality during construction and operational periods. Development of the project site would be subject to all existing water quality regulations and programs, including all applicable construction permits. Existing General Plan policies related to groundwater quality are applicable to the project. The Sustainable Community Element includes policies that aim to limit potential water quality impacts and to promote groundwater conservation. Implementation of General Plan policies and the Regional Basin Plan would ensure that water quality impacts related to the proposed project would be less than significant.

4.13 – 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) No Impact. The project site is comprised of one undeveloped, 9.01-acre parcel and is surrounded by residential, industrial, and commercial uses. The project as proposed would not include the reconfiguration of existing roadways or streets. There are residential uses to the north, south, and west of the project site; however, the project would not divide an established community and, as such, no impacts would occur.

b) Less than Significant Impact. The project proposes to amend the existing General Plan land use designation on the project site from Low Density Residential to Medium Density Residential. The Medium Density Residential land use designation allows up to 15 dwelling units per acre. The intent of this land use category is to provide areas for the development of attached, detached, and/or mixed residential uses with a range of densities and housing types. While the development does require a land use change for the project site, the proposed development would be subject to all land use and planning policies in the General Plan.

A specific plan is proposed as part of the project to establish the Madera at Citrus Trail Specific Plan. The proposed single-family homes and related infrastructure would be subject to development standards established by the Madera at Citrus Trail Specific Plan, including design guidelines to define the community and visual character. The proposed project would be consistent with both the General Plan and new Specific Plan. Furthermore, the project-level review of the project includes a site design review to ensure compliance with site-specific development standards, as outlined in the City's Zoning Code and other applicable ordinances. With compliance with the above plans and policies, the proposed project would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and a less than significant impact would occur.

4.15 – 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) Less Than Significant Impact. The California Surface Mining and Reclamation Act (SMARA) identifies and protects mineral resources within the State of California. It establishes several Mineral Resource Zones (MRZ), divisions of land containing within them various amounts of known or unknown mineral resources. The MRZ's are defined as follows: MRZ-1 are areas where no significant minerals are considered to be present, MRZ-2 are areas where mineral resources have been identified, MRZ-3 are areas of undetermined mineral resource significance, and MRZ-4 areas are of unknown mineral resource potential. According to the City's General Plan, the eastern side of the project site slightly enters an MRZ-2 area, the designation suggesting that significant mineral resources may be present.[38] However, Figure 6-4 of the Vital Environment Element in the General Plan indicates that the project site is not located in an area designated by the State Mining and Geology Board as having regionally significant PCC-grade aggregate resources.[39] The project site is located in an urbanized area of Redlands, with residential, industrial, and commercial uses surrounding the property. The development of the site would not constitute a loss of aggregate mineral as its location in an urbanized area is incompatible with mining operations and would negatively impact neighboring businesses and residents. Furthermore, the majority of the project site is located in an area with undetermined mineral resource occurrences. Therefore, the project would not 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. Impacts would be less than significant.

b) Less than Significant Impact. Mineral resources found in Redlands have been deemed significant to the region and the State; however, such mineral resources identified have not been designated as locally significant to the City of Redlands. The eastern edge of the project site enters an MRZ-2 area, of which significant mineral deposits are likely to be present. However, the project site is zoned as Single Family Residential (R-1), meant for the development of low density, single family housing. The area is urbanized and is surrounded by residential, industrial, and commercial uses that would not support the development of mining operations and the subsequent increase in mining related pollution. The development of the project does not constitute a loss of mineral resources as the surrounding land uses do not support the development of mining operations. Potential impacts to locally important mineral resources would be less than significant.

4.17 – Noise

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☑	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑	☐

A *Noise and Vibration Analysis Memo* was prepared by MIG (July, 2023) to evaluate and document noise levels associated with construction and operation of the proposed project (See Appendix H). The information in this section is taken from the *Noise and Vibration Analysis Memo* for the proposed project. Additional detail regarding how noise is defined and measured can be found in Appendix H.

a) Less than Significant with Mitigation Incorporated. Existing ambient noise levels in the project area were monitored on May 30, 2023 (MIG, 2023; see Attachment 3). Four (4) short-term measurements were conducted to determine typical ambient noise levels in the vicinity of the project area, provide direct observations of existing noise sources at and in the vicinity of the project area, and evaluate project noise levels at nearby sensitive receptors. The four monitoring locations are described below and shown in Exhibit 9 (Ambient Noise Monitoring Locations).

- Location ST-1 was at the northeast corner of the project site, approximately 28 feet west of the centerline of the outermost lane of Wabash Avenue.
- Location ST-2 was at the southeast corner of the project site, at the intersection of Wabash Avenue and Colton Avenue. The meter was approximately 35 feet east of the centerline of the outermost lane of Wabash Avenue and approximately 30 feet north of the centerline of the outermost lane of Colton Avenue.

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Source: MIG, Inc.

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Exhibit 9 Ambient Noise Monitoring Locations

Madera at Citrus Trail Residential Project
Redlands, California

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- Location ST-3 was at the southwest corner of the project site, approximately 65 feet north of the centerline of the outermost lane of Colton Avenue.
- Location ST-4 was at the northwest corner of the project site, approximately 680 feet north and west of the centerline of the outermost lanes of Colton Avenue and Wabash Avenue, respectively.

Based on observations made during the ambient noise monitoring, the existing noise environment in the project vicinity consists primarily of vehicles on Wabash Avenue and Colton Avenue and overhead air traffic. Table 12 (Measured Short-Term Ambient Noise Levels (dBA)) summarizes the results of the ambient noise monitoring.

Table 12
Measured Short-Term Ambient Noise Levels (dBA)

Monitor	Duration	Measured Noise Level		
		L_{eq}	L_{min}	L_{max}
ST-1	1 hour	64.3	41.9	83.7
ST-2	1 hour	65.3	46.1	83.1
ST-3	1 hour	59.3	42.7	80.3
ST-4	4 hours	47.6	34.4	76.1
Source: MIG, 2023				

As shown in Table 12, measured ambient noise levels were highest along Wabash Avenue (ST-1) and at the intersection of Wabash Avenue and Colton Avenue (ST-2). Noise levels along Colton Avenue (ST-3) were lower than along Wabash Avenue. Noise levels on the interior of the site (ST-4) were much lower than noise levels along Wabash Avenue and Colton Avenue and indicates traffic noise levels attenuation at rate of approximately 4.5 decibels per doubling of distance from the roadway centerline.

Construction Noise Impact Analysis

The proposed project involves construction activities including site preparation, grading, building construction, paving and architectural coating on an undeveloped parcel in an existing residential area of the City. Construction activities are anticipated to begin early 2024 and may last approximately 14 months in total.

In general, construction activities would involve the use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. These types of construction activities would generate noise and vibration from the following sources:

- Heavy equipment operations at different work areas. Some heavy equipment would consist of mobile equipment such as a loader and excavator that would move around work areas; other equipment would consist of stationary equipment (e.g., cranes or material hoists/lifts) that would generally operate in a fixed location until work activities are complete. Heavy equipment generates noise from engine operation, mechanical systems, and components (e.g., fans, gears, propulsion of wheels or tracks), and other sources such as back-up alarms. Mobile equipment generally operates at different loads, or power outputs, and produces higher or lower noise levels depending on the operating load. Stationary equipment generally operates at a steady power output that produces a constant noise level.
- Vehicle trips, including worker, vendor, and haul truck trips. These trips are likely to primarily occur on Colton Avenue and Wabash Avenue.

Typical construction equipment noise levels at different distances are shown in Table 13 (Potential Project Construction Equipment Noise Levels).

Table 13
Potential Project Construction Equipment Noise Levels

Typical Equipment	Noise Level at 50 feet (L_{max})(A)	Percent Usage Factor(B)	Predicted Equipment Noise Levels (L_{eq})(C)						
			50 Feet	75 Feet	100 Feet	150 Feet	200 Feet	250 Feet	300 Feet
Air Compressor	80	40	76	72	70	66	64	62	56
Bulldozer	85	40	81	77	75	71	69	67	65
Backhoe	80	40	76	72	70	66	64	62	56
Compact Roller	80	20	73	69	67	63	61	59	57
Concrete mixer	85	40	81	77	75	71	69	67	65
Crane	85	16	77	74	71	67	65	63	61
Excavator	85	40	81	77	75	71	69	67	65
Grader	85	40	81	77	75	71	69	67	65
Generator	82	50	79	75	73	69	67	65	66
Paver	85	50	82	78	76	72	70	68	66
Pneumatic tools	85	50	82	78	76	72	70	68	66
Scraper	85	40	81	77	75	71	69	67	65
Welder	73	40	69	65	63	59	57	55	53

Sources: Caltrans, 2013 and FHWA, 2010.

(A) L_{max} noise levels based on manufacturer's specifications.

(B) Usage factor refers to the amount (percent) of time the equipment produces noise over the time period

(C) Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2013: L_{eq} (hourly) = L_{max} at 50 feet – 20log (D/50) + 10log (UF), where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.

With regard to construction noise, site preparation and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as dozers, excavators, graders, loaders, and trucks. Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time. Construction activities associated with the proposed project would last approximately 14 months. Construction activities would, at times, occur directly adjacent to existing residential properties to the north and west.

As shown in Table 13, estimated worst case hourly L_{eq} and L_{max} construction equipment noise levels are predicted to be approximately 82 and 85 dBA, respectively, at 50 feet; however, the magnitude of the project's temporary and periodic increase in ambient noise levels would depend on the nature of the construction activity (i.e., grading, building construction, paving) and the distance between the construction activity and sensitive receptors/outdoor use areas. Sensitive residential receptors would be within 25 feet of work areas for specific but limited times (e.g., site grading along the property line),

at which distance construction equipment may generate noise levels up to 88 dBA L_{eq}. project construction in the middle of the site would be approximately 300 feet from sensitive receptors to the north and west. At a distance of 300 feet, construction equipment could generate noise levels of 66 dBA L_{eq} at sensitive receptor locations The concurrent operation of two or more pieces of equipment could, depending on the equipment being operated, increase estimated noise levels by 2 dBA to 4 dBA L_{eq}.

There is an existing, approximately three- to six-foot-tall concrete wall on the western boundary of the project site that may provide up to 5 dBA of shielding and construction noise attenuation for residences bordering the project site to the west; however, not all residences would receive shielding, as the concrete wall changes height over the length of the site boundary. Specifically, the residences adjacent to the southwest corner of the project site would be exposed to higher noise levels than residences adjacent to the northwest corner of the project site because of the difference in height of the existing concrete wall.

The City's Municipal Code (Section 8.06.120(G)) limits construction activities to the hours of 7 AM and 6 PM on Monday through Saturday; however, neither the City's General Plan nor Municipal Code establish a specific numeric noise standard (e.g., 90 dBA L_{eq}) for construction noise levels. As discussed above, the project's potential exterior construction noise levels would range from approximately 66 dBA L_{eq} to 88 dBA L_{eq} depending on the specific equipment in use and the distance between the equipment and adjacent residential properties. These noise levels would be approximately 1 dB to 40 dB above the existing ambient noise levels measured at the project site (see Table 12). Although the City does not maintain a specific construction noise level standard, the temporary increase in noise levels associated with the proposed construction activities could, at times, be substantial and have the potential to annoy adjacent residential receptors and/or interfere with the receptors normal use and enjoyment of their property.

Although the proposed project's construction activities may result in a substantial temporary increase in ambient noise levels, they are not anticipated to result in physical harm (e.g., temporary or permanent hearing loss or damage) to any adjacent sensitive residential noise receptor for several reasons. First, the construction phases using the most large equipment - site preparation and grading - are anticipated to occur for no more than 30 total days (not necessarily consecutive) out of the anticipated 14-month construction schedule. In addition, the estimated worst-case noise levels would only occur when equipment operations occur directly adjacent to a receptor. As equipment moves along the property line and throughout the site, noise levels would decrease at one receptor and increase at a different receptor. Worst-case conditions (i.e., equipment operating directly adjacent to a specific receptor), are estimated to occur up to four (4) hours per day for no more than several days. Thus, any individual receptor would not be continuously exposed to estimated worst-case noise levels (i.e., noise levels would lower when equipment moves away and return to ambient conditions when construction ceases for the day). Finally, the estimated construction noise level values presented in Table 13 are exterior noise levels, whereas receptors would be likely to be inside residential buildings. Interior noise levels associated with the project's construction at nearby sensitive receptors would be approximately 12 dBA to 30 dBA lower depending on the presence of existing barriers, setback distances, façade construction type, and whether windows or doors were open or closed. Physiological effects occur when the human ear is subjected to either very high noise levels (e.g., 110 dB or more) for a short period or prolonged exposure to high noise environments. For example, to protect workers from noise-induced hearing loss, the U.S. Occupational Safety and Health Administration (OSHA) limits worker noise exposure to 90 dBA as averaged over an 8-hour time period (29 CFR 1910.95). Similarly, the National Institute for Occupational Safety and Health (NIOSH) recommends workers limit noise exposure to no more than 85 dBA over an 8-hour period to protect against noise-induced hearing loss (NIOSH, 1998). Although hourly construction noise levels may approach approximately 88 dBA L_{eq}, such noise levels would not be sustained over an 8-hour period (due to movement of equipment and changes in operations that

occur during daily construction activities). Therefore, at worst-case, noise from construction activities may pose a temporary interference or annoyance effect on nearby sensitive receptors but would not result in adverse physiological effects on human receptors in the surrounding area.

To reduce the potential for the proposed project's construction activities to result in a substantial temporary increase in ambient noise levels in the vicinity of the project site that could annoy adjacent residential receptors and/or interfere with the normal use and enjoyment of residential properties, **Mitigation Measure NOI-1** would be incorporated into the project.

The implementation of **Mitigation Measure NOI-1** would reduce construction noise levels by 5 dBA to 10 dBA at individual receptor locations during the daytime. Based on the estimated worst-case scenario (88 dBA L_{eq}), exterior noise levels at individual receptors could reach 78 dBA L_{eq} to 83 dBA L_{eq} for limited periods of time with the incorporation of **Mitigation Measure NOI-1**. Such noise levels would be similar to the maximum measured daytime noise levels in the project vicinity, but noticeably louder (approximately 20 dBA to 30 dBA) than the typical measured daytime noise levels. Although worst-case noise levels could be noticeably louder than typical hourly daytime noise levels, **Mitigation Measure NOI-1** would require the applicant to provide advance warning of the proposed project's potentially noisy construction activities, restrict work hours to periods when humans are less sensitive to elevated noise levels in accordance with Municipal Code requirements, implement equipment noise control measures, install a temporary noise barrier between work areas and affected receptors, and prepare and plan for potential unanticipated or unexpected construction noise issues. By providing advanced notice of loud construction activities and implementing equipment control measures and temporary noise barriers, the potential for sensitive residential receptors to be surprised or annoyed by loud exterior noises would be substantially reduced.

In addition, daytime noise levels inside potential residential buildings would be approximately 12 dBA to 30 dBA lower, depending on whether windows and doors were open or closed. Thus, interior noise levels at individual receptors locations could potentially reach 58 dBA L_{eq} to 71 dBA L_{eq} during daytime hours, when humans are less sensitive to higher noise levels. At no time would the proposed project's exterior or interior construction noise be loud enough to result in physical harm to adjacent residential receptors.

Finally, although worst-case construction noise levels could be noticeably louder than typical conditions, this impact would occur intermittently (anticipated to be up to four (4) hours per day) for several days during the project's anticipated 30-day site preparation and grading phases), which would not constitute sustained or prolonged exposure to substantially temporary noise increases. The implementation of **Mitigation Measure NOI-1** would lower overall project construction noise levels, reduce the potential for project construction noise levels to surprise or annoy residential receptors, and reduce the potential for project construction noise levels to interfere with normal use of residential properties. The implementation of **Mitigation Measure NOI-1** would, therefore, render the proposed project's potential construction noise levels less than significant.

<u>Operational Noise Impact Analysis</u>

The existing residential land uses near the project site generate noise from vehicle parking activities, garbage collection activities, landscaping activities, stationary heating, ventilation, and air conditioning (HVAC) equipment, and other residential activities (e.g., building maintenance). The proposed project would have a similar density as the existing land uses surrounding the project site and involve similar noise generating sources and activities. Although the proposed project could increase the amount of noise sources and noise-generating activities compared to existing conditions, the project would have a limited potential to generate significant on-site noise levels or substantially change overall noise levels in the vicinity of the project. In general, single-family residential land uses are not a substantial noise-

generating land use type because they do not involve substantial noise-generating activities, buildings and equipment are usually setback from shared property lines, and properties are usually screened from public view by landscaping, fences, or walls and, therefore, shielded from adjacent property lines. For example, the short-term noise levels measured the interior of the site, away from Wabash Avenue and Colton Avenue, were less than 50 dBA L_{eq} (see Table 12), which is indicative of the fact that most residential land uses do not generate significant noise levels.

Once constructed, the proposed project's primary on-site noise generating activities would include traffic on the new interior circulation roads, human activity from use of the small community park, and mechanical equipment such as garage doors and HVAC equipment; however, the project includes several design features that limit the potential for project noise sources to impact adjacent residential receptors. First, the proposed project design includes a six-foot high, four-inch thick concrete wall along its entire northern and western perimeter, which would provide shielding between rear yards and adjacent residential uses. Second, the proposed project layout generally places the housing units around the perimeter of the site, which would further shield potential noise originating from the interior of the project from adjacent residences. Finally, the project would be subject to Municipal Code provisions that generally govern the use of noise-generating equipment on residential properties, such as Municipal Code Section 8.06.090, which prohibits the use of domestic power tools and machinery (e.g., powered saws, lawn and garden tools) during nighttime hours if they create a noise disturbance.

The only stationary noise generating equipment at the project site would be the proposed HVAC units, which would be located at ground-level, in the backyard area of each residential building. Although the exact make and model of the HVAC units are unknown at this time, the type of HVAC unit anticipated to be installed is a small fan-type residential unit capable of generating noise levels between 70 and 76 dBA at a distance of three feet, depending on the type of model installed.

The site plan indicates that the project's residential buildings would be set back a minimum of 25 feet from existing residences to the north and west. With distance, the typical residential HVAC unit would generate a noise level between 51.6 dBA L_{eq} and 57.6 dBA L_{eq} at adjoining property lines, which is above the City's 50 dBA L_{eq} nighttime noise standard for residential land uses. The proposed project design also includes a six (6)-foot tall concrete masonry unit perimeter wall that would provide between approximately five (5) and 10 dB of attenuation in the rear yards of adjacent property lines. The difference in barrier attenuation is due to differences in receiver, source (i.e., HVAC), and top of barrier elevations along the site's northern and western property lines. In general, receptors adjacent to the western property line are situated below the project grade and the differences in elevations between the receptor, HVAC unit, and top of barrier height are greater. In contrast, receptors adjacent to the northern property line are situated closer to (on the west) or above (on the east) the project grade, and the differences in elevations between the receptor, HVAC unit, and top of barrier height are less pronounced. The proposed project's estimated HVAC unit noise levels with distance and barrier attenuation are provided in Table 14 (Potential HVAC System Noise Levels).

Table 14
Potential HVAC System Noise Levels

HVAC System Variable	Property Line Receptor[(A)]	
	West	North
HVAC Unit Noise Level	71 to 76 dBA	71 to 76
Distance to Receptor	25 feet	25 feet
Noise Level at 25 Feet	51.6 dBA L_{eq} to 57.6 dBA L_{eq}	51.6 dBA L_{eq} to 57.6 dBA L_{eq}
Perimeter Barrier Attenuation	-9.0 dBA to -10.4 dBA	-5.2 dBA to -7.5 dBA
Resulting HVAC Noise Level	41.2 dBA L_{eq} to 48.6 dBA L_{eq}	44.1 dBA L_{eq} to 52.4 dBA L_{eq}
City Municipal Code Standard	60 dBA L_{eq} (7 AM – 10 PM) 50 dBA L_{eq} (10 PM – 7 AM)	60 dBA L_{eq} (7 AM – 10 PM) 50 dBA L_{eq} (10 PM – 7 AM)
Additional Attenuation Needed	0 dBA	Up to 2.4 dBA (10 PM – 7 AM)

Source: MIG (see Attachment 04 of Appendix H)
(A) The data presented are the worst-case prediction along the property line. Refer to Appendix XYZ for detailed information on HVAC noise level estimates.

As shown in Table 14, HVAC units that generate higher noise levels (74.6 dBA or higher) would require additional attenuation to ensure potential HVAC units do not exceed the City's nighttime noise standard of 50 dBA L_{eq}. To reduce the potential for the proposed project's operational HVAC noise levels to generate noise levels above the City's exterior standards for residential properties, **Mitigation Measure NOI-2** would be incorporated into the project.

The implementation of **Mitigation Measure NOI-2** would provide a minimum of 2.5 dBA of additional HVAC noise attenuation at existing residential receptors along the shared northern property line and ensure that HVAC noise levels would not exceed the City's 50 dBA L_{eq} exterior nighttime noise standard, nor any other exterior noise standard (e.g., the City's 60 dBA L_{eq} daytime standard for residential properties).

The project also would not have the potential to result in noise levels that exceed the City's maximum permissible interior noise limit of 45 dBA L_{eq} for residential properties. Noise levels inside existing residential buildings would be approximately 12 dBA to 30 dBA lower than estimated exterior noise levels, depending on whether windows and doors were open or closed. Thus, potential HVAC-related interior noise levels at existing residential receptors adjacent to the project would be less than 40 dBA L_{eq} even with windows open, which is less than the City's 45 dBA L_{eq} interior noise standard.

Finally, it is noted that HVAC equipment does not operate continuously and would not affect ambient noise levels when the equipment is not in use. For these reasons, potential HVAC equipment would not generate noise levels that have the potential to exceed the 45 dBA CNEL interior noise standard established by General Plan Policy 9.0s. Furthermore, with **Mitigation Measure NOI-2**, potential HVAC noise is estimated to be less than 50.0 dBA L_{eq} when in operation, which would be approximately 2.4 dBA above measured ambient noise levels on the interior of the site. Since HVAC equipment would not operate continuously, the net change in 24-hour noise exposure levels at adjacent residential properties would be less than 2.4 dBA. The proposed project, therefore, does not have the potential to result in incompatible noise levels at adjacent residences or otherwise result in a substantial permanent increase in ambient noise levels in the vicinity of the project (considered by General Plan Policy 9.0v to be 4 dBA if a land use compatibility threshold is exceeded or 6 dBA in any situation).

As described above, the proposed project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of City standards with the incorporation of **Mitigation Measure NOI-2**.

Operational Noise Impact Analysis (Off-Site Vehicle Trip Noises)
The Transportation Study Screening Analysis prepared for the proposed project (see Appendix I) indicates the project would result in a net increase of 918 daily vehicle trips. Currently, there are approximately 7,400 vehicles per day on Wabash Avenue north of Colton Avenue, 5,800 vehicles per day on Wabash Avenue south of Colton Avenue, 4,100 vehicles per day on Colton Avenue east of Wabash Avenue, and 5,400 vehicles per day on Colton Avenue between Wabash Avenue and Dearborn Street. In general, it takes a doubling of traffic to increase traffic noise volumes by 3 dBA, which is considered an audible increase for exterior noise environments by the City's General Plan. The addition of 918 passenger cars to the roadway system would not result in a doubling of traffic on any roadway segment at or in the vicinity of the project site and, therefore, would result in a less than 3 dBA increase in noise levels on local roads used to access the project site. The proposed project would not result in a substantial, permanent increase in noise levels along the roadways used to access the proposed project as compared to existing or future conditions. This impact would be less than significant. With implementation of **Mitigation Measures NOI-1** and **NOI-2**, impacts related to project construction and operation would be less than significant.

b) Less than Significant with Mitigation Incorporated.

Construction Vibration Impacts
Construction vibration impacts generally occur when construction activities occur in close proximity to buildings and vibration-sensitive areas, during evening or nighttime hours, or when construction activities last extended periods of time. The potential for groundborne vibration is typically greatest when vibratory or large equipment such as rollers or bulldozers are in operation. For the proposed project, these types of equipment would primarily operate during the site preparation, grading, and paving phases. Site preparation and grading would occur over a total of approximately 30 days at the beginning of construction and paving would occur over approximately 20 days near the end of construction. During site preparation and grading activities, large equipment could, at worst-case, operate adjacent to the site's property lines and within approximately 25 feet of the nearest residential buildings (to the north and west), although most operations would generally take place further from receptor locations. For example, equipment operating in the middle of the site could be 300 feet from receptors, and equipment operating along the southern and eastern perimeters could be approximately 600 feet from receptors. Paving operations would generally take place near the interior of the site, usually at least 50 feet from any adjacent residential building. The groundborne vibration levels generated by the type of equipment that would be used to construct the proposed project are shown in Table 15 (Potential Project Construction Vibration Levels).

Table 15
Potential Project Construction Vibration Levels

Equipment	Estimated Peak Particle Velocity at Distance (in/sec) [(A),(B)]							
	25 feet	50 feet	100 feet	200 feet	250 feet	300 feet	350 feet	400 feet
Small bulldozer	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000
Jackhammer	*0.035*	*0.016*	0.008	0.006	0.005	0.004	0.003	0.002
Large bulldozer	*0.089*	*0.042*	*0.019*	*0.015*	*0.012*	0.009	0.007	0.006
Vibratory Roller	*0.210*	*0.098*	*0.046*	*0.034*	*0.029*	*0.021*	*0.017*	*0.010*

Sources: MIG (see Attachment 05 of Appendix H)' Caltrans, 2020; and FTA, 2018.

(A) Estimated PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground attenuation rate (1.1 for dense, compacted hard soils). All distances are lateral distances and do not consider changes in topography.

(B) *Italicized* values indicate the estimated vibration level exceeds the vibration perception threshold of 0.01 in/sec established by City Municipal Code Section 8.06.090(G).

As shown in Table 15, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. The use of typical equipment during construction activities (e.g., bulldozer, jack hammer) is estimated to produce vibration levels above the City's vibration perception threshold of 0.01 in/sec PPV when operated within 250 feet of a residential building façade. For specific vibration-inducing equipment, such as a vibratory roller, it is estimated vibration levels may be above the City's vibration perception threshold when operated within 400 feet of a residential building façade. It is noted that the vibration estimates shown in Table 15 do not take into account differences in grade or other subsurface conditions that may limit vibration transmission. In addition, the vibration estimated shown in Table 15 do not consider any loss of vibratory energy associated with the transfer of vibrations across different medium (e.g., from the soil to a concrete foundation to a floor or wall assembly). The vibration estimates shown in Table 15, therefore, are likely to overestimate potential vibration levels associated with construction equipment.

As shown in Table 15, the proposed project's potential construction activities would have the potential to exceed the City's vibration perception threshold of 0.01 in/sec PPV; however, the vibration levels that could be generated by potential construction activities would not be considered excessive for several reasons. First, potential worst-case construction vibrations would be intermittent, lasting only a few hours each day at any individual receptor. Second, potential worst-case construction vibrations would occur only when equipment operates directly adjacent to a receptor, which is not anticipated to last more than several days in total. Third, all construction activity would occur during the daytime, when human beings are less sensitive to vibrations, and would not interfere with evening or knighting use of residences. Finally, potential construction vibrations would not result in physical damage to any building or structure because estimated worst-case vibration levels would be below Caltrans' guidelines for damage to sensitive residential structures.

While potential construction vibrations would not be considered excessive, the potential exists for construction equipment to generate vibration levels above the City's vibration perception threshold of 0.01 in/sec PPV. To reduce the proposed project's potential to temporarily exceed the City's vibration standard, **Mitigation Measure NOI-3** would be incorporated into the project.

The implementation of **Mitigation Measure NOI-3** would prohibit or limit the use of construction equipment with the greatest potential to exceed the City's vibration perception threshold. In addition, **Mitigation Measure NOI-1** would require the Applicant to provide advance warning to adjacent residents of the proposed project's construction activities, restrict work hours to daytime periods, and use the smallest equipment capable of safely completing work activities. By prohibiting and limiting the use of vibration inducing equipment, providing advanced notice of construction activities, and implementing equipment control measures, the potential for sensitive residential receptors to be exposed to disturbing or excessive perceptible vibrations would be substantially reduced. Thus, with **Mitigation Measure NOI-3**, the proposed project's potential construction vibration levels would be rendered a less than significant impact. Once operational, the proposed project would not have any large equipment that would generate vibration. This impact would be less than significant.

c) Less than Significant Impact. The proposed project is located approximately 1.3 miles south of the Redlands Municipal Airport. Noise from overhead flights was observed during the ambient noise monitoring conducted for the project; however, the predominant source of noise was traffic noise from Wabash Avenue and Colton Avenue. As noted in the City's General Plan, aircraft noise is a relatively minor contribution to the City's overall noise environment.[40] The project site is located outside of the 60 CNEL noise contour for the Redlands Municipal Airport and is not located within any other airport planning boundary. The proposed project, therefore, would not expose people living at the site to excessive airport-related noise levels, and as such, impacts would be less than significant.

<u>Mitigation Measures</u>

NOI-1 **Reduce Potential Project Construction Noise Levels.** To reduce potential noise levels from project construction activities, the applicant shall:

1) *Notify Residential Land Uses of Planned Construction Activities.* This notice shall be provided at least two (2) weeks prior to the start of any construction activities, describe the noise control measures to be implemented by the project, and include the name and phone number of the designated contact for the applicant/project representative and the City of Redlands responsible for handling construction-related noise complaints (per action #5 below). This notice shall be provided to the owner/occupants of residential dwelling units that border the Project site to the north and west and that are directly across Colton Avenue from the Project site.
2) *Restrict Work Hours:* All construction-related work activities, including material deliveries, shall be subject to the requirements of City Municipal Code Section 8.06.120(G). Construction activities, including deliveries, shall occur only during the hours of 7 AM to 6 PM Monday to Saturday and shall not occur any time on Sundays and holidays. The Applicant/Project representative and/or its contractor shall post a sign at all entrances to the construction site informing contractors, subcontractors, other workers, etc. of this requirement.
3) *Construction Equipment Selection, Use, and Noise Control Measures*: The following measures shall apply to construction equipment used at the Project site:

    a. Contractors shall use the smallest size equipment capable of safely completing work activities.
    b. Construction staging shall occur as far away from residential land uses as possible given site and active work constraints.
    c. Electric hook-ups shall be provided for stationary equipment (e.g., pumps, compressors, welding sets). This measure shall be subject to the approval of the

local electric utility. If electric service is denied, the applicant shall ensure actions 3a, 3b, and 3d are implemented.

d. All stationary noise generating equipment shall be shielded and located as far as possible from residential land uses given site and active work constraints. Shielding may consist of a three-or four-sided enclosure provided the structure/enclosure breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operation.
e. Heavy equipment engines shall be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, and be maintained in accordance with manufacturer's recommendations during active construction activities.
f. Pneumatic tools shall include a suppression device on the compressed air exhaust.
g. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.

4) *Install Construction Noise Barrier:* The following measures shall apply to Project construction activities:

a. Site Preparation, Grading, and Foundation Work: During all site preparation, grading, and structure foundation work activities, a physical noise barrier shall be installed and maintained around the north, south, and western site perimeter to the maximum extent feasible given site constraints and access requirements. The noise barrier shall extend to a height of six (6) feet above grade. Potential barrier options capable of reducing construction noise levels could include, but are not limited to:

i. A plywood or other barrier installed at-grade (or mounted to structures located at-grade, such as a K-Rail), and consisting of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB.
ii. Commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class (STC) or transmission loss value of 20 dB.
iii. Any combination of noise barriers and commercial products capable of achieving required construction noise reductions during site preparation, grading, and structure foundation work activities.
iv. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).

The noise barrier shall not be required if the perimeter concrete masonry unit wall included in the project's site plan is fully constructed prior to the start of substantial site preparation and grading activities at the site (i.e., only clearing and grubbing and grading necessary to access the site and install the perimeter wall may occur).

5) *Prepare a Construction Noise Complaint Plan:* The applicant shall prepare a Construction Noise Complaint Plan that shall:

a. Identify the name and/or title and contact information (including phone number and email) for a designated Project and City representative responsible for addressing construction-related noise issues.
b. Includes procedures describing how the designated Project representative shall receive, respond, and resolve construction noise complaints.
c. At a minimum, upon receipt of a noise complaint, the Project representative shall notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint.

NOI-2 **Reduce Potential Project HVAC Noise Levels.** To reduce potential noise levels from Project heating, ventilation, and air conditioning (HVAC) equipment, the City shall prohibit the installation of HVAC systems that generate a noise level greater than 76 dBA at three (3) feet. In addition, for HVAC systems located in the rear or side yards of residential units along the Project's northern property line, the applicant shall, prior to the release of the grading or building permit that authorizes the construction of any such unit, submit evidence of one the following:

1) The HVAC units to be installed shall be located at least 25 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment) and shall not generate a noise level in excess of 74.6 dBA at three (3) feet from the unit. The City may accept a manufacturer's specifications or other information, such as actual empirical noise measurements, as evidence of the noise levels that may be generated by the final proposed HVAC system(s).
2) If the HVAC units to be installed generate a noise level between 74.6 dBA and 76 dBA at three feet they shall be located a minimum of 34 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment).
3) If the HVAC units to be installed generate a noise level between 74.6 dBA and 76 dBA at three feet and they are located closer than 34 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment), then the height of the planned northern perimeter concrete masonry unit wall shall be increased from six feet to eight feet in height above the planned finished surface elevation.

NOI-3 **Prohibit Vibratory Construction Equipment.** To reduce potential vibration levels associated with construction of the proposed project, the applicant and/or its designated contractor, contractor's representatives, or other appropriate personnel shall use tamper and drum/wheel style rollers during project construction. The use of large vibratory rollers or other vibratory equipment shall be prohibited during construction unless geotechnical evaluations indicate the use of this equipment is specifically required to address compaction or other building requirements, in which case the use of vibratory rollers and equipment shall be limited to the area/conditions specified in the geotechnical report.

4.18 – Population and Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☑	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

a) Less than Significant Impact. The project would directly induce population growth in the area with the development of new single-family housing. According to "Table 4-4: Residential Buildout (2035)" of the Livable Community Element of the Redlands General Plan, potential buildout of single family residential within the City, outside of the Transit Village, is projected at 1,900 units by 2035.[41] This number does not include housing projects that were under construction, entitled, or in the planning stage when the General Plan was written. The table additionally estimates a population growth from total future buildout, including multi-family residential, of 10,964 people. Under the existing Single-Family Residential (R-1) zoning for the site, the maximum allowable density is 6 du/ac, or a maximum of 54 dwelling units on the 9.01-acre site. Using an average of 3.23 persons per dwelling unit, the site under existing zoning would have capacity to house up to 174 persons in the 54 allowable dwelling units.

As described in Section 2 (Project Description), the proposed project includes a Zone Change from Low-Density Residential (R-1) to Multi-Family Residential (R-2), which would increase the maximum allowable density of the site to 15 du/ac, or a maximum of 135 dwelling units. This would result in a maximum capacity to house up to 436 persons in the 135 allowable dwelling units. The proposed project would include development of 103 new single-family homes, which would result in a density of 11.43 du/ac and up to 333 new persons on the site. As such, the proposed project would result in 49 additional dwelling units and a potential net increase of capacity to house up to 159 additional persons on the site when compared to existing zoning. While this increase in units and potential population growth has not been planned for by the City, the increase of 49 dwelling units and up to 159 additional persons on the site would not represent substantial unplanned population growth that cannot be handled by the City's existing utilities and service providers. As discussed in Section 4.18 (Public Services), payment of development impact fees by the proposed project would offset incremental increases in demand for services such as fire protection, police protection, schools, parks and recreation facilities, and other public services such as libraries. In addition, there are existing private utilities (gas, electric, telecommunications, etc.) located in Colton Avenue and Wabash Avenue in which the project would connect to laterally, and no new infrastructure would be required to serve the proposed residential development that could have an effect on the environment. Finally, the potential increase in capacity to house up to 159 additional persons on the site would be well within the SCAG 2020 RTP/SCS growth

projections for the City of Redlands (i.e., an increase of 11,300 residents between 2016 and 2045). Therefore, the proposed project would not exceed regional growth assumptions. As such, impacts would be less than significant.

b) No Impact. The project site is currently undeveloped. No housing would be displaced as a result of project development and as such there would be no impacts.

4.20 – 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
a) Fire protection?	☐	☐	☑	☐
b) Police protection?	☐	☐	☑	☐
c) Schools?	☐	☐	☑	☐
d) Parks?	☐	☐	☑	☐
e) Other public facilities?	☐	☐	☑	☐

a) Less than Significant Impact. The project is located in the service area of the City of Redlands Fire Department. The Fire Department responds to medical emergencies, hazardous materials incidents, rescue calls, and motor-related accidents, in addition to regular fire suppression services. There are four stations in Redlands[42]:

- Fire Station 261: 525 E Citrus Ave.
- Fire Station 262: 1690 Garden St.
- Fire Station 263: 10 W Pennsylvania Ave.
- Fire Station 264: 1270 W Park Ave.

The nearest fire station to the project site is Station 261, located approximately 2.6 miles to the west. The project may create an incremental increase in demand for fire services. However, development impact fees that are collected at the time of building permit issuance for approved projects would offset any incremental in demand for fire protection and emergency medical services. Fees would be charged at a current rate of $577.08 per single family dwelling unit and would go towards fire facilities and staffing.[43] Impacts related to expansion of fire protection services would be less than significant with payment of fees.

b) Less than Significant Impact. The project area is served by the Redlands Police Department. The Police Department and Patrol building is located at 1270 W Park Ave, Building C, Redlands, CA 92373. The station is approximately 4 miles west of the project site. Development of the project may generate an incremental increase in the need for police protection in the project area. However, this incremental increase is consistent with the buildout of the City's General Plan. The Police Department reviews its needs on a yearly basis and adjusts service levels as needed to maintain an adequate level of public protection. Additionally, development impact fees collected at the time of building permit issuance would offset incremental impacts of development on demand for services. Fees would be charged at a current

rate of $30.11 per single family dwelling unit and would go towards law enforcement facilities and staffing.[44] Therefore, a less than significant impact to police services would occur.

c) Less than Significant Impact. The project includes construction of 103 single family dwelling units, and, as such, would directly lead to population growth in the area of up to 333 persons, and an associated growth within the Redlands Unified School District of up to 33 students. Payment of development impact fees required under State law would offset the cost of increased demand for school district facilities in the future. The Redlands Unified School District has established a school fee and charge a current rate of $4.79 per square foot of "assessable space" (space within the perimeter of a residential structure) within new residential construction.[45] Any project impacts on school facilities would be less than significant with payment of school fees.

d) Less than Significant Impact. Development of the project could have the potential to impact demand on parks and recreation facilities if it induced substantial population growth in the area. However, as described in Section 4.13 above, the proposed project is within the region's anticipated buildout. In addition, development impact fees collected at the time of building permit issuance would offset any incremental impacts of development on the utilization of local park services. The City has established Open Space and Parks Fees going to those facilities and the project would be charged at a current rate of $3,959.94 per single family dwelling.[46] Less than significant impacts would occur with payment of fees.

e) Less than Significant Impact. The project is expected to result in an increase in residents, that may generate an additional demand for public facilities such as libraries. However, the development of the proposed dwelling units is in line with the region's future growth and buildout. Payment of required development impact fees determined by the City of Redlands would offset the cost of increased demand for such facilities in the future. Fees for public facilities would be charged at a current rate of $686.45 per single family residential dwelling unit.[47] Potential impacts to public facilities in Redlands would be less than significant with payment of fees.

4.21 – Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☑	☐

a) Less than Significant Impact. The project involves the development of 103 single family residential dwelling units at the northwestern corner of Colton Avenue and Wabash Avenue. Crafton Park is an irregularly shaped public park located 350 feet south of the project site, across Colton Avenue. The 7.5 acre park includes a playground, picnic tables and grills, parking, restrooms, and a soccer field.[48] Additionally, the Orange Blossom Trailhead is located adjacent to the park, just 80 feet south of the project site. The proposed project may lead to an increased use of both Crafton Park and the Orange Blossom Trail with the associated increase in the local population of the area. However, the project proposes the development of an approximately 0.63-acre on-site community park (See Exhibit 7). The park would be located off of "A Street" in the center of the proposed community, and would include an area for children with recreational "climb and slide" equipment, an enclosed dog park, open turf, and a sitting area with shaded benches and two outdoor grills. Ease of access to and the new amenities as part of the proposed community park would limit any over exposure to Crafton Park and the Orange Blossom Trailhead, limiting any substantial deterioration of those facilities over time. Additionally, as described above in Section 4.13, the proposed project is in line with the region's anticipated future buildout. Finally, Development Impact Fees collected at the time of building permit issuance would help to offset any incremental impacts of development on the utilization of local park services. The City has established Open Space and Parks Fees going to those facilities and the project would be charged at a current rate of $3,959.94 per single family dwelling. As such, the increase in population would not induce unforeseen stress on the City's local or regional parks. The proposed project would not increase the use of local recreational resources to such a substantial amount that would lead to their accelerated physical deterioration. Impacts would be less than significant with payment of fees.

b) Less than Significant Impact. The project involves the development of 103 single family dwelling units, as well as an approximately 0.63-acre community park. The park would be located off of "A Street" in the center of the proposed community, and would include an area for children with recreational "climb and slide" equipment, an enclosed dog park, open turf, and a sitting area with shaded benches and two outdoor grills. Newly planted trees would also encircle the community park. Construction and operation of the proposed community park is required to be in compliance of Chapter 12.44 "Parks" of the City of Redlands Code of Ordinances.[49] The proposed park is not anticipated to have an adverse physical impact on the environment, and any impacts would be reduced with compliance to local regulations. As such, impacts would be less than significant.

4.22 – 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) Would the project 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?	☐	☐	☑	☐

A *Traffic Impact Analysis* and a *VMT Screening Analysis* were prepared for the proposed project by Ganddini Group, Inc., dated May 3rd and April 7th, 2023, respectively (See Appendix I). The information presented below is provided from the aforementioned evaluations.

a) Less than Significant Impact. The *Traffic Impact Analysis* was prepared to calculate the project's trip generation and evaluate the potential for transportation impacts resulting from the development of the proposed project in the context of the City of Redlands's discretionary authority for conformance with locally established operational standards – specifically Measure U policies (which are largely based on Level of Service (LOS) standards that measure traffic congestion). The *VMT Screening Analysis* was prepared to determine whether the proposed project meets the vehicle miles traveled (VMT) requirements for the San Bernardino County Transportation Authority (SBCTA) Guidelines and screens out from needing to conduct a detailed VMT analysis. CEQA Guidelines section 15064.3(A) states that VMT is the most appropriate measure for transportation impacts, and LOS shall not be considered an environmental impact and "a project's effect on automobile delay shall not constitute a significant environmental impact" (for CEQA purposes).

Project Trip Generation

Table 16 (Proposed Project Trip Generation) shows the estimated trip generation for the proposed project based on trip generation rates collected from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). As shown in Table 16, the proposed project is forecast to generate a total of approximately 918 new daily trips, including 67 trips during the AM peak hour and 88 trips during the PM peak hour.

Table 16
Proposed Project Trip Generation

Land Use	Source	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Single-Family Detached Housing	ITE 210	79 DU	14	41	55	47	27	74	745
Single-Family Attached Housing	ITE 215	24 DU	4	8	12	8	6	14	173
Total Project Trips			**18**	**49**	**67**	**55**	**33**	**88**	**918**

Source: Ganddini, 2023.
Notes: ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021);
DU = Dwelling Unit

Conflicts with Redlands Measure U

Measure U was an initiative approved by the voters of Redlands in 1997 to enact several principles of managed development within the City of Redlands. The principles in Measure U have been incorporated throughout the new 2035 General Plan, as well as several sections of the Redlands Municipal Code. The *Traffic Impact Analysis* evaluated the project using the applicable Measure U Policies identified in the Connected City Element of the City of Redlands 2035 General Plan as well as the County of San Bernardino Transportation Impact Study Guidelines (TIS Guidelines). The Measure U Policies are largely based on Level of Service (LOS) standards that measure traffic congestion. A detailed LOS evaluation is included in the *Traffic Impact Analysis* (See Appendix I) in order to demonstrate project compliance with Measure U. Each Measure U policy is provided below followed by a brief explanation of how the project complies with the policy.

> *Policy 5.20a: Maintain LOS C or better as the standard at all intersections presently at LOS C or better.*

As shown in Table 1 of the *Traffic Impact Analysis*, all study intersections currently operate at LOS (C or better) except for the intersection of Judson Street at Colton Avenue during the peak hours. The addition of project traffic would not cause any location to deteriorate from LOS C to worse than LOS C.

> *Policy 5.20b: Within the area identified in GP Figure 5-1, including that unincorporated County area identified on GP Figure 5-1 as the "donut hole", maintain LOS C or better; however, accept a reduced LOS on a case-by-case basis upon approval by a four-fifths (4/5ths) vote of the total authorized membership of the City Council.*

Measure U Policy 5.20b does not apply to the project since the project site is not within the area identified in GP Figure 5-1.

> *Policy 5.20c: Where the current level of service at a location within the City of Redlands is below the Level of Service (LOS) C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location except as provided in Section 5.20b.*

As shown in Table 3 of the *Traffic Impact Analysis*, the intersection of Judson Street and Colton Avenue would operate at LOS D during the peak hours, and the addition of project traffic would not change the delay or LOS at the intersection. Therefore, no mitigation is necessary as the project does not reduce the existing level of service at the intersection.

As discussed above, the project does not result in a drop in LOS at any intersection and therefore would not cause the LOS to drop below the referenced standards. The proposed project's study area

intersections were evaluated with and without project trips to comply with the City's Measure U policies by determining if the project would cause any LOS deficiencies. As previously noted, CEQA Guidelines section 15064.3(A) states that VMT is the most appropriate measure for transportation impacts, and LOS shall not be considered an environmental impact and "a project's effect on automobile delay shall not constitute a significant environmental impact" (for CEQA purposes). As shown in the *Traffic Impact Analysis*, all study area intersections would operate at satisfactory LOS in the Existing and Existing Plus Project Conditions except for the intersection of Judson Street and Colton Avenue which would continue to operate at an LOS D with or without the project. As such, the project would not result in any unsatisfactory LOS; therefore, the project would be in compliance with Measure U, no improvements would be required, and impacts would be less than significant.

b) Less than Significant Impact. In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts, under CEQA, associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending the use of VMT for evaluating transportation impacts as of July 1, 2020. CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation.

The City of Redlands' CEQA Assessment VMT Analysis Guidelines provides guidelines for analysis of transportation impacts under CEQA. The guidelines also provide three types of screening that can be applied to determine if a project is exempt from project-level VMT analysis. The project was screened using the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

1. The project is located within a Transit Priority Area.
2. The project is located in a low VMT screening area.
3. The project is considered a local serving use or would generate less than 3,000 metric tons of CO2 equivalent (3,000 MT CO2e) per year.

Below are the results of the screening criteria for the project:

<u>Screening Criteria 1 –Transit Priority Area (TPA) Screening</u>
Projects located within a TPA, defined as within one-half mile of a major transit stop or high-quality transit corridor, may be presumed to result in a less than significant VMT impact absent substantial evidence to the contrary. This presumption may not apply, however, if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75.
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the jurisdiction with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

Based on a review of the San Bernardino County Transpiration Authority (SBCTA) VMT Screening Tool, the proposed project is not located within a TPA; therefore, the project does not satisfy the TPA screening criteria.

Screening Criteria 2 – Low VMT Screening Area

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. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population (residential plus employment) that is similar to the existing land uses in the low VMT area.

As prescribed in the City VMT Guidelines, the SBCTA VMT Screening Tool was used to assess low VMT area screening for the project. The SBCTA VMT Screening Tool utilizes county travel forecasting models to measure VMT performance for individual jurisdiction and for individual traffic analysis zones (TAZ) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population was estimated for each TAZ. The proposed project is consistent with the existing land uses in the project TAZ. Per the VMT Screening Analysis, the baseline year (2023) origin-destination average daily VMT per service population for the project TAZ is equal to 24.0, which is less than 15 percent (15%) below the County baseline (28.4 VMT per service population). Therefore, the proposed project satisfies the City of Redlands established screening criteria for projects located in a low VMT area, and the project can be presumed to result in a less than significant VMT impact.

Screening Criteria 3 – Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment. Local serving retail projects with stores less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel. In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools
- Local Parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g., non-destination hotels)
- Student housing projects on or adjacent to a college campus
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (public libraries, fires stations, local government)
- Local-serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects which generate less than 3,000 MTCO2e per year can be presumed to have a less than significant impact on VMT. Projects which generate less than 3,000 MTCO2e per year5 include the following:
    - Single-family residential – 167 dwelling units or fewer

- Multi-family residential (1-2 stories) – 232 dwelling units or fewer
- Multi-family residential (3+ stories) – 299 dwelling units or fewer
- Office – 59,100 square feet or less
- Local-serving retail center – 112,400 square feet or less (no stores larger than 50,000 square feet)
- Warehousing – 463,400 square feet or less
- Light industrial – 74,600 square feet or less

As previously shown in Table 16, the proposed project consists of less than 167 single-family dwelling units; therefore, the proposed project satisfies the City-established project type screening criteria and may be presumed to result in a less than significant VMT impact.

Conclusion

Based on the above analysis, the proposed project is determined to have a less than significant impact on VMT since it satisfies one of more of the VMT screening criteria established by the City of Redlands CEQA Assessment VMT Analysis Guidelines. The project's VMT impact is considered less than significant and no additional VMT analysis is required.

c) Less than Significant Impact. A significant impact would occur if the proposed project substantially increased an existing hazardous design feature or introduced incompatible uses to the existing traffic pattern. Access to the site would be provided via three new streets connecting to Colton Avenue and Wabash Avenue. The streets are referred to as streets "A, B, and C". A Street would be 32 feet wide and run in a north – south direction, with an inlet off of Colton Avenue. B and C Streets would be 36 feet wide and operate in an east – west direction, both providing service off of Wabash Avenue. B Street would be south of C Street, located closer to the intersection of Colton and Wabash. These streets would provide vehicle access in and out of the project site. From these streets, there would be aisles, akin to a driveway. Each aisle would provide access to multiple houses on either side, as well as the attached garages. Street parking is available on all three of the proposed streets. The project does not involve any changes to the alignment or uses of existing roadways, and the proposed project is consistent with City of Redlands driveway spacing and design requirements. Construction operations occurring on site would comply with the California Building Code adopted in the City of Redlands Municipal Code.[50] The proposed project would not result in a traffic safety hazard due to any design features, and impacts would be less than significant.

d) Less than Significant Impact. A significant impact would occur if the design of the proposed project would not satisfy emergency access requirements of the City of Redlands Fire Department or in any other way threaten the ability of emergency vehicles to access and serve the project site or adjacent uses. The proposed project would not result in inadequate emergency access. As previously discussed above, access to the project site would be provided via three proposed streets running through the neighborhood; two streets accessible from Wabash Avenue, and the other from Colton Avenue. A Street off of Colton Avenue would 32 feet wide, and B and C Streets off of Wabash Avenue would both be 36 feet in width. The streets width is sufficient to provide access to fire and emergency vehicles and is consistent with California Fire Code requirements. All access features are subject to and must satisfy the City of Redlands design requirements, including the Fire Department's requirements. This project would therefore not result in adverse impacts with regard to emergency access. Impacts would be less than significant.

4.24 – Tribal 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 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 Cultural Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☐	☑
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐

a.i) No Impact. A significant impact would occur if the proposed project would cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Resources of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). A field survey and records search conducted for the Cultural Report of this project identified two historic-period concrete standpipes located at the project site, which was once an agricultural field. According to the Report, the standpipes evaluated are not eligible for listing in the California Register of Historical Resources or for local designation, and neither structure qualifies as a “historical resource.” While the City has several historic landmarks and sites listed under its historic preservation program as defined in Public Resources Code Section 5020.1(k), the proposed project site is completely undeveloped and there are no buildings, structures, or features on the site that could be listed as a “historical resource.” The project site was formerly used for agricultural purposes and is not

known to be associated with an important historical period or important persons from the past. The project would not have any physical impacts outside the designated project area boundary. Therefore, the project would not result in any adverse change in the significance of a historical resource as defined in Public Resources Code Section 5020.1(k). No impact would occur.

a.ii) Less than Significant with Mitigation Incorporated. Government Code §§ 65352.3 and 65562.5 (SB 18); and Public Resources Code §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 (AB 52) provide that a project that may cause a substantial adverse change to a defined Tribal Cultural Resource (TCR) can result in a significant effect on the environment. SB18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan. The Lead Agency is required to notify tribes within 14 days of deeming a development application complete subject to CEQA to notify the requesting tribe as an invitation to consult on the project.

AB 52 identifies examples of mitigation measures that would avoid or minimize impacts to TCR. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015. Although there is no indication of TCRs at the project site, AB 52 is clear in stating that it is the responsibility of the Public Agency (i.e., Lead Agency) to consult with Native American tribes early in the CEQA process to allow tribal governments, lead agencies, and project proponents to discuss the appropriate level of environment review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process (see Public Resources Code Section 2108.3.2). Specifically, government-to-government consultation may provide "tribal knowledge" of the project area that can be used in identifying TCRs that cannot be obtained through other investigative means. Pursuant to AB 52, as the CEQA Lead Agency, the City of Redlands sent consultation notification letters on November 22, 2022 to the following tribes:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Chemehuevi Indian Tribe
- Colorado River Indian Tribes of the Colorado River Indian Reservation
- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino/Tongva Nation
- Juaneño Band of Mission Indians Acjachemen Nation 84A
- Juaneño Band of Mission Indians Acjachemen Nation - Belardes
- Kern Valley Indian Community
- Los Coyotes Band of Cahuilla and Cupeno Indians
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pechanga Band of Luiseño Indians
- Quechan Tribe of the Fort Yuma Reservation
- Ramona Band of Cahuilla Tribe

- Rincon Band of Luiseno Indians
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseño Indians
- Torres-Martinez Desert Cahuilla Indians
- Twenty-Nine Palms Band of Mission Indians

Only the Morongo Band of Mission Indians responded and requested consultation with the City. The City has not been presented with any information or evidence regarding the presence or likelihood of any TCR occurring on or near the project site. However, at the request of the Morongo Tribe, the City has agreed to implement **Mitigation Measures CUL-1** through **CUL-8** in the event of any inadvertent discovery of a TCR during construction activities related to the proposed project. Incorporation of **Mitigation Measures CUL-1** through **CUL-8** would ensure that potential impacts to listed or eligible TCR from the proposed project, if any, would be reduced to less than significant. Therefore, impacts to TCR would be less than significant.

4.18 - 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, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation 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 and 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?	☐	☐	☐	☑

a) Less than Significant Impact. The Redlands Municipal Utilities & Engineering Department delivers water to over 23,000 service connections throughout its service area, including those in Redlands, Mentone, parts of Crafton Hills, San Timoteo Canyon, and San Bernardino. The Department receives its water from a mix of sources including local groundwater wells, the Mill Creek Watershed, Santa Ana Watershed, and imported water provided through the State Water Project. The City utilizes 23 groundwater wells, 44 booster pumps, 18 reservoirs, and 450 miles of transmission lines to deliver water.[51] Additionally, the City operates two surface water treatment plants, Tate and Hinkley, which provide treated water from the Mill Creek and Santa Ana watersheds respectively, and State Water Project (SWP). The City maintains ownership in multiple local private and mutual water companies to

bolster and secure reliable water supplies for their treatment plants. Wastewater is collected and treated at the Redlands Wastewater Treatment Facility and has a treatment capacity of 9.5 million gallons.

As discussed in Section 4.9 (Hydrology and Water Quality), the project would install new water and sewer lines onsite connecting to the existing infrastructure in Redlands. Compliance with local drainage guidelines and implementation of pollutant-related BMPs would reduce the chances of substantial runoff accumulating. The project would not generate substantially increased runoff from new impermeable surfaces on site. The proposed project would have two drainage areas, one comprising the majority of the site, and a smaller second one located at the southwest corner of the site. Stormwater would be captured and infiltrated on site through two subsurface infiltration facilities. Runoff would then be collected by catch-basins and moved to the underground infiltration facility. No additional improvements are anticipated to either sewer lines or treatment facilities to serve the project. Standard connection fees would address any incremental impacts of the project. Therefore, the project would result in less than significant impact as a result of new or expanded water supply and wastewater treatment facilities.

Impacts related to electric power, natural gas, and telecommunications facilities would also be less than significant. The project would connect to existing facilities and would not require any expansion of services. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause a significant environmental effect. Less than significant impacts would occur.

b) Less than Significant Impact. According to the *2020 Integrated Regional Urban Water Management Plan* (*UWMP*) for the Upper Santa Ana River Watershed Region, the City of Redlands is projected to have a total demand of 25,818 acre-feet (AF) in 2025.[52] The same estimates calculated a supply total of 31,039 AF in 2020, a difference of 5,221 AF. The project would generate a small increase in additional demand for water from the City of Redlands' water supply (17.1 AFY) relative to overall existing citywide demand. The Urban Water Management Plan anticipates an overall increase in demand associated with development in the area over 2015 conditions. The project would not substantially deplete water supplies, and the project would have a less than significant impact on entitled water supplies.

c) Less than Significant Impact. Potentially significant impacts could occur as a result of this project if it results in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. As detailed in Sections 4.19.a and 4.19.b, the project would be adequately served by existing wastewater treatment facilities. Therefore, a less than significant impact would occur.

d) Less than Significant Impact. Significant impacts could occur if the proposed project would exceed the existing permitted landfill capacity or violates federal, state, and local statutes and regulations. Solid waste disposal services are overseen by the City of Redlands Trash Collection. Solid waste collected in Redlands is primarily transferred to the San Timoteo Landfill in Redlands, located approximately 6 miles south of the project site. According to CalRecycle, the San Timoteo Landfill has a maximum capacity of 23,685,785 tons, with a remaining capacity of 12,360,396 tons measured April 30th, 2019.[53] Construction of the facility is anticipated to generate some solid waste, with an estimated total waste generation of approximately 3,577 lbs, per dwelling unit, per year.[54] There would be adequate landfill capacity in the region to accommodate project-generated waste; as such, the proposed project is not expected to generate an amount of solid waste in excess of the capacity of the local infrastructure. Impacts to solid waste disposal capacity would be less than significant.

e) No Impact. The proposed project is required to comply with all applicable federal, state, County, and City statutes and regulations related to solid waste as a standard project condition of approval. Therefore, no impact would occur.

4.25 – 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 exacerbate fire risk or 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) No Impact. The project site is not located within a State Responsibility Areas (SRA). The nearest SRA area is approximately one mile east of the project site in Crafton.[55] There are no wildland conditions in the urbanized area where the project site is located. While the project site is currently undeveloped and vacant with low to the ground vegetation, the site is bounded by Colton Avenue and Wabash Avenue and is surrounded by residential, industrial, and commercial uses. The City's General Plan identifies several evacuation routes out of the City; these routes were previously designated as potential evacuation routes in the 2007 San Bernardino General Plan.[56] These include: Interstates 10, 15, 210, and 215, and State Highways 30, 60, 66, 71, and 83. In the event of an earthquake, the following roads would provide safe access out of the San Bernardino Valley, as indicated by Caltrans and cited in the Redlands General Plan:

- Hospitality Lane from Tippecanoe Avenue to Waterman Avenue
- Coulston Street from Mountain View Avenue to Tippecanoe Avenue
- Lugonia Avenue from Orange Street to Mountain View Avenue
- Redlands Boulevard from Orange Street to Waterman Avenue

The proposed project would not interfere with the availability of these highways and roadways as evacuation routes. The project would not substantially impair any adopted or informal emergency response plan or evacuation plan, as such no impact would occur.

b) No Impact. The project site is not located within a fire hazard zone, as identified on the Very High Fire Hazard Severity Zone (VHFHSZ) maps prepared by the California Department of Forestry and Fire Protection (CALFIRE).[57] The nearest FHSZ is considered moderate, and is located approximately one mile east of the project site, beginning at the southeastern corner of Coltan and Crafton Avenue. The nearest VHFHSZ is located approximately 1.6 miles south in South Redlands. The project site is located in an urbanized area that would not exacerbate wildfire risks, thereby exposing occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

c) No Impact. The project site is not located within or near a State Responsibility Areas as indicated in Section 4.19.a. Development of the proposed project would involve the construction of three streets and associated driveways that would provide access in and out of the project site. The installation of utility connections to the new housing developments would also be required to provide water, heating, and electricity to residents. None of the project improvements would exacerbate fire risk or would result in a temporary or ongoing impact from wildfires requiring the installation or maintenance of associated infrastructure that may exacerbate fire risk, or that may result in temporary or ongoing impacts to the environment. No impact would occur.

d) No Impact. The project site is not located within or near any State Responsibility Areas. As described in Threshold 4.9.c.iv above, the project site is located in an area designated as Flood Zone "X" or Zone "D"; Zone X representing areas determined to be outside the 0.2% annual chance and Zone "D" where flood hazards are undetermined, but possible. Additionally, according to Figure 7-3: Flood Hazards of the Healthy Community Element of the Redlands General Plan, the project site is not located within a floodway, or within a 100 or 500-year floodplain.[58] Additionally, the project site is not located in a dam inundation area. The project site is located in a relatively flat area, with little to no potential for landslides or downstream flooding or runoff. If such an event were to occur, the City of Redlands General Plan outlines policies and principles to mitigate potential impacts from flooding. Development of the proposed project would not exacerbate risks to people from flooding or landslides. No impacts would occur.

4.27 – Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially 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) Does the project have impacts that are individually limited, but cumulatively considerable?	☐	☑	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

a) Less than Significant with Mitigation Incorporated. The proposed project would not substantially impact any scenic vistas, scenic resources, or the visual character of the area, as discussed in Section 4.1, and would not result in excessive light or glare. The project site is located within a developed area with no natural habitat. The proposed project would not significantly impact any sensitive plants, plant communities, fish, wildlife, or habitat for any sensitive species. Impacts to burrowing owl and nesting birds would be less than significant with adherence to existing regulations and incorporation of **Mitigation Measures BIO-1** and **BIO-2**. There are no jurisdictional waters on the project site. Impacts to archaeological resources, buried human remains, and Tribal Cultural Resources would be reduced to less than significant with implementation of **Mitigation Measures CUL-1** through **CUL-8**. Based on the preceding analysis of potential impacts in the responses to items 4.1 through 4.20, no evidence is presented that this proposed project would degrade the quality of the environment. Impacts related to degradation of the environment would be less than significant with incorporation of mitigation measures.

b) Less than Significant with Mitigation Incorporated. Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long-term, due to the permanent land-use changes and operational

characteristics involved with the proposed project. Cumulative impacts would be less than significant, as further discussed herein.

Aesthetics
Impacts related to aesthetics at the project-level have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Therefore, no cumulative impacts related to this topic would occur.

Agricultural Resources
The analysis provided in Sections 4.2 found that no individual impacts would occur; therefore, the Project could not contribute considerably to local agriculture or forestry.

Air Quality
The analysis provided in Section 4.3 found that impacts would be less than significant with incorporation of **Mitigation Measure AIR-1**. Therefore, the project would not contribute to cumulatively considerable air quality impacts.

Biological Resources
The analysis provided in Section 4.4 found that no individual impacts to sensitive species or migratory birds would occur with implementation of **Mitigation Measures BIO-**1 and **BIO-2**; therefore, the project would not contribute considerably to regional impacts on such species, and impacts would be less than significant. The analysis also found that the project would have no other impacts on biological resources and would not result in localized or regional cumulative impacts, and as such, impacts would be less than significant.

Cultural Resources
The analysis provided in Section 4.5 found that impacts to archaeological resources and buried human remains would be less than significant with incorporation of **Mitigation Measures CUL-1** through **CUL-8**. Therefore, the project would not contribute to cumulatively considerable cultural resources impacts.

Energy
The analysis provided in Section 4.6 found that no individual impacts related to energy use would occur as a result of the proposed project. Therefore, the project would not contribute to cumulative energy impacts.

Geology and Soils
Impacts related to geology at the project-level have no potential for cumulative impacts. Therefore, the proposed project would have no contribution to potential geological or soil degradation or other such impacts. The analysis in section 4.7 found that if during construction operations, paleontological resources are discovered, **Mitigation Measure GEO-1** would establish proper care and attention to such discoveries. Therefore, the project would not contribute to cumulative paleontological resources impacts.

Greenhouse Gas Emissions
As discussed in Section 4.8, climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. The project would not contribute considerably to global climate change.

Hazardous Materials
The analysis provided in Section 4.9 related to hazards and hazardous materials, and the associated Phase I Environmental Site Assessment found that impacts would be less than significant with

adherence to the following mitigation measure listed below. Additionally, compliance with all regulations related to the disposal and storage of household hazardous waste would ensure that impacts would be less than significant.

Land Use and Planning
The analysis provided in Section 4.11 related to Land Use and Planning found that impacts would be less than significant; therefore, while the proposed project would contribute to individual, localized, or regional cumulative impacts, its contribution would not be considerable.

Mineral Resources
The analysis provided in Section 4.12 related to mineral resources found that there would be no impact; therefore, while the project would contribute to localized or regional cumulative impacts, the project contribution would not be considerable.

Noise
The analysis provided in Section 4.13 found that impacts related to the construction and operation of the proposed project would be less than significant with incorporation of **Mitigation Measures NOI-1** through **NOI-3**. Therefore, the project would not contribute considerably to cumulative noise impacts.

Population and Housing
The analysis provided in Section 4.14 related to Population and Housing found that no impacts would result; therefore, no cumulative impacts related to this topic would occur.

Public Services
The analysis provided in Section 4.15 related to Public Services found that impacts would be less than significant; therefore, while the proposed project would contribute to localized cumulative impacts, the contribution would not be cumulatively considerable.

Recreation
The analysis provided in Section 4.16 related to Recreation found that impacts would be less than significant; therefore, no cumulative impacts related to this topic would occur.

Traffic and Transportation
Traffic conditions were analyzed in Section 4.17 and found to be less than significant. The proposed project's contribution to cumulative impacts to local and regional transportation facilities would not be considerable.

Tribal Cultural Resources
The analysis provided in Section 4.18 related to Tribal Cultural Resources found that impacts would be less than significant with adherence to **Mitigation Measures CUL-1** through **CUL-8**.

Utilities and Service Systems
The analysis provided in Section 4.19 related to Utilities and Service Systems found that impacts would be less than significant; therefore, while the project would contribute to localized or regional cumulative impacts, the project contribution would not be considerable.

Wildfire
The analysis provided in Section 4.20 related to Wildfire found that no impacts would result; therefore, no cumulative impacts related to this topic would occur.

c) Less than Significant Impact. The proposed project would not have environmental effects which would cause substantial adverse effects on humans, either directly or indirectly, as noted in the previous sections above.

AIR-1: To reduce potential short-term adverse health risks associated with PM10 exhaust emissions, including emissions of diesel particulate matter (DPM), generated during project construction activities, the City shall require the applicant and/or its designated contractors, contractor's representatives, or other appropriate personnel to comply with the following construction equipment restriction for the project:

- All construction equipment with a rated power-output of 50 horsepower or greater shall meet U.S. EPA and CARB Tier IV Interim Emission Standards. This may be achieved via the use of equipment with engines that have been certified to meet Tier IV Interim emission standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., oxidation catalyst, particulate filter) capable of reducing exhaust PM10 emissions to levels that meet Tier IV standards.

As an alternative to using equipment that meets Tier IV Interim Emissions Standards for off-road equipment with a rated power-output of 50 horsepower or greater, the applicant may prepare and submit a refined construction health risk assessment to the City once additional project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment shall demonstrate and identify any measures necessary such that the proposed project's incremental cancerogenic health risk at nearby sensitive receptor locations is below the applicable SCAQMD threshold of 10 cancers in a million.

BIO-1: **Pre-Construction Burrowing Owl Surveys**: Preconstruction surveys for burrowing owl should be conducted. The surveys should follow the methods described in the CDFW's Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). Two surveys should be conducted, with the first survey being scheduled between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls and/or suitable burrowing owl burrows are identified on the project site during the survey, the project should consult with CDFW and follow the methods listed in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012) for avoidance and/or passive relocation. If burrowing owls or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified on the project site during the survey, these features must be completely avoided. If impacts to those features are unavoidable then the project proponent must also develop an owl mitigation plan in consultation with CDFW. Mitigation methods may include passive relocation conducted outside of the owl breeding season (between September 1 and February 28). If an active owl burrow is identified, and construction is to proceed, then a qualified biologist (with two or more years of burrowing owl experience) can establish an appropriate disturbance-limit buffer around the burrow using flagging or staking. Construction activities shall not occur within any buffer zones until the burrow is deemed inactive by the qualified biologist.

BIO-2: **Pre-Construction Nesting Bird Survey**: If construction or other project activities are scheduled to occur during the nesting bird season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests shall not be disturbed or destroyed. The survey shall be

completed no more than three days prior to initial ground disturbance. The nesting bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly, due to construction activity, noise, human activity, or ground disturbance. If an active nest is identified, a qualified avian biologist shall establish an appropriately sized non-disturbance buffer around the nest using flagging or staking. Construction activities shall not occur within any non-disturbance buffer zones until the nest is deemed inactive by the qualified avian biologist. If initial ground-disturbing activities are scheduled to occur during the nesting bird season, then a biological monitor shall be present during all vegetation removal activities to ensure no impacts to nesting birds occur.

CUL-1: **Native American Treatment Agreement.** Prior to the issuance of grading permits, the applicant shall enter into a Tribal Monitoring Agreement with the Morongo Band of Mission Indians 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 temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.

CUL-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 will 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 will 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.

CUL-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.

CUL-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.

CUL-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.

CUL-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:

E. Full avoidance.

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

G. 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.

H. 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)

CUL-7: **Inadvertent Discovery of Human Remains.** The Morongo Band of Mission Indians 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].**

E. 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.

F. 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.

G. 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

H. 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 will 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 will be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the City Planning Department.

CUL-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 Lead Agency and Consulting Tribe[s] for review and comment. After approval of all parties, the final reports are to be submitted to the Eastern Information Center, and the Consulting Tribe[s].

GEO-1: **Inadvertent Discovery of Paleontological Resources.** If paleontological materials are uncovered during grading or other earth moving activities, the contractor shall be required to halt work in the immediate area of the find, and to retain a professional paleontologist to examine the materials to determine whether it is a significant paleontological resource. If this determination is positive, the resource shall be left in place, if determined feasible by the project paleontologist. Otherwise, the scientifically consequential information shall be fully recovered by the paleontologist. Work may continue outside of the area of the find; however, no further work shall occur in the immediate location of the find until all information recovery has been completed and a report concerning it filed with the Development Services Director. The applicant shall bear the cost of implementing this mitigation.

NOI-1 **Reduce Potential Project Construction Noise Levels.** To reduce potential noise levels from project construction activities, the applicant shall:

1) *Notify Residential Land Uses of Planned Construction Activities.* This notice shall be provided at least two (2) weeks prior to the start of any construction activities, describe the noise control measures to be implemented by the project, and include the name and phone number of the designated contact for the applicant/project representative and the City of Redlands responsible for handling construction-related noise complaints (per action #5 below). This notice shall be provided to the

owner/occupants of residential dwelling units that border the project site to the north and west and that are directly across Colton Avenue from the project site.

2) *Restrict Work Hours:* All construction-related work activities, including material deliveries, shall be subject to the requirements of City Municipal Code Section 8.06.120(G). Construction activities, including deliveries, shall occur only during the hours of 7 AM to 6 PM Monday to Saturday and shall not occur any time on Sundays and holidays. The applicant/project representative and/or its contractor shall post a sign at all entrances to the construction site informing contractors, subcontractors, other workers, etc. of this requirement.

3) *Construction Equipment Selection, Use, and Noise Control Measures*: The following measures shall apply to construction equipment used at the project site:

    a. Contractors shall use the smallest size equipment capable of safely completing work activities.
    b. Construction staging shall occur as far away from residential land uses as possible given site and active work constraints.
    c. Electric hook-ups shall be provided for stationary equipment (e.g., pumps, compressors, welding sets). This measure shall be subject to the approval of the local electric utility. If electric service is denied, the applicant shall ensure actions 3a, 3b, and 3d are implemented.
    d. All stationary noise generating equipment shall be shielded and located as far as possible from residential land uses given site and active work constraints. Shielding may consist of a three-or four-sided enclosure provided the structure/enclosure breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operation.
    e. Heavy equipment engines shall be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, and be maintained in accordance with manufacturer's recommendations during active construction activities.
    f. Pneumatic tools shall include a suppression device on the compressed air exhaust.
    g. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.

4) *Install Construction Noise Barrier:* The following measures shall apply to project construction activities:

    a. Site Preparation, Grading, and Foundation Work: During all site preparation, grading, and structure foundation work activities, a physical noise barrier shall be installed and maintained around the north, south, and western site perimeter to the maximum extent feasible given site constraints and access requirements. The noise barrier shall extend to a height of six (6) feet above grade. Potential barrier options capable of reducing construction noise levels could include, but are not limited to:

        i. A plywood or other barrier installed at-grade (or mounted to structures located at-grade, such as a K-Rail), and consisting of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB.

ii. Commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class (STC) or transmission loss value of 20 dB.
iii. Any combination of noise barriers and commercial products capable of achieving required construction noise reductions during site preparation, grading, and structure foundation work activities.
iv. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).

The noise barrier shall not be required if the perimeter concrete masonry unit wall included in the project's site plan is fully constructed prior to the start of substantial site preparation and grading activities at the site (i.e., only clearing and grubbing and grading necessary to access the site and install the perimeter wall may occur).

5) *Prepare a Construction Noise Complaint Plan:* The applicant shall prepare a Construction Noise Complaint Plan that shall:

a. Identify the name and/or title and contact information (including phone number and email) for a designated project and City representative responsible for addressing construction-related noise issues.
b. Includes procedures describing how the designated project representative shall receive, respond, and resolve construction noise complaints.
c. At a minimum, upon receipt of a noise complaint, the project representative shall notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint.

NOI-2 **Reduce Potential Project HVAC Noise Levels.** To reduce potential noise levels from project heating, ventilation, and air conditioning (HVAC) equipment, the City shall prohibit the installation of HVAC systems that generate a noise level greater than 76 dBA at three (3) feet. In addition, for HVAC systems located in the rear or side yards of residential units along the project's northern property line, the applicant shall, prior to the release of the grading or building permit that authorizes the construction of any such unit, submit evidence of one the following:

1) The HVAC units to be installed shall be located at least 25 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment) and shall not generate a noise level in excess of 74.6 dBA at three (3) feet from the unit. The City may accept a manufacturer's specifications or other information, such as actual empirical noise measurements, as evidence of the noise levels that may be generated by the final proposed HVAC system(s).
2) If the HVAC units to be installed generate a noise level between 74.6 dBA and 76 dBA at three (3) feet they shall be located a minimum of 34 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment).
3) If the HVAC units to be installed generate a noise level between 74.6 dBA and 76 dBA at three (3) feet) and they are located closer than 34 feet from the northern property line (as measured from the edge of the HVAC compressor/condenser equipment), then the height of the planned northern perimeter concrete masonry unit

wall shall be increased from six (6) feet to eight (8) feet in height above the planned finished surface elevation.

NOI-3 **Prohibit Vibratory Construction Equipment.** To reduce potential vibration levels associated with construction of the proposed project, the applicant and/or its designated contractor, contractor's representatives, or other appropriate personnel shall use tamper and drum/wheel style rollers during project construction. The use of large vibratory rollers or other vibratory equipment shall be prohibited during construction unless geotechnical evaluations indicate the use of this equipment is specifically required to address compaction or other building requirements, in which case the use of vibratory rollers and equipment shall be limited to the area/conditions specified in the geotechnical report.

6 References

6.1 – List of Preparers

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6.2 – Persons and Organizations Consulted

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