PETERSON ROAD

RANCHO MIRAGE

Initial Study
Mitigated Negative Declaration

Lead Agency:

City of Rancho Mirage

69-825 Highway 111

Rancho Mirage, California 92270

Prepared by:

MSA CONSULTING, INC.

September 2024

ENVIRONMENTAL INITIAL STUDY
PETERSON ROAD

Project Title:	Peterson Road
City Project No:	Environmental Assessment Case No. EA24-0008 Preliminary Development Plan Case No. PDP24-0003
Lead Agency Name and Address:	City of Rancho Mirage 69-825 Highway 111 Rancho Mirage, California 92270 Phone: (760) 328-2266
Applicant:	Mark Bigley Blieu Companies, LLC 2000 E. Fourth St. #205 Santa Ana, CA 92705
Contact Person:	Pilar Fløtterud, Senior Planner
Phone Number:	(760) 328-2266
Project Location:	39360 Peterson Road
Accessor Parcel Number:	689-180-012
General Plan Designation:	Existing: High Density Residential (R-H) / Affordable Housing Overlay (AHO) Proposed: High Density Residential (R-H) / Affordable Housing Overlay (AHO)
Zoning Designation:	Existing: High Density Residential (R-H) / Affordable Housing Overlay (AHO) Proposed: High Density Residential (R-H) / Affordable Housing Overlay (AHO)

TABLES

EXHIBITS

Appendix

Appendix A – California Emissions Estimator Model (CalEEMod)
Appendix B – Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis Report
Appendix C – Cultural Resources Assessment
Appendix D – Preliminary Geotechnical Investigation
Appendix E – Paleontological Resources Assessment
Appendix F – Phase I Environmental Site Assessment
Appendix G – Vehicle Miles Traveled Evaluation

CHAPTER 1: PROJECT DESCRIPTION

Project Location

The project property occupies approximately 12 acres east of Peterson Road and north of Juniper Lane in Rancho Mirage. The project site is surrounded by developed residential communities to the north and south, the Whitewater River Channel to the east, and Peterson Road and commercial uses to the west.

The project site was previously a mobile home park with a community center/clubhouse. The mobile home park has been present since 1972 and remained relatively unchanged up until 1984. In 2018, all onsite structures were demolished. Remnants of the demolished structures have been removed. Building pads and foundation and paved roads remain onsite. The site is surrounded by fencing.

Proposed Project

The project proposes the construction of a residential community, consisting of up to 120 residential units, a clubhouse, open space areas, and amenities. Project amenities will include a pool with lounge deck, grilling and dining areas, grass sports filed, tot lot with large shade structures, community garden, and multiple seating areas with shade.

Access to the project will occur at one location on Peterson Road. The project will provide 275 paved parking spaces (including 149 carport spaces and 126 uncovered spaces).

In order to allow up to 120 residential units, the applicant will submit the following entitlements for City approval:

- Preliminary Development Plan Case No.PDP24-0003: The PDP shows the project concept by providing engineering, architectural, and landscaping plans for review.
- Environmental Assessment EA24-0008: The EA will analyze the project's impact to the environment.

Landscaping and Retention

Landscaping is proposed along the Peterson Road frontage and throughout the project. Drought-tolerant trees, shrubs and accents would be utilized to both enhance the property and complement the desert environment. Plant material would include a mix of trees, shrubs, and groundcover. Trees proposed for the site will provide shade and include acacia, strawberry tree, mesquite, olive, palm trees, and palo verde. Proposed shrubs include century plant, ocotillo, yucca, and various forms of agave, to name a few. The detention basin will include a hydroseeded basin seed mix.

Open space/retention will occur along the eastern property boundary. The project will include on-site storm drainage facilities designed to capture and infiltrate the water quality design capture volume while being equipped to adequately convey high flows in an equivalent manner to the existing condition. As a standard requirement, the project incorporates on-site retention facilities to convey and retain project-related runoff to the satisfaction of the City's engineering standards.

Access and Parking

As previously stated, primary access to the project will occur at Peterson Road. Parking spaces will occur along the paved drive aisles. The project will provide 126 paved spaces, and 149 covered parking spaces, for a total of 275 parking spaces.

Utilities

The project will connect to existing water and sewer utility infrastructure along Peterson Road. Water and sewer services are provided to the City of Rancho Mirage, and the project site, by the Coachella Valley Water District (CVWD). The project will connect to the existing 8-inch water main along the project's western boundary (Peterson Road). The project will connect to the existing 8-inch sewer main along Peterson Road.

The project site is currently served by electrical utilities. Electricity is provided to the project site by Southern California Edison (SCE). The project will connect to the existing electrical facilities.

Environmental Setting and Surrounding Land Uses

The project property previously operated as a mobile home community until 2018. Structures associated with the mobile home community do not occur onsite. However, trees, shrubs, and utility infrastructure exist onsite. The site is surrounded by block walls.

The boundaries of the project are delineated by the paved right-of-way, Peterson Road, developed residential communities to the north and south, and the Whitewater River Channel (and Morningside Golf Course) to the east.

Table 1 Land Use Description

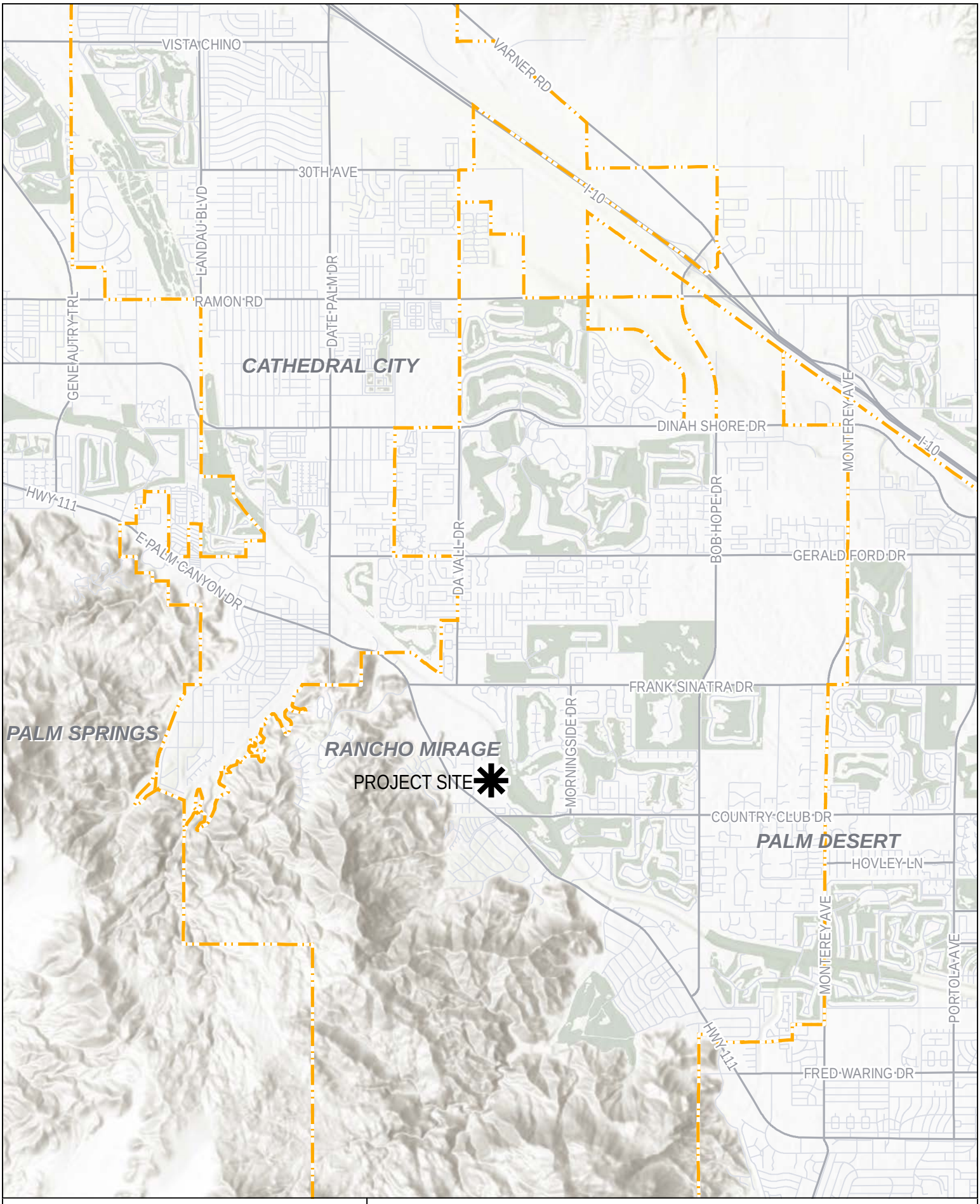
	Jurisdiction	General Plan/ Zoning	Existing Use
Project Site	Rancho Mirage	High Density Residential (R-H) / Affordable Housing Overlay (AHO)	Vacant land previously a mobile home park
North	Rancho Mirage	Residential Estates (R-E)	Residential Estates
East	Rancho Mirage	Floodways and Drainage Channels (OS/W)	Whitewater River Channel (and Morningside Golf Course)
West	Rancho Mirage	General Commercial (C-G)	Commercial businesses (storage)
South	Rancho Mirage	Mobile Home Park (MHP)	Santa Rosa Villas Residential Community

Other public agencies whose approval is required

South Coast Air Quality Management District

Southern California Edison

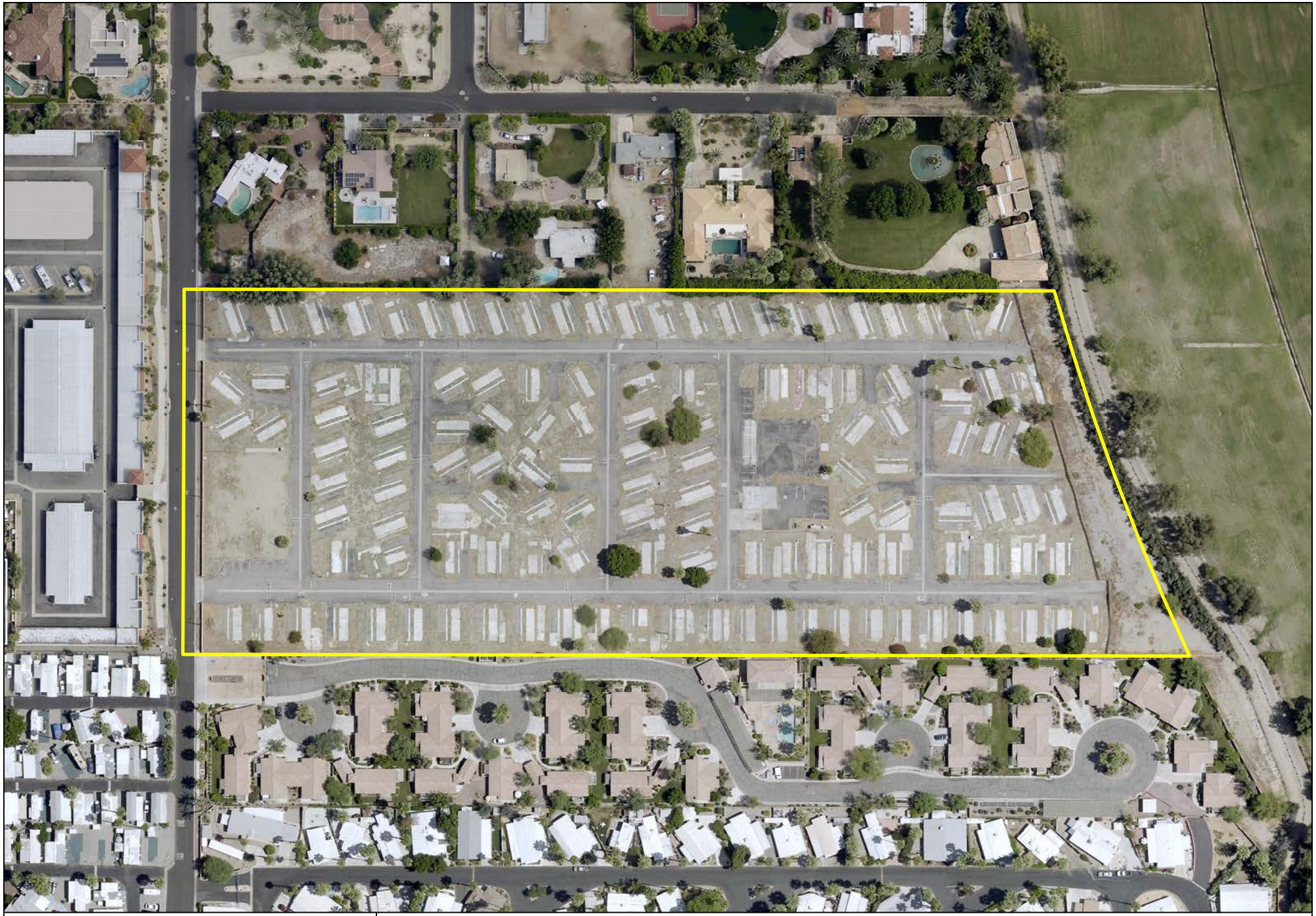
Coachella Valley Water District



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 5,000 FT

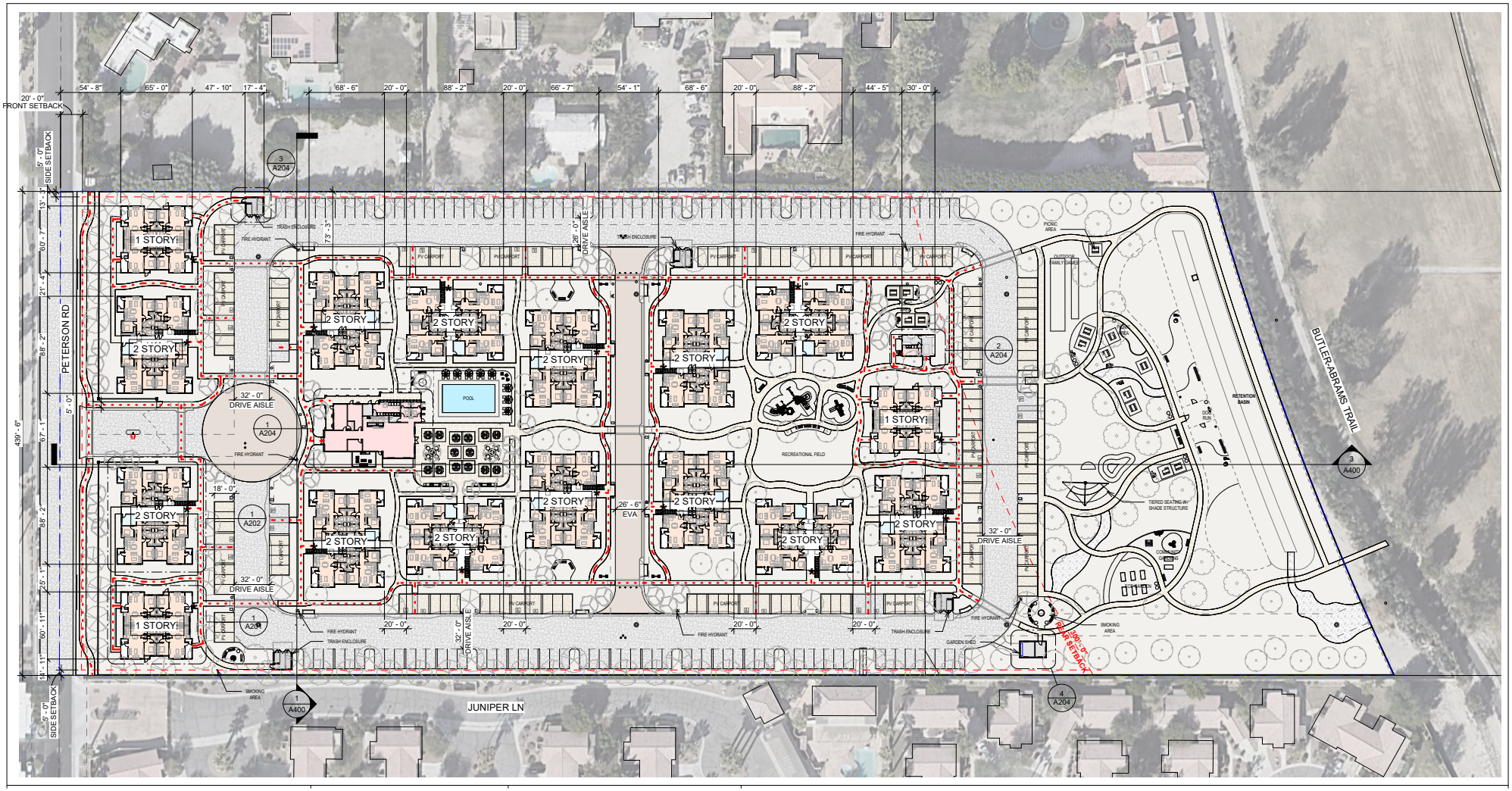
VICINITY MAP
PETERSON ROAD
EXHIBIT 1



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 150 FT

AERIAL PHOTOGRAPH
PETERSON ROAD
EXHIBIT 2



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SITE PLAN
PETERSON ROAD
EXHIBIT 3

CHAPTER 2: ENVIRONMENTAL ANALYSIS AND DETERMINATION

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 and Forestry 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	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

Evaluation of Environmental Impacts:

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

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

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

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

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

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

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

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

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

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

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

9) The explanation of each issue should identify: a) the significance criteria or threshold, if any, used to evaluate each question; and b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Determination: (To be completed by the Lead Agency) On the basis of this initial evaluation:

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

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

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

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

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

Pilar Fløtterud, Senior Planner City of Rancho Mirage	9/10/2024 Date:

Environmental Checklist and Discussion:

The following checklist evaluates the proposed Project's potential adverse impacts. For those environmental topics for which a potential adverse impact may exist, a discussion of the existing site environment related to the topic is presented followed by an analysis of the Project's potential adverse impacts. When the Project does not have any potential for adverse impacts for an environmental topic, the reasons why there are no potential adverse impacts are described.

1 - Aesthetics

AESTHETICS -- Would the project**:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Sources: Rancho Mirage General Plan, 2017; Rancho Mirage Municipal Code; California Department of Transportation (Caltrans), State Scenic Highways, 2024.

1.1 Setting

The perception and uniqueness of scenic vistas and visual character can vary according to location and composition of its surrounding context. The subjective value of views is generally affected by the presence and intensity of neighboring man–made improvements, such as structures, overhead utilities, and landscaping, often in relation to the aesthetic quality offered by a natural background that may include open space, mountain ranges, or a natural landmark

feature. The proximity and massing of structures, landscaping and other visual barriers interact with the visibility of surrounding environments to restrict or enhance the value of local scenic views. The evaluation of scenic vistas takes into consideration the physical compatibility of proposed projects in relation to land uses, transportation corridors, or other vantage points, where the enjoyment of unique vistas may exist, such as residential areas or scenic roads.

The Rancho Mirage General Plan outlines the aesthetic qualities that define the City. The Rancho Mirage Municipal Code establishes development standards and guidelines attributed to the different zones within the City. The City's General Plan and Municipal Code were consulted to determine whether the proposed project would result in impacts to aesthetics, including scenic vistas, scenic quality, and light and glare.

1.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT.** The project property occupies approximately 12 acres of disturbed and vacant land in Rancho Mirage. The entire site has been disturbed by previous grading, and development. The site previously operated as a mobile home community since 1972. However, between the years 2009 to 2018, the structures onsite were slowly demolished and removed from the site. Paved drive aisles, building foundations, and scattered landscaping (i.e., trees) remain onsite. Due to the previous development that occurred onsite, the entire site exhibits a predominantly flat condition. Moreover, there are no salient topographic features or other natural visual landmarks on the project site, and the onsite characteristics and physical features do not contribute to a unique scenic vista.

The project is located in Rancho Mirage's High Density Residential (R-H 9 du/ac max)/Affordable Housing Overlay (AHO) General Plan Land Use/Zoning designation. The R-H designation is most suitable for affordable and senior housing, including apartments and condominiums.

The project site is located in an area of the City that is characterized by developed uses to the north, south, east and west. Specifically, surrounding uses include residential estate lots to the north, residential condo community and mobile home park community to the south, commercial businesses to the west, and the Whitewater River Channel to the east. The project's western boundary is delineated by the paved right-of-way, Peterson Road. Surrounding land use and zoning designations include Residential Estate (R-E) to the north, Mobile Home Park (MHP) to the south, Floodways and Drainage Channels (OS/W) to the east, and General Commercial (C-G) to the west.

The hillsides and mountains surrounding the Coachella Valley are considered scenic resources. When viewed from the project site, the Santa Rosa Mountains are visible to the south and west. The San Jacinto Mountains to the west, and the Little San Bernardino Mountains to the north and northeast are largely obstructed by existing structures and landscaping, however, peak views are visible depending on viewpoint location. Existing buildings, perimeter walls, hedges, and planted trees of various sizes collectively obstruct the views of the surrounding mountain ranges.

As stated above, the project previously operated as a mobile home park, however, has since been demolished. Existing residential properties are located north and south of the project. In its current vacant state, the project does not impair views of the surrounding scenic vistas to the existing residential structures or existing public right-of-way to a

significant degree. Existing onsite landscaping and surrounding block walls briefly obstruct views depending on viewpoint location.

The project proposes the development of up to 120 multifamily units with associated improvements. When observed from the surrounding properties and local roadways, the views of the surrounding mountain ranges are visible and partially obstructed, depending on viewpoint location. The following discussion analyzes the project's potential impact on the surrounding scenic vistas from Peterson Road, as well as the properties to the north, west, east, and south.

Peterson Road

From the public right-of-way, Peterson Road, the Little San Bernardino Mountains and the Indio Hills are distant and partially visible to the north, however, existing landscaping obstructs these views; the Santa Rosa Mountains are visible to the south and southwest, however landscaping and developed areas obstruct baseline views of the Santa Rosa Mountains; finally, peak views of the San Jacinto Mountains are visible to the west depending on viewpoint location. Existing commercial buildings (i.e., storage facility) largely obstructs the view of the San Jacinto Mountain from Peterson Road.

The project property was previously developed and operated as a mobile home park. However, the structures associated with the mobile home park have been demolished. Scattered trees remain onsite and currently obstruct the distant views of the Little San Bernardino Mountains to the north and east. Due to the existing developments, landscaping onsite and on the surrounding properties, and manmade infrastructure, the distant mountains to the north and east are largely obstructed and panoramic views are not achieved from the right-of-way when viewed from the segment of Peterson Road adjacent to the project boundary.

Development of the residential project may contribute to additional obstructions to the scenic vistas to the east due to the proposed residential structures, and additional landscaping. However, building setbacks from the right-of-way and breaks between buildings will ensure that the obstruction will be less than significant.

The project will not result in impacts to the views of the San Jacinto Mountains, Santa Rosa Mountains, or Indio Hills when viewed along Peterson Road. This is due to the respective locations of these features to the west, south, and north of the project.

Surrounding Properties

West

Public Storage is located west of the project (west of Peterson Road). Views are not typically observed from storage facilities. However, an analysis is included here for informational purposes.

Development of the proposed project would result in similar impacts to the western property as Peterson Road due to its location west of the project. Therefore, as stated above, development of the project would not result in impacts to views of the San Jacinto Mountains to the west, Indio Hills and Little San Bernardino Mountains to the north, and Santa Rosa Mountains to the south, due to the project's orientation east.

Views of the Little San Bernardino Mountains to the northeast are largely obstructed by existing landscaping, including mature trees. Depending on viewpoint location, peak views

of the Little San Bernardino Mountains to the east are somewhat visible, however, panoramic views of the mountain range are not impacted. Development of the proposed project may contribute to additional obstructions to the scenic resources to the east, however, building setbacks from the frontage and breaks between buildings will reduce impacts of the proposed buildings to the views of the scenic resources.

Therefore, development of the proposed project would not result in significant impacts to scenic vistas when observed from Public Storage.

North

Properties north of the project include large residential estate lots. From these properties, views of the Little San Bernardino Mountains and Indio Hills to the north are distant and largely obstructed by existing landscaping and structures; the San Jacinto Mountains to the west is also distant and obstructed by existing landscaping and structures; the Santa Rosa Mountains to the south and west are the most prominent landform from these locations due to its proximity. Thus, mid-range and peak views of the Santa Rosa Mountains are visible depending on viewpoint location.

The project will not result in visual impacts to the Little San Bernardino Mountains and Indio Hills to the north and northeast or San Jacinto Mountain to the west, due to the project's location south of the residential estate lots. The project may, however, result in obstructions of midrange views of the Santa Rosa Mountains when viewed from the northern properties because the project proposes building heights of up to 25 feet (compliant with the Zoning Section 17.20.100(A), Height measurement, restrictions, and height limit exceptions (see discussion c., below)).

However, the proposed structures will be set back approximately 73 - 90 feet from the northern project property line. One building is proposed at the northwest corner of the project site and proposes a setback of approximately 13.3 feet. This is consistent with Section 17.08.020 of the Rancho Mirage Municipal Code, which allows a minimum of a 5-foot setback. The proposed setbacks will reduce the scale of the buildings observed from the northern properties. Impacts will be less than significant.

South

The property to the south includes an age-restricted affordable housing residential community, Santa Rosa Villas. The homes in Santa Rosa Villas are one-story, apart from the two-story clubhouse building. From this community, views of the Santa Rosa Mountains to the south and west, Little San Bernardino Mountains and Indio Hills to the north, and San Jacinto Mountain to the west are distant and obstructed by existing structures, landscaping, and manmade infrastructure.

The project will not result in visual impacts to the San Jacinto Mountain to the west, or the Santa Rosa Mountains to the south due to the project's location north of the residential community. The project may, however, result in obstructions to the Little San Bernardino Mountains and Indio Hills to the north when viewed from the southern properties. However, the proposed structures will be set back approximately 80 - 115 feet from the southern property boundary to reduce the scale of the buildings. One building is proposed at the southwest corner of the project site and proposes a setback of approximately 14.9 feet. This is consistent with Section 17.08.020 of the Rancho Mirage Municipal Code, which allows a minimum of a 5-foot setback. The proposed setbacks will reduce the scale

of the buildings observed from the northern properties. Impacts will be less than significant.

East

To the east of the project site is the Whitewater River Channel. The public trail, Butler-Adams Trail, is located along the project's eastern boundary. From the Stormwater Channel and trail, views of the Santa Rosa Mountains to the south and west, Little San Bernardino Mountains and Indio Hills to the north, and San Jacinto Mountains to the west are distant and obstructed by existing structures, landscaping, and manmade infrastructure. Mountains to the west are largely obstructed by a line of mature trees, thus views of the Santa Rosa Mountains and San Jacinto Mountains to the west are not visible.

Development of the project site would not result in visual impacts to the surrounding landforms. The project will not obstruct views of the Little San Bernardino Mountains and Indio Hills to the north and northeast and the Santa Rosa Mountains to the south because the project is oriented to the west. The project will not result in impacts to the views of the landforms to the west (i.e., Santa Rosa and San Jacinto Mountains) because they are already obstructed from views by existing mature trees. Therefore, the project would not result in impacts to scenic vistas.

Overall, the project proposes development of a multifamily residential community on vacant land. The proposed buildings will comply with building setback requirements established by the City of Rancho Mirage.

The proposed residential community will be similar to existing residential communities in the area, which are also characterized by perimeter block walls, gated entries, and landscaped frontages. In addition to the foregoing, the project property is currently absent of any historic buildings, structures or other former permanent improvements that would hold any aesthetic value. Based on the existing conditions of the project property and the surrounding area, it is likely that historic buildings, structures, or other former permanent improvements were not present on the project site. Impacts would be less than significant.

b) **LESS THAN SIGNIFICANT IMPACT.** The purpose of the State Scenic Highway Program is to preserve and protect scenic State highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. State highways can be officially designated as Scenic Highways or be determined to be eligible for designation. The status of a state scenic highway changes from eligible to "officially designated" when a local jurisdiction adopts a scenic corridor protection program, and the California Department of Transportation (Caltrans) approves the designation as a Scenic Highway. Based on the Caltrans status map of scenic highway designations, Highway 111 is considered an Eligible State Scenic Highway, but is not officially designated. The "eligible" segment of Highway 111 is located approximately 430 feet south of the proposed project. Based on the Circulation Element of the Riverside County General Plan, the project is not located within close proximity to any designated state or county scenic highway. Therefore, no impacts to those resources are anticipated.

The project site is not located adjacent to a view corridor designated by Rancho Mirage (RMGP Exhibit 32). Therefore, the project would not result in visual obstructions of views witnessed by motorists and pedestrians traveling along a view corridor.

Additionally, the property does not contain any landmarks such as trees or historic buildings, and based on historical maps, the project property has maintained a developed condition, and as such, is absent of any historic buildings, structures or other former improvements that would hold any aesthetic value. Furthermore, the project is not located within close proximity to any designated scenic highways as identified by Caltrans or the County of Riverside General Plan. Therefore, the proposed project would not result in adverse impacts to scenic resources adjacent to, or in close proximity to state scenic highway or other local transportation corridors. Less than significant impacts are expected.

c) **LESS THAN SIGNIFICANT IMPACT.** The proposed project is located in an urbanized area within the City of Rancho Mirage, with some infill and vacant parcels in the local vicinity. Areas surrounding the project site consist of residential communities, estate lots, and commercial businesses. Residential properties and communities are located north and south of the project. Commercial uses are located to the west. The surrounding developed areas include well-maintained landscaping, building frontages, public and pedestrian areas, and roadways. The existing land uses contribute to the scenic quality of the area.

In its existing condition, the project property is disturbed and vacant. The site previously operated as a mobile home park; however, the park has been demolished. Landscaping from the previous mobile home park was not removed during demolition and currently exists onsite. Utility infrastructure and concrete foundations remain onsite. The site exhibits a predominantly flat topography. Peterson Road delineates the project's western boundary and is paved with curb and gutter improvements.

The project is located within the High Density Residential (R-H) / Affordable Housing Overlay (AHO)land use and zoning designation. The project will comply with the development standards established for R-H zones, per the Rancho Mirage Municipal Code (RMMC). Title 17, Zoning, of the RMMC was consulted in order to compare the development standards proposed for the project with the existing standards established for the City of Rancho Mirage.

Table I-1 Existing and Proposed Development Standards

Development Feature	R-H Zoning Standards
Minimum Parcel Size	8,000 sq. ft.
Minimum Parcel Width	60 ft.
Minimum Parcel Depth	90 ft.
Maximum Density	5-9 du/ac
Private Outdoor Living Spaces	300 sf
Setbacks Required	
Front	20 ft
Side	10 ft
Street Side	15 ft
Rear	20 ft
Accessory Structures	17.30.190
Maximum Lot Coverage	35%
Minimum Distance Between Structures	20 ft
Main Structure – Maximum Height	20 ft / 1 story

(1) Additional heights/stories may be allowed, in compliance with 17.20.100(A), which states "Additional height restrictions. In all zoning districts the maximum building height shall not exceed twenty feet as measured from the finished grade to the highest point of the structure, excluding chimneys and vents. The number of stories shall be limited to one story (unless otherwise provided in this section) when meeting applicable set-back requirements. However, this building height may be increased and up to one additional story may be permitted by the council as part of a development plan application."

The proposed project will comply with the City's development standards established for R-H zones in the RMMC. As indicated in the table above, the proposed project will not result in significant changes to the development standards established for R-H zones.

The project proposes one- and two-story multifamily buildings. Per the RMMC, R-H zones allow one-story buildings. However, according to Section 17.20.100, building height may be increased and up to one additional story may be permitted by the council as part of a development plan application, subject to the following:

1. In addition to the minimum required setbacks, the setbacks shall be increased at a minimum rate of two feet for each foot of additional building height above twenty feet, which shall be measured from the property line to each portion of the building that exceeds twenty feet; however, the council in exercising their discretion may require significantly greater setbacks.
2. Enhanced buffering to surrounding properties and the appropriateness of understructure parking shall be evaluated and related conditions of approval may be imposed by the council to mitigate any potential negative impacts on surrounding properties.
3. A visual and spatial analysis relating building proportions, massing, height, and setback shall be conducted to preserve and enhance the scenic viewshed and related conditions of approval may be imposed by the council to mitigate any potential negative impacts on scenic viewsheds.
4. The need for appropriateness of the additional height shall be demonstrated to the satisfaction of the council.
5. Compatibility and harmony with surrounding development, land uses designations, and zoning shall be demonstrated subject to the satisfaction of the council and related conditions of approval may be imposed by the council to mitigate any potential negative impacts on the compatibility and harmony with surrounding development, land use designations and zoning.

The project proposes two-story multifamily buildings; however, these structures will be setback at least 73 feet and 79 feet from the northern and southern property boundaries, respectively. Per item 1 above, the proposed setbacks allow the additional story. As mentioned previously, building height, setbacks, spacing and orientation will be considered during plan review to accommodate views to the extent practicable. Project building heights are subject to City Council review.

The scenic/design quality in the project area is governed by the Rancho Mirage General Plan (Update 2017). Therefore, the following discussion will analyze the project's consistency with the goals and policies established in the Rancho Mirage General Plan (RMGP) governing scenic quality in the City. The Community Design Element of the

RMGP defines the important design goals and guides new development to enhance Rancho Mirage's identity. Specifically, the Community Design Element outlines goals and policies designed to improve the image, character, and quality of life within the City. The table below outlines the various goals and policies established in the Community Design Element of the RMGP, and determines whether the project is consistent, not consistent, or not applicable with the RMGP.

Table 1-2 Project Consistency with Rancho Mirage General Plan Goals

General Plan Goal/Policy	Project Consistency
Goal CD 1: *Preservation and promotion of the special identity of Rancho Mirage as an "Oasis in the Desert," combining quality development with scenic, natural, and open space amenities*	
Policy CD 1.1: Rancho Mirage's symbolic identity shall be enhanced through distinct signage, gateways, architecture, and resilient landscaping.	Consistent: The project proposes a multifamily residential project with landscaping and various amenities. The proposed landscape features along Peterson Road will enhance the project's frontage along the roadway. The City of Rancho Mirage will review landscape and architecture plans prior to the approval and development of the project.
Policy CD 1.2: Unique views of mountains and other natural open spaces from Rancho Mirage's streets shall be preserved and enhanced.	Consistent: See discussion a) of this Aesthetics section for additional analysis. As determined in discussion a), above, the project would not result in significant impacts to views of the Santa Rosa Mountains, San Bernardino Mountains, Little San Bernardino Mountains, and San Jacinto Mountains when viewed from the adjacent right-of-way. The project proposes setbacks from the existing right-of-way and surrounding buildings and communities.
Policy CD 1.4: The planning and design of residential neighborhoods shall provide distinctive and characteristic design elements along public rights-of-way and in the project, creating a recognizable sense of place.	Consistent: As stated in the analysis for Policy CD 1.3, and the table above, the project will comply with development standards established in the RMMC. Landscape areas will provide a sense of arrival and offer clear and safe pathways for interconnectivity. The project will be reviewed by City Council.
Goal CD 3*: Scenic roadways that impart a sense of place and are attractively landscaped, provide visual continuity along adjacent uses, preserve views, and create focused intersection landscaping.*	
Policy CD 3.1: The City shall develop and maintain high-quality roadways that frame views, buffer surrounding residential development, and enhance commercial uses.	Consistent: The project is not located along a view corridor as designated in the Rancho Mirage General Plan. Peterson Road is the only paved roadway adjacent to the proposed project, delineating the project's western boundary. As stated in discussion a), the project would not result in significant obstructions to views witnessed from this right-of-way. Building setbacks and height restrictions will ensure impacts are less than significant.
Policy CD 3.2: The City shall ensure the development of well-designed, richly landscaped intersections that are attractive to drivers and pedestrians alike.	Consistent: Landscaping along the length of Peterson Road is intended to achieve a consistent, colorful and attractive presentation and soften the project when viewed from the public street. See discussion for Policy CD 3.1.
Policy CD 3.3: View corridors shall be preserved through streetscape improvements and specialized design standards.	Not applicable, but consistent: The project is not located adjacent to a designated view corridor. See discussions for Policy CD 3.1.

Goal CD 4: *A landscape program that promote aesthetics climate change resistance, and place making.*	
Policy CD 4.1: Landscape plans submitted to the City shall be consistent with this element.	Consistent: The landscaping proposed for the project will consist of drought-tolerant trees, ground covers, and shrubs. The landscaping and irrigation plans and system shall comply with all City ordinances relating to water efficiency and shall be an automatic system with an irrigation timer and two drip or bubbler heads per tree to produce deep root irrigation. Additionally, landscape lighting will include tree and shrub up lights, path lights, and step lights. All lighting will be low voltage and have low maintenance LED fixtures.
Goal CD 5: *Walls and fences that act as attractive elements of the streetscape, while providing privacy and views, creative design, and visual continuity*	
Policy CD 5.1: Wall and fence designs shall be considered important components of the design review process and overall streetscape improvement plans.	Consistent: Landscape buffers with screen plantings and wall treatments will be implemented in the design throughout the project.
Goal CD 6: *Signage of the highest level of design and construction quality.*	
Policy CD 6.1: The City shall encourage high-quality, low-scale signage that effectively communicates in an attractive manner.	Consistent: Exterior entrance signage will be subject to review according to the provisions of Section 17.28.040 of the Rancho Mirage Municipal Code.
Goal CD 7: *Protection of the star-studded desert night sky from excessive glare.*	
Policy CD 7.1: Lighting features that preserve the beauty of the desert night while still performing directional, safety, and informational functions shall be designed and incorporated into development projects.	Consistent: Lighting for landscaping, pathways and stairways, monuments and signs shall be installed as needed for security and safety purposes. All lighting will be low voltage and have low maintenance LED fixtures. The selective use of up lights will be limited to high-profile specimen tree and shrubs and will be shielded to reduce glare and hot spots. There shall be zero lumen foot candle for all exterior lighting at any property line of abutting properties and/or public right-of-way. See discussion d, below.
Goal CD 8: *Architecture that us sensitive to its context, blending quality materials, distinctive detailing, and a strong sense of living with nature.*	
Policy CD 8.1: The City shall encourage cohesive yet flexible architectural design for all structures in Rancho Mirage.	Consistent: See discussion for Policy CD 1.1, above.

As indicated above, the project will comply with the development standards for R-H zones as established in the RMMC. The project will also be consistent with applicable General Plan goals and policies governing scenic quality of the City. Project architecture, landscape design, and additional associated improvements will be subject to review and approval by the City of Rancho Mirage. Less than significant impacts are anticipated.

d) **LESS THAN SIGNIFICANT IMPACT.** The project site, located east of Peterson Road and approximately 430 feet north of Highway 111. The site previously operated as a mobile home park but has been demolished and is currently vacant. The site does not contribute light to the area.

In the project surroundings, existing sources of fixed nighttime lighting can be attributed to the existing residential uses located north and south of the project site. Lighting associated with residential areas typically consist of wall- and post-mounted, downward-oriented fixtures at residential building entrances and driveways, backyard/patio lighting, and landscape lighting. The commercial areas west of the project contribute to nighttime lighting during operational hours. Commercial lighting illuminates building frontages and entrances, signage, landscaping, and parking lot areas. Light posts along Peterson Road (immediately west of the project) contribute to nighttime lighting in the area. Additionally, day-time glare and nighttime lighting can be attributed to existing vehicular traffic along the surrounding roads.

The proposed project would develop up to 120 multifamily units with associated improvements, including retention areas, paved drive aisles, pedestrian sidewalks, and landscaping. The project will be consistent with the physical character intended for residential uses per the General Plan. The project includes nighttime lighting to safely illuminate the site entrances, signage, parking, walkways, and other project features with the appropriate fixtures. All lighting will be low voltage and have low maintenance fixtures. Lighting for landscaping, pathways, and signs shall be installed as needed for security and safety purposes. Additionally, signage that is visible from outside the project will be subject to review according to the provisions of Section 17.28.040 of the Rancho Mirage Municipal Code (RMMC).

These requirements are established to ensure that proposed development includes a minimum uniformity of light coverage, while minimizing light trespass. Sources of low-intensity lighting will consist of wall-mounted fixtures for the dwelling unit exteriors and landscaping illumination throughout the interior walkways, consistent with Section 17.26.120 of the RMMC. The project's lighting plan and proposed fixtures will be subject to review and approval by the City of Rancho Mirage.

Pertaining to glare and reflectivity, the project encourages a variety of materials with a palette of neutrals and earth tones. The proposed project will include high quality materials that perform well in desert environments, and building color and material should be consistent and complimentary within the project and surrounding environment. The proposed project will not include colors or finishes that have highly reflective properties or other surface conditions that would cause substantial daytime or nighttime glare. With the proposed landscape plan that includes a strategic placement of trees, palms, shrubs, groundcover, and accent plantings, the potential visibility of nighttime light sources and building surfaces is expected to be partially screened. Less than significant impacts are expected.

1.3 Mitigation Measures: None required.

2 - Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY **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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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, timberland, or timberland zoned Timberland Production?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Sources: Farmland Mapping and Monitoring Program, California Department of Conservation. Rancho Mirage General Plan 2017.

2.1 Setting

California Land Conservation Act of 1965

The California Land Conservation Act of 1965 (the "Williamson Act") encourages the preservation of agricultural lands through tax incentives due to the increasing trend toward the conversion of agricultural lands and urban uses. The act enables counties and cities to designate agricultural preserves (Williamson Act lands) and within these preserves, offer preferential taxation to

agricultural landowners based on the agricultural income producing value of the property. There are no active or permitted quarries identified within the City of Rancho Mirage.

State Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 as a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Prime agricultural land is rated according to soil quality and irrigation status and identified by the following categories: Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Urban and Built-Up Land, and Other Land. Each category is described as follows:

- Prime Farmland: areas with both good physical and chemical attributes able to sustain long-term agricultural production.
- Farmland of Statewide Importance: areas that have a good combination of physical and biological characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses.
- Unique Farmland: areas that produce crops of statewide importance; however, contain lower quality soils than those within Prime Farmland.
- Farmland of Local Importance: lands generally without irrigation, and which produce dry crops that may be important locally but are not important for statewide agriculture production.
- Urban Built-Up Land: areas occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel.
- Other Land: areas of land not included in any other mapping category.

The project site and the City of Rancho Mirage area is characterized by the urban context, primarily consisting of residential and commercial developments.

2.2 Discussion of Impacts:

a-e) NO IMPACT: The proposed project will not disturb or convert any designated farmland or other form of agricultural resources. According to the 2022 California Farmland Mapping and Monitoring Program the proposed project is located in a portion of Rancho Mirage designated Urban and Built-Up Land. Urban and Built-Up land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures. All surrounding properties are also classified as Urban and Built-Up Land. The City of Rancho Mirage consists of Urban and Built-Up Land and land designated as Other.

The project site is not located in an existing zoning for agricultural use or classified as farmland. The City General Plan designates the subject property with a zoning of High Density Residential (R-H) with an Affordable Housing Overlay (AHO). R-H zones allow for multifamily dwellings and encourages planned residential developments (PRDs). PRDs encourage well-conceived residential neighborhoods through creative and flexible planning. They allow for a mix of housing types that are unique in their physical characteristics and warrant special methods of residential development. PRDs also

consolidate areas for structures and maximize common open space and recreation areas, while integrating access and private internal roadways.

According to the California Department of Conservation Williamson Act Enrollment Finder, no portion of the land within or near a one-mile radius is recognized as a Williamson Act Contract area. Furthermore, no forest land, timberland, or Timberland Production zone occurs on the project site or in the surrounding areas. The proposed project will not impact or remove land from the City or the County's agricultural reserve. No impacts are expected.

2.3 Mitigation Measures: None required.

3 - Air Quality

AIR QUALITY – Where available, the significance criteria established by the applicable air quality management 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 Incorporation	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?	☐	☐	☒	☐

Sources: *Final 2022 Air Quality Management Plan (AQMP),* by SCAQMD, December 2022; *Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP),* by SCAQMD, August 2003; *Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan,* by the California Air Resources Board, February 2010; *South Coast AQMD Rule Book*; *California Emissions Estimator Model* (CalEEMod) Version 2022.1.1.23 (Appendix A), California Air Pollution Officers Association (CAPCOA) and California Air Districts.

3.1 Setting

Summary of Existing Air Quality Regulatory Framework:

The project site and Coachella Valley are situated within the Riverside County portion of the Salton Sea Air Basin (SSAB), under jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the adopted 2022 Air Quality Management Plan (2022 AQMP). The 2022 AQMP builds upon and supersedes the prior 2016 AQMP with updated strategies toward air quality attainment, while recognizing the challenges from experiencing the worst levels of ground-level ozone (smog) and among the highest levels of fine particulate matter (PM2.5) in the nation, despite the progress in air pollution reduction. The 2022 AQMP also recognizes the Coachella Valley's necessity to meet federal ozone standards due to transport of pollution from the upwind South Coast Air Basin. As a result, the updated strategies focus on reducing emissions of nitrogen oxides (NOx) – the key pollutant that creates ozone – by 67 percent more than is required by adopted rules and regulations in 2037. This is to be achieved in part through the extensive use of zero emission technologies across all stationary and mobile sources, combined with additional controls over stationary sources that currently account for approximately 20 percent of NOx emissions. The 2022 AQMP recognize that the overwhelming majority of NOx emissions are from

heavy-duty trucks, ships and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD's control, so federal regulatory action will help toward the AQMP goals. The current AQMP does not involve numeric revisions to the South Coast AQMD Air Quality Significance Thresholds, nor is it understood to implement land use and land development restrictions. The 2022 AQMP accounts for information and assumptions from the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to support the integration of land use and transportation toward meeting the federal Clean Air Act requirements.

Local air quality relevant to the standards for criteria air pollutants and attainment status is measured at three established Coachella Valley monitoring stations that are part of the current SCAQMD Annual Air Quality Monitoring Network Plan: Palm Springs (AQS ID 060655001), Indio (AQS ID 060652002), and Mecca (Saul Martinez - AQS ID 060652005).

The 2022 AQMP provides guidance for the State Implementation Plans (SIP) for attainment of the applicable ambient air quality standards. The Coachella Valley region is in non-attainment for Particulate Matter (PM10) and Ozone (O3), which are described below.

Particulate Matter (PM10):

PM10 is a criteria air pollutant consisting of particulate matter (airborne particles) with an aerodynamic diameter of up to 10 microns. In terms of health effects, elevated levels of ambient particulate matter are linked to increases in respiratory infections, number and severity of asthma attacks, the number of hospital admissions, and mortality rates. As indicated in the 2022 AQMP, the Coachella Valley is currently designated as a serious nonattainment area for PM10.

PM10 levels in the Coachella Valley are largely attributed to sources of fugitive dust (e.g., construction activities, re-entrained dust from paved and unpaved road travel, and natural wind-blown sources). The Coachella Valley is subject to frequent high winds that generate wind-blown sand and dust, leading to high episodic PM10 concentrations, especially from disturbed soil and natural desert blow sand areas.

The Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP) was approved by the U.S. Environmental Protection Agency (EPA) on December 14, 2005. It incorporated updated planning assumptions, fugitive dust source emissions estimates, mobile source emissions estimates, and attainment modeling with control strategies and measure commitments. Some of those measures are reflected in SCAQMD Rules 403 and 403.1, which are enacted to reduce or prevent man-made fugitive dust sources with their associated PM10 emissions.

Rule 403.1 recognizes blowsand as a form of larger particulate matter that can contribute to the production of the smaller PM10 (Particulate Matter with a diameter of 10 micrometers or smaller) particles in two ways: (1) by direct particle erosion and fragmentation as natural PM10, and (2) by secondary effects, as sand deposits on road surfaces. SCAQMD has defined a Coachella Valley Blowsand Zone as the corridor of land extending two miles on either side of the Interstate 10 (I-10) Freeway, beginning at the SR-111/I-10 junction and continuing southeast to the I-10/ Jefferson Street interchange in Indio. Being located approximately 4 miles south of the Interstate 10 Freeway, the project location is not deemed to be located within the Coachella Valley Blowsand Zone. The project will be subject to the standard dust control requirements during construction.

Ozone and Ozone Precursors:

Ozone (O3) is a photochemical oxidant formed through chemical reactions of nitrogen oxides (NOx), volatile organic compounds (VOCs), and oxygen in the presence of sunlight. In terms of health effects, individuals exercising outdoors, children, and people with preexisting lung disease,

such as asthma and chronic pulmonary lung disease, are the most susceptible sub-groups for the effects of ozone.

The Coachella Valley portion of the Salton Sea Air Basin (SSAB) is deemed to be in nonattainment for the 1997 8-hour ozone standard. The Coachella Valley is unique in its geography due to its location downwind from the South Coast Air Basin (SCAB). As such, when high levels of ozone are formed in the South Coast Air Basin upstream, they are transported to the Coachella Valley. Similarly, when ozone precursors such as NOx and VOCs are emitted from mobile and stationary sources located in the South Coast Air Basin, they are also transported to the Coachella Valley. The 2022 AQMP has found and established that the Coachella Valley does not have large sources of smog-forming emissions and therefore, local sources of air pollution have a limited impact on ozone levels compared to the transport of ozone precursors generated upwind in SCAB. Based on the 2022 AQMP, the attainment date for the said ozone standard is August 2033. SCAQMD continues to reduce ozone and improve air quality in the Coachella Valley, in part by providing more than $50 million in grant funding towards paving dirt roads and parking lots, clean energy projects and cleaner vehicles. Future emission reductions anticipated to occur in the South Coast Air Basin associated with current and planned regulations on mobile and stationary sources are expected to contribute to improvements in ozone air quality in the Coachella Valley and lead to attainment of the standard.

Regional Significance Threshold Criteria:

The SCAQMD has determined that impacts to air quality are significant if there is a potential to contribute or cause regional and/or localized exceedances of the federal and/or state ambient air quality standards, such as the NAAQS and CAAQS. To assist lead agencies in determining the significance of air quality impacts, SCAQMD has established suggested short-term construction-related and long-term operational impact significance thresholds for direct and indirect impacts on air quality. Table III-1 displays the established SCAQMD Air Quality Significance Thresholds applicable to construction and operational activities to which the project-specific air emissions results will be compared. Table III-1 is based on the most current standards, published in March of 2023.

Table III-1
SCAQMD's Air Quality Significance Thresholds
(Pounds/Day)

Emission Source	CO	VOC	NOx	SOx	PM10	PM2.5
Construction	550	75	100	150	150	55
Operation	550	55	55	150	150	55

Source: Air Quality Analysis Guidance Handbook and SCAQMD Air Quality Significance Thresholds, March 2023

Localized Significance Threshold Criteria:

The South Coast Air Quality Management District (SCAQMD) has also developed and published the Final Localized Significance Threshold (LST) Methodology to help identify potential impacts that could contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). LST methodology was developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. The purpose of analyzing LSTs is to determine whether

a project may generate significant adverse localized air quality impacts in relation to the nearest exposed sensitive receptors, such as schools, churches, residences, hospitals, day care facilities, and elderly care facilities. The separation distances between project sites and sensitive receptors, set forth by the LST methodology, range from 25 meters (82 feet) to 500 meters (1,640 feet). LST thresholds represent the maximum emissions from a project that will prevent an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project, size, and distance to the sensitive receptor. Therefore, meeting the lowest allowable emissions thresholds translates to meeting the most stringent air quality standards for a project locality.

As part of the LST methodology, SCAQMD has divided its jurisdiction into 37 source receptor areas (SRAs) which can be used to determine whether a project may generate significant adverse localized air quality impacts. The proposed development is located in SRA 30, which covers the Coachella Valley and City of Rancho Mirage. LSTs only apply to certain criteria pollutants: carbon dioxide (CO2), oxides of nitrogen (NOx) particulate matter equal to or less than 10 microns in diameter (PM10), and particulate matter equal to or less than 2.5 microns in diameter (PM2.5).

Geographic Information Systems (GIS) mapping analysis was used to identify the project site in relation to the nearest potential sensitive receptors, such as residential dwelling units or schools. The undeveloped site is surrounded primarily by residential uses located to the north and south. Therefore, the most conservative (closest) distance of 25 meters (82 feet) serves as the basis for the LST analysis. This will ensure that the lowest emissions threshold is used as a standard for determining significance.

Air Emissions Methodology:

This analysis relies on the quantitative findings from the latest version of the California Emissions Estimator Model™ (CalEEMod™) Version 2022.1.1.23, which serves as an adopted software platform, developed in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, to calculate both construction emissions and operational emissions of criteria air pollutants and greenhouse gases from land use projects. The parameters considered for CalEEMod and air quality analysis were obtained from the most current technical site plan for the project, as subsequently summarized. The most conservative interpretation of proposed land uses, equitable modelling criteria, and associated air quality impacts have been utilized to capture impacts associated with 100% of the proposed onsite structures and operations.

CalEEMod input included an analysis of up to 120 multi-family dwelling units with associated landscaping, hardscape, and asphalt improvements, the dimensions of which are based on the most current site plan. The population factor is 220 persons based on an approximate household size of 1.83 persons per household obtained from the 2024 California Department of Finance E-5 Population and Housing Estimates for the City of Rancho Mirage.

Since the existing site condition includes remnants of the former residential uses (parking, driveways, concrete slabs), this analysis assumed the demolition/removal and export of approximately 6,453 cubic yards of asphalt, concrete and related materials. The construction-related factors also incorporated approximately 9,300 cubic yards of soil export during the grading stage, based on preliminary engineering estimates.

Moreover, the model incorporated the fugitive dust control measures required during construction under the City's Dust Control Ordinance and SCAQMD Rules 403 and 403.1. The measures of temporary soil stabilization required under this local regulatory framework are designed to prevent sediment track-out onto public roads, prevent visible dust emissions from exceeding a 20-percent opacity, and prevent visible dust emissions from extending more than 100 feet (vertically or horizontally from the origin of a source) or crossing any property line. Being a requirement in the Coachella Valley, the dust control practices are not considered mitigation.

3.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT:

The results summarized in Table III-3 display the potential criteria air pollutant emission levels associated with construction-related demolition, site preparation, grading, utilities/building construction, paving, and architectural coating phases. The emission levels from project construction are not shown to exceed the applicable SCAQMD Air Quality Significance Thresholds for criteria pollutants, including PM10 and Ozone precursors. As a standard requirement, dust control measures will be implemented during construction as part of a City-approved fugitive dust control plan in accordance with SCAQMD Rule 403/403.1 and Section 15.64.630 (Dust Control Requirements) of the Rancho Mirage Municipal Code. Thus, a less than significant impact would occur for the construction-related emissions in relation to the applicable South Coast AQMD Air Quality Significance Thresholds.

Table III-2
Short Term Air Pollutant Emissions
Associated With Construction of the Proposed Project (Unmitigated)
(Pounds/Day)

Construction Source	ROG/VOC	NOx	CO	SO2	PM10	PM2.5
Peak Emissions Resulting from Asphalt Demolition, Site Preparation, Grading, Building Construction, Paving, and Architectural Coating	46.6	38.3	32.3	0.11	13.3	5.72
SCAQMD Air Quality Significance Threshold	75	100	550	150	150	55
Threshold Exceeded	No	No	No	No	No	No
Note: The PM10 and PM2.5 emissions account for required compliance with SCAQMD Rules 403/403.1 and Rancho Mirage Requirements.						

CalEEMod 2020.4.0 was also used to calculate the long-term operational air pollutant emissions that would occur during the life of the project. These operations include area, energy and mobile sources. As shown in Table III-4 below, the project-related operational emissions of criteria pollutants are also not expected to exceed any of the South Coast AQMD Air Quality Significance Thresholds. Therefore, a less than significant impact is expected for operational emissions from the project.

Table III-3
Long Term Operational Air Pollutant Emissions
Associated With Development of the Project (Unmitigated)
(Pounds/Day)

Emission Source	ROG/VOC	NOx	CO	SO2	PM10	PM2.5
Peak Area Sources, Energy Use, Mobile Sources	39.6	7.37	110.00	0.26	17.3	10.7
SCAQMD Air Quality Significance Threshold	55	55	550	150	150	55
Threshold Exceeded	No	No	No	No	No	No

In addition to the emission levels discussed above, another measure of determining consistency with the governing AQMP is outlined in Chapter 12, Section 12.2 and Section 12.3 of SCAQMD's CEQA Air Quality Handbook (1993), as provided and evaluated below:

Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The relevant emission standards are compiled in the South Coast AQMD Air Quality Significance Thresholds and also provided in Table III-1 pertaining to construction and operation. As demonstrated by the CalEEMod results in Tables III-3 and III-4, project construction and operation would not result in emission levels exceeding the AQMD Air Quality Significance Thresholds for any criteria air pollutant category, including PM10 and ozone precursors, and therefore would not conflict with the AQMP according to this criterion.

Consistency Criterion No. 2: The project will not exceed the assumptions in the AQMP based on the years of project build-out phase.

Project implementation will involve the construction and operation of up to 120 dwelling units on a site with a current land use and zoning designation of High Density Residential (R-H) / Affordable Housing Overlay (AHO). The site previously contained 120 dwelling units. The proposed nature and scale of the project are not expected to exceed the locally adopted land development assumptions and other growth projections in a meaningful manner. Therefore, the project is not expected to result in emission levels, growth or land use changes that would interfere with the City or region's ability to comply with the most current air quality plans, including the 2022 AQMP and State Implementation Plan strategies for PM10 and ozone level attainment efforts. Moreover, the project's short-term construction and long-term operational emissions would not exceed the established regional thresholds for criteria air pollutant emissions.

In summary, by producing emission levels below the applicable SCAQMD Air Quality Significance Thresholds the project will prevent any interference with the City or region's ability to comply with the most current air quality plans, including the 2022 AQMP, CVSIP for PM10, and the ozone level attainment efforts. Pertaining to the obstruction of an applicable air quality plan, less than significant impacts are anticipated.

b) **LESS THAN SIGNIFICANT IMPACT:** As discussed previously, the Coachella Valley portion of the Salton Sea Air Basin (SSAB) is in nonattainment for the 1997 8-hour ozone standard. Under the 2022 AQMP, the target attainment date for this standard is August 2033. SCAQMD has established that the Coachella Valley does not have large sources of smog-forming emissions and therefore, local sources of air pollution have a limited impact on ozone levels compared to the transport of ozone precursors generated upwind in SCAB. As demonstrated in tables III-2 and III-3, project-related short-term construction and long-term operational emissions would not exceed the SCAQMD Air Quality Significance Thresholds for ozone precursors, such as NOx and ROG/VOC. Therefore, pertaining to the ozone nonattainment status, the proposed project would not result in an exceedance to the applicable threshold or result in a cumulatively considerable net increase in the precursors of this criteria pollutant.

Furthermore, the Coachella Valley is currently designated as a serious nonattainment area for PM10 and is under the EPA-approved Coachella Valley PM10 State Implementation Plan with an attainment strategy for meeting the PM10 standard. Some of the existing measures include the requirement of detailed dust control plans from builders that specify the use of more aggressive and frequent watering, soil stabilization, wind screens, and phased development to minimize fugitive dust.

Appropriate air quality measures to prevent fugitive dust are required by the City's Fugitive Dust Control ordinance and plan implementation requirements, which are consistent with SCAQMD Rules 403 and 403.1 that apply to the Coachella Valley strategy for reducing fugitive dust emissions. Under the City's dust control regulations, a Local Air Quality Management Plan (LAQMP) must be prepared and approved prior to any grading, earth-moving, demolition, or building operation with a disturbed surface area of more than five thousand (5,000) square feet. Consistent with SCAQMD Rules 403 and 403.1, implementation of the LAQMP is required to occur under the supervision of an individual with training on Dust Control in the Coachella Valley. The plan is required to include methods to prevent sediment track-out onto public roads, prevent visible dust emissions from exceeding a 20-percent opacity, and prevent visible dust emissions from extending more than 100 feet (vertically or horizontally from the origin of a source) or crossing any property line.

The most widely used measures include proper construction phasing, proper maintenance/cleaning of construction equipment, soil stabilization, installation of track-out prevention devices, and perimeter wind fencing. Moreover, material hauling is required to incorporate compliant freeboard or cover to prevent erodible material from becoming a source of fugitive dust. As shown in tables III-2 and III-3, project-related short-term construction and long-term operational emissions that factor in the required soil stabilization measures are expected to not exceed the applicable SCAQMD Air Quality Significance Thresholds for PM10. Therefore, pertaining to the PM10 nonattainment status, the proposed project would not result in an exceedance to the applicable threshold or result in a cumulatively considerable net increase in the precursors of this criteria pollutant. Less than significant impacts are anticipated.

c) **LESS THAN SIGNIFICANT IMPACT:** A sensitive receptor is a person or group in the population particularly susceptible (i.e. more susceptible than the population at large) to health effects due to exposure to an air contaminant. Sensitive receptors and the facilities that house them are of particular concern if they are located in close proximity to localized sources of carbon monoxide, toxic air contaminants, or odors. Residences, long-term

health care facilities, schools, rehabilitation centers, playgrounds, convalescent centers, childcare centers, retirement homes, and athletic facilities are generally considered sensitive receptors.

The SCAQMD has developed and published the Final Localized Significance Threshold (LST) Methodology to help identify potential impacts that could contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). LST methodology was developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. The purpose of analyzing LSTs is to determine whether a project may generate significant adverse localized air quality impacts in relation to the nearest exposed sensitive receptors, such as those listed above. LSTs represent the maximum emission levels that comply with the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project, size, and distance to the sensitive receptor. Therefore, meeting the lowest allowable emissions thresholds translates to meeting the most stringent air quality standards for a project locality in consideration of sensitive receptors. As part of the LST methodology, SCAQMD has divided its jurisdiction into 37 source receptor areas (SRAs) which can be used to determine whether a project may generate significant adverse localized air quality impacts. The proposed development is located in SRA 30, which covers the Coachella Valley and City of Rancho Mirage. LSTs only apply to certain criteria pollutants: carbon dioxide (CO), oxides of nitrogen (NOx) particulate matter equal to or less than 10 microns in diameter (PM10), and particulate matter equal to or less than 2.5 microns in diameter (PM2.5).

Since the site is immediately surrounded by residential uses, the most conservative (closest) distance of 25 meters (82 feet) serves as the basis for the LST analysis. This will ensure that the lowest emissions threshold is used as a standard for determining significance.

Table III-4 Localized Significance Thresholds (LSTs) Associated with Construction of the Project with Receptors at 25 Meters (82 Feet), (In Pounds/Day)

Emission Source	NOx	CO	PM10	PM2.5
Maximum Unmitigated Emissions Resulting from Asphalt Demolition, Site Preparation, Grading, Building Construction, Paving and Architectural	38.3	32.3	13.3	5.72
SCAQMD LST Threshold for SRA 30	304	2,292	14	8
LST Threshold Exceeded?	No	No	No	No

Sources: Appendix A and AQMD LST Look-Up Tables

Note: The PM10 and PM2.5 emissions factor dust control compliance with SCAQMD Rule 403 and 403.1 and Rancho Mirage Municipal Code requirements.

The results provided in Table III-4 resulting from the Localized Significance Thresholds methodology demonstrate that the construction-related emission levels would occur below the established thresholds, taking into account the source receptor area and nearest sensitive receptor location to the project. Therefore, the project would not result in

emissions capable of exposing sensitive receptors to localized substantial pollutant concentrations. Moreover, the proposed project would not situate new housing in a location known to be exposed to existing or planned sources of substantial emissions. Less than significant impacts are anticipated.

d) **LESS THAN SIGNIFICANT IMPACT:** Objectionable odors can be associated with toxic or non-toxic emissions. While offensive odors seldom cause physical harm, they can be unpleasant and lead to considerable annoyance and distress among the public. Examples of facilities commonly known to generate considerable odors include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging facilities, none of which are located in the project vicinity. The land uses and populations considered more likely to experience concern over odors include residences, retirement homes, schools, playgrounds, and athletic facilities, among others.

As demonstrated in the discussions above, construction-related and operational emissions resulting from the proposed residential development would occur below the applicable South Coast AQMD Air Quality Significance Thresholds. The project would also comply with the numeric Localized Significance Thresholds relevant to the localized project setting.

The project will result in potential short-term odor emissions associated with the temporary operation of construction equipment, handling of petroleum-based products, and application of certain materials, such as asphalt pavement. These temporary odors would be perceptible within close proximity to the active construction areas dissipate with distance, to the point of becoming undetectable.

During the life of the project, residential activities on the proposed dwelling units are not expected to represent a source of odor to the surrounding uses. Therefore, the project is not expected to result in odor or other emissions adversely affecting nearby neighbors or a substantial number of people. Less than significant impacts are anticipated.

3.3 Mitigation Measures: None required.

4 - Biological Resources

BIOLOGICAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (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?	☐	☒	☐	☐

Sources: Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis Report for the Proposed Crossings on Peterson Road Project located within Accessor Parcel Number (APN) 689-180-012 in the City of Rancho Mirage, Riverside County, California, February 2024 (Appendix B); *Rancho Mirage General Plan 2017, Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan, CVAG.*

4.1 Setting

The project site is located on approximately 12.34 acres of land east of Peterson Road and north of Juniper Lane in the City of Rancho Mirage. The project proposes the construction of up to 120 residential units with a pool, recreational open space, gardens, a tot lot, a dog run, and park.

The project site is bound to the north and south by residential developments, to the east by the Whitewater River Channel, and to the west by Peterson Road with commercial developments beyond. Adjacent portions of the Whitewater River Channel have been modified and converted into a golf course that slows and utilizes seasonal storm flows. The site itself supports developed and undeveloped land that formerly supported a mobile home park. According to historic aerials and local records, the site and adjacent areas have not supported natural plant communities since at least 1959. The site itself has been vacant since 2009.

The project area is not within a Conservation Area, nor does it share borders with a Conservation Area designated by the CVMSHCP.

On February 14, 2024, ELMT Consulting conducted a field survey and evaluated the condition of the habitat within the proposed project site. The field investigation and literature review were conducted to characterize existing site conditions and assess the probability of occurrence of special-status plant and wildlife species that could pose a constraint to implementation of the project. ELMT's project specific *Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Consistency Analysis Report* ("biological report") provides information on the species found onsite and a detailed assessment of the suitability of the project site to support special-status species.

Literature Review

Prior to conducting the field investigation, a literature review and records search was conducted for special status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW's CNDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

Literature detailing biological resources previously observed in the vicinity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- CDFW 2012 Staff Report on Burrowing Owl Mitigation;
- Coachella Valley Multiple Species Habitat Conservation Plan;
- Google Earth Pro historic aerial imagery (1985-2023);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey2; and
- USFWS Critical Habitat designations for Threatened and Endangered Species.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. Additional recorded occurrences of these species found on or near the project site were derived from database queries. The CNDDB ArcGIS database was used, in conjunction with ArcGIS software, to locate the nearest occurrence and determine the distance from the project site.

Aerial References

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program “My Waters” data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Field Investigation

An ELMT biologist inventoried and evaluated the extent and conditions of any plant communities found within the boundaries of the project site and a 200-foot buffer, where possible, on February 14, 2024. Any plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through any plant communities and along boundaries between plant communities. The site was evaluated for its potential to support special-status plant and wildlife species. In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area. Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species.

All plant and wildlife species observed were recorded in the biological report. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of any on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted. Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006).

Topography and Soils

On-site surface elevation ranges from approximately 246 to 260 feet above mean sea level. The project site slopes gently from northwest to southeast and is relatively flat with no natural areas of significant topographic relief. Based on the USDA NRCS Soil Survey, the site is underlain by Coachella fine sand (0 to 2 percent slopes), Fluvents, and Myoma fine sand (0 to 5 percent slopes). Soils underlying the project site have been mixed and compacted by land modifications associated with historic land uses.

The discussion below evaluates the project's potential impact on biological resources.

4.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT WITH MITIGATION: Per the project-specific biological report, no native plant community was found within the site boundaries. The site is both disturbed and developed from previous uses as a mobile home park. Vegetative density in the disturbed portions of the site varies from barren to heavily vegetated and are dominated by weedy/early successional species or ornamental landscaping species.

Plants

Common plants observed in the disturbed areas of the site include saharan mustard (*Brassica tournefortii*), small datura (*Datura discolor*), whispering bells (*Emmenanthe penduliflora*), brittlebush (*Encelia farinosa*), filaree (*Erodium cicutarum & E. texanum*), climbing milkweed (*Funastrum sp.*), narrow-leaved johnstonella (*Johnstonella angustifolia*), prickly lettuce (*Lactuca serriola*), lantana (*Lantana sp.*), cheese weed (*Malva parviflora*), desert needle (*Palafoxia arida*), fountain grass (*Pennisetum setaceum*), Mediterranean grass (*Schismus sp.*), tumble mustard (*Sisymbrium altissimum*), cape ricegrass (*Stipa capensis*), and puncture vine (*Tribulus terrestris*). Ornamental trees observed on-site include weeping fig (*Ficus benjamina*), olive (*Olea europaea*), African sumac (*Searsia lancea*), salt cedar (*Tamarix sp.*), and Mexican fan palm (*Washingtonia robusta*).

Developed portions of the site include concrete pads, paved roads, and miscellaneous associated infrastructure. These areas tend to be unvegetated except by monocultures of especially hardy weedy/early successional species or remnant landscaping.

Special Status Plants

According to the CNDDB and CNPS, thirteen (13) special-status plant species have been recorded in the Cathedral City quadrangle. No special-status plants were observed on the project site during the field investigation. The project site supports developed and highly disturbed land that has not supported natural plant communities since at least 1959. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that that the project site does not have the potential to support any of the special-status plant species known to occur in the area. Therefore, no impact to plant species identified as a candidate, sensitive, or special status species would occur from the development of the project site.

Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site.

Therefore, no fish are expected to occur and are presumed to be absent from the site, and no impact would occur to fish species.

Amphibians

No amphibians or hydrogeomorphic features that would provide suitable habitat for amphibian species were observed within the project site. Adjacent portions of the Whitewater River Channel receive regular irrigation to maintain golf course fairways and ornamental landscaping, which have the potential to provide limited habitat for local amphibian species that are adapted to such conditions such as red-spotted toad (*Anaxyrus punctatus*) and Woodhouse's toad (*Anaxyrus woodhousii*). However, the site itself does not retain sufficient moisture to allow for the establishment of amphibian species and amphibians would only be expected to occur incidentally while foraging in adjacent areas; therefore, no impact would occur to amphibian species.

Reptiles

The project site and surrounding area provide limited foraging and cover habitat for local reptilian species adapted to development and routine anthropogenic disturbance. The only reptile observed during the field investigation was desert spiny lizard (*Sceloporus magister*). Other common reptilian species that may occur on-site include Great Basin whiptail (*Aspidoscelis tigris tigris*), red racer (*Coluber flagellum piceus*), desert iguana (*Dipsosaurus dorsalis*), and San Diego gopher snake (*Pituophis catenifer annectens*).

Birds

The project site and surrounding area provide suitable foraging and nesting habitat for avian species adapted to development and routine anthropogenic disturbance. Avian species detected during the field investigation include verdin (*Auriparus flaviceps*), red-tailed hawk (*Buteo jamaicensis*), Costa's hummingbird (*Calypte costae*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), vermilion flycatcher (*Pyrocephalus rubinus*), Say's phoebe (*Sayornis saya*), western bluebird (*Sialia mexicana*), mourning dove (*Zenaida macroura*).

Mammals

The project site and surrounding area provide limited foraging and burrowing/denning habitat for local mammalian species adapted to development and routine anthropogenic disturbance. Mammals detected and/or sign observed during the field investigation include coyote (*Canis latrans*), California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), pocket gopher (*Thomomys bottae*). In addition, while no bat species were observed during the field investigation, which was conducted during the day, the abundant fan palms throughout and surrounding the site provide suitable roosting opportunities for local bat species.

Special-Status Wildlife

According to the CNDDB, eighteen (18) special-status wildlife species have been reported in the Cathedral City quadrangle. No special-status species were observed onsite. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support California horned lark (*Eremophila alpestris actia*) and western yellow bat (*Lasiurus xanthinus*). It

was further determined that the site does not have potential to support the remaining special-status wildlife species known to occur and all are presumed to be absent.

To ensure impacts to bird species identified as a candidate, sensitive, or special status species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. Nesting birds, listed or not listed, are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests, or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no birds will be disturbed during construction. This is required in Mitigation Measure BIO-1. With the implementation of Mitigation Measure BIO-1, impacts to special status birds would be less than significant.

Therefore, less than significant impacts to wildlife species identified as a candidate, sensitive, or special status species would occur from the development of the project site following the implementation of Mitigation Measure BIO-1.

b) **NO IMPACT:** The property does not contain nor is it adjacent to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS. No blue-line stream corridors or desert washes are found within the project boundaries. Therefore, no impacts are expected.

c) **NO IMPACT:** The project site does not contain federally protected wetlands, marshes, or other drainage features. As a result, implementation of the project would not result in the direct removal, filling, or other hydrological interruption to any of these resources. The project is designed with an on-site stormwater retention system that during the life of the project will comply with the City's drainage requirements by preventing the discharge and transport of untreated runoff associated with the project. A project Specific Water Quality Management Plan (WQMP) is expected to be prepared to ensure that the project does not contribute pollutants of concern in any project storm runoff. No impacts are expected.

d) **NO IMPACT:** Per the project-specific biological report, no migratory wildlife corridors or native wildlife nursery sites were found on the project or adjacent properties; however, multiple birds exhibiting nesting behaviors such as territorial displays and materials gathering were observed. The ornamental vegetation supported by and adjacent to the project site provides suitable nesting habitat for a variety of year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments. In addition, tall trees and snags are present that provide suitable nesting opportunities for local raptors.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests, or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. This is required in Mitigation Measure BIO-1. The implementation of Mitigation Measure BIO-1 would ensure that less than significant impacts occur to native wildlife nursery sites due to the development of the project site.

e) **NO IMPACT:** The project will comply with the CVMSHCP, and there are no other unique local policies or ordinances protecting biological resources that would cause a conflict nor does the site support high value biological resources that could be affected. Additionally, the proposed project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and no impacts are anticipated.

f) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION:** As previously mentioned, the project lies within the boundary of the CVMSHCP, which outlines policies for conservation of habitats and natural communities and is implemented by the City of Rancho Mirage. The project site is not located within a Conservation Area under CVMSHCP. The CVMSHCP implements a habitat mitigation fee for new development to support the acquisition of conservation lands, to be paid to the City. Therefore, the proposed project will comply with all required plan provisions and pay the required Local Development Mitigation Fee in conformance with the CVMSHCP and City Ordinance. No impacts are anticipated.

4.3 Mitigation Measures:

BIO-1: If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

5 - Cultural Resources

CULTURAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Sources: Material Culture Consulting (MCC), Phase I Cultural Resources Assessment April 2024 (Appendix C).

5.1 Setting

The Project Area has historically been the territory of the Cahuilla people. Migration of Shoshone peoples from the Great Basin into the desert and coastal Southern California regions occurred approximately 1,000 to 600 years B.P. The Cahuilla ethnographic group derives from this migration.

The Cahuilla's traditional territory was bounded by the San Bernardino Mountains to the north, the Orocopia Mountains to the east, the Santa Ana River/the San Jacinto Plain and the eastern portion of Palomar Mountains to the west, and Borrego Springs and the Chocolate Mountains to the south. The Cahuilla existed within the most geographically diverse region, having exploited more than 500 native and non-native plants. The Cahuilla spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family, a language family that includes the Shoshonean groups of the Great Basin.

The precontact Cahuilla occupation is characterized by structures within permanent villages that ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at man-made walk-in wells. There appears to be slight difference in subsistence tools between the Desert, Pass, or Mountain Cahuilla groups. The Desert Cahuilla used deep, wooden mortars with a long pestle whereas San Gorgonio Pass Cahuilla utilized shallower mortars with basketry rims. Cahuilla granaries were usually raised on pole platforms two to four feet high, which resembled birds' nests, and were used to store mesquite.

Initial contact with European explorers with the Cahuilla most likely occurred during the expedition of Juan Bautista de Anza in 1777. The presence of the San Gabriel Mission in the early 1800s led to more contact via baptisms. It also led to the Native Americans moving away from traditional habitation sites to separate themselves from the influence of the Mission. The Cahuilla traditions may have been relatively stable until mission secularization in 1834, due to the policy of the

Catholic Mission fathers, or padres, to maintain imported European traditional style settlement and economic patterns. Presently, the Cahuilla reside in nine separate reservations in Southern California, located in Imperial, Riverside and San Diego counties.

The discussion below evaluates the property's potential impact on cultural resources.

5.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT WITH MITIGATION: The project is located on approximately 12 acres of land previously developed as a mobile home park. The mobile home park has been present since 1972 and remained relatively unchanged up until 1984. The former mobile home park is considered historic due to the remaining foundations that date prior to 1972.

The records search conducted at the Eastern Information Center (EIC) identified 25 previously conducted cultural resources investigations within a 1-mile radius of the project site between 1972 and 2017. Although no previously recorded historical resources were located within the project site, the records search identified one previously recorded cultural resource within a 1-mile radius of the project site. The historic-age site consists of a historic building located within a ¼ mile of the site. The structure is eligible for local listing or designation. However, the structure is not eligible for the NRHP, CR, or Local listing, but is recognized as historically significant by local government. No additional information was identified relating to the residence.

MCC surveyed the entire project area on March 13, 2024. The project site is heavily disturbed from the former development. The remnants of the previous mobile home lots and parking lots were observed throughout the site. Each mobile home lot consists of a paved pad, sidewalk, driveway and underground utilities. The existing foundations of the defunct mobile home park are considered historic age and were recorded as a resource by MCC. The recorded concrete foundations do not meet any criteria for the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 but were recorded as a formality. Piles of modern refuse and landscaping material were observed throughout the project site. Evidence of imported landscaping material was observed with the presence of white quartz gravel, red lava rock and decorative shells. Other decorative material present included red tile, red brick edging, cinder blocks and red brick with cement mortar. Modern refuse observed included rubber tires, wood furniture, brick fragments, clothing, a chandelier, green and colorless glass fragments.

The proposed project site is considered to have unknown to moderate sensitivity for presence of precontact or historical archaeological deposits or features. While none were observed at the surface, due to heavy disturbance from previous development, vegetation overgrowth, and modern refuse, archaeological features and resources may have subsurface components could be revealed during construction of the proposed Project.

Due to the site's moderate sensitivity for historical resources, archaeological monitoring is required by a qualified archaeologist for the removal of the concrete foundations, all vegetation clearing, trimming, and removal, and for all ground disturbance occurring within the first 5 feet below surface during construction.

Prior to the start of construction, a cultural resources management plan (CRMP) should be prepared and implemented. Therefore, following the recommended Mitigation Measure CUL-1, less than significant impacts to historical resources are anticipated.

b) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION:** A records search was conducted at the CHRIS EIC, Department of Anthropology, University of California, Riverside, in January 2024. The goal of the records search was to review any previous archaeological projects that may have been conducted within the project area and to identify any previously recorded archaeological resources located on the property. The records search looked at all reports of archaeological work executed within 1 mile of the project area. The records search also included consultation of the catalogs of sites listed in the National Register of Historic Places (NRHP) and/or designated California Historical Landmarks (CHLs). Additional archival research was also conducted and included a review of primary and secondary sources for information pertinent to historical-period activities within the project area.

The results of the record search indicated that 25 previous cultural resource projects had been conducted within the records-search area. No previous studies involving the project site had been completed. The records search did not identify any previously recorded pre-historic cultural resources within the records-search area and no previously recorded resources were identified within the project area. No resources were found to be listed in the NRHP or the catalog of CHLs. Additionally, MCC submitted a request for a Sacred Lands File Search to the Native American Heritage Commission (NAHC) on January 30, 2024. On February 26, 2024, the NAHC responded and indicated that the results of the Sacred Lands File Search were negative for known cultural resources within the vicinity of the project area.

No known archaeological sites were found within the project site, however the site is considered to have unknown to moderate sensitivity for presence of precontact or historical archaeological deposits or feature. Therefore, MCC recommends that an archaeological monitor be present during ground disturbing activities (concrete foundation removal, clearing, grubbing, and grading within the first 5 feet) related to the project. Therefore, following the recommended Mitigation Measure CUL-1, less than significant impacts are anticipated.

c) **LESS THAN SIGNIFICANT IMPACT:** The project site is not likely to uncover human remains during grading operations, since the site has been disturbed with the construction of the mobile home park in the early 1970's. However, the California Health and Safety Code Section 7050.5, and the CEQA Guidelines Section 15064.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the coroner determines the remains to be Native American or has reason to believe that they are those of Native American, the coroner shall contact by telephone within 24-hours of the Native American Heritage Commission.

Assembly Bill 52 (AB 52) requires lead agencies to notify their local tribes about development projects. It also mandates lead agencies consult with Tribes if requested and sets the principles for conducting and concluding the required consultation process. Per the requirements of AB 52, the agreements shall provide protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction and provide for sensitive treatment and disposition of Native American burials, skeletal remains, and associated grave goods consistent with the planned use of, or the approved project on, the land. Pursuant to the mentioned California Health and Safety Code and AB 52, proper actions shall take place in the event of a discovery or recognition of any human

remains during project construction activities and less than significant impacts are expected.

5.3 Mitigation Measures:

CUL-1: Prior to the start of construction, a cultural resources management plan (CRMP) should be prepared and implemented. It is recommended the Project's CRMP implement the following procedures:

- Archaeological monitoring during all ground-disturbance activities, such as site preparation, demolition of historic structures, and grading up to 5 feet below surface, in order to quickly identify and assess any discoveries of cultural resources during Project implementation.
- Development of an inadvertent discovery plan in place to expediently address archaeological and / or tribal cultural resource discoveries should these be encountered during any phase of development associated with the Project. If these resources are inadvertently discovered during ground disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the appropriate regulatory agency/agencies.

6 - Energy

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

Sources: Appendix A (CalEEMod Version 2022.1.1.23); Rancho Mirage General Plan Update; Rancho Mirage Sustainability Plan, 2012; Rancho Mirage Greenhouse Gas Inventory, 2012; Rancho Mirage Municipal Code; Rancho Mirage General Plan EIR May, 2005.

6.1 Setting

Energy sources are made available to the Coachella Valley by private and public agencies. Major energy providers include Southern California Edison (SCE), Imperial Irrigation District (IID), and the Southern California Gas Company (The Gas Company or SoCalGas). Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage and are provided by SCE, IID and The Gas Company. The project property lies within SCE's and The Gas Company's service areas. Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking.

Electricity and Natural Gas

Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage. The project property lies within SCE's and The Gas Company's service areas. The Rancho Mirage City Council started the Rancho Mirage Energy Authority (RMEA) for the purpose of helping to reduce the community's SCE electricity bills. Pursuant to CCA law, RMEA is a locally-run, not-for-profit power program created by the City of Rancho Mirage. RMEA purchases power directly from power providers, pays consultants for compliance functions, and sets electricity rates based on costs. RMEA power is delivered through SCE poles and wires. SCE is still the utility and will continue to bill and collect from customers but using RMEA's lower electricity rates will allow businesses and residents to save 5 percent. RMEA also allows customers to choose 100 percent renewable energy through their Premium Renewable Choice rate plan. This plan offers customers the option of "opting-up" to 100 percent renewable energy at an affordable price. Residential and commercial accounts will see an incremental increase from the Base Choice rate of $0.009 or 0.9 cents per kWh.

Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking for existing land uses. However, natural gas will no longer be available for new projects on undeveloped land. The project site is served by natural gas.

Petroleum

There are more than 27 million registered vehicles in California, and those vehicles consumed an estimated 18.5 billion gallons of petroleum and diesel in 2014, according to the California Energy Commission (CEC). Gasoline and other vehicle fuels are commercially provided commodities and would be available to the project via commercial outlets. According to the CEC, transportation accounts for nearly 37 percent of California's total energy consumption. Petroleum-based fuels account for approximately 92 percent of California's transportation energy sources.

Technological advances, market trends, consumer behavior, and government policies could result in significant changes to fuel consumption by type and total. Various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and reduce vehicle miles traveled (VMT), at the federal and State levels. Technological advances have made use of other energy resources or alternative transportation modes increasingly feasible, as market forces have driven the price of petroleum products steadily upward.

6.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project proposes up to 120 multifamily residential units east of Peterson Road in the City of Rancho Mirage. Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage. Electricity is provided primarily by Southern California Edison (SCE) and the Rancho Mirage Energy Authority (RMEA), with a limited portion of the northeast quadrant of Rancho Mirage in Imperial Irrigation District's (IID) service area. The Rancho Mirage City Council started RMEA for the purpose of helping to reduce the community's SCE electricity bills. Pursuant to CCA law, RMEA is a locally-run, not-for-profit power program created by the City of Rancho Mirage. RMEA purchases power directly from power providers, pays consultants for compliance functions, and sets electricity rates based on costs. RMEA power is delivered through SCE poles and wires. SCE is still the utility and will continue to bill and collect from customers but using RMEA's lower electricity rates will allow businesses and residents to save 5 percent. SCE facilities include 12 kV transmission lines for local distribution. High voltage lines for more distant transmission range up to 115 kV and 230 kV. Substations step down voltage for local distribution and use. Three substations serve the City of Rancho Mirage: one on Highway 111, east of Thunderbird Cove, one on Clancy Lane at Monterey Avenue, and one on Plumley Road south of 35th Avenue.

The Southern California Gas Company (SoCalGas or the Gas Company) provides natural gas to the City of Rancho Mirage, serving residential, commercial, and industrial markets. Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking.

The project is expected to consume energy in the form of electricity, natural gas and petroleum during project construction and operation. The purpose of this analysis is to provide an assessment of the impacts resulting from the development and operation of the proposed project and to identify measures that may be necessary to reduce potentially significant impacts. Project-related energy consumption was calculated and analyzed using the latest version of CalEEMod V2022.1.1.23. CalEEMod was used to calculate project-related construction equipment demands, transportation energy demands, and facility energy demands (operational). Project-related construction and operational energy demands are discussed further below.

Construction Energy Demands

Electricity

Temporary electrical power for lighting and electronic equipment, such as computers inside interim construction trailers, would be provided by SCE. Electricity consumed for onsite construction trailers, which are used by managerial staff during the hours of construction activities, as well as electrically powered hand tools are expected to use a minimal amount of electricity. However, the electricity used for such activities would be temporary and negligible. Most energy used during construction would be from petroleum consumption (discussed further in following subsection).

Natural Gas

Natural gas is not anticipated to be required during construction of the project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the following petroleum subsection. Any minor amounts of natural gas that may be consumed because of project construction would be temporary and negligible and would not have an adverse effect.

Petroleum

Petroleum would be consumed throughout construction of the project. Fuel consumed by construction equipment would be the primarily energy resource expended over the course of construction, while VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty equipment used for project construction would rely on diesel fuel, as would haul trucks involved in off-hauling materials from excavation. Construction workers are expected to travel to and from the project site in gasoline-powered passenger vehicles. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive that is used for comparable activities or use of equipment that would not conform to current emission standards (and related fuel efficiencies).

Heavy-duty construction equipment of various types would be used during each phase of construction. CalEEMod was used to estimate construction equipment usage. In the analysis of the project the mitigated construction figures were used, based on the assumption that the project will implement applicable mitigation measures. Fuel consumption from construction equipment was estimated by converting the total CO2 emissions from each construction phase to gallons using the conversion factors shown in the tables included subsequently.

Table VI-1, Construction Worker Gasoline Demand, illustrates the demand of gasoline fuel for construction worker trips to and from the site during each construction phase, and phase of development. Construction worker gasoline demand during each phase of development equals a total of 13,292.5 gallons of gasoline fuel.

Table VI-1 Construction Worker Gasoline Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	15	12.8	3,840	1,290	8.89*	145.1
Site Prep.	10	17.5	12.8	2,240	750	8.89	84.4
Grading	30	20	12.8	7,680	2,590	8.89	291.3
Building Const.	300	87.5	12.8	336,000	110,850	8.89	12,469.1
Paving	20	15	12.8	3,840	1,240	8.89	139.5
Arch. Coating	20	17.5	12.8	4,480	1,450	8.89	163.1
Total Construction Worker Gasoline Demand							**13,292.5**

Sources: Appendix A (CalEEMod Version 2022.1.1.14); *https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

Table VI-2, Construction Vendor Diesel Demand, illustrates the demand of diesel fuel for construction vendor trips to and from the site during each construction phase, and phase of development. These trips are associated with the delivery of construction materials during the building construction phase. Construction vendor demand during each phase of development equals a total of 4,790.8 gallons of diesel fuel.

Table VI-2 Construction Vendor Diesel Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	0	0	0	0	10.18	0
Site Prep.	10	0	0	0	0	10.18	0
Grading	30	0	0	0	0	10.18	0
Building Const.	300	13.4	8.33	33,486.6	48,770	10.18	4,790.8
Paving	20	0	0	0	0	10.18	0
Arch. Coating	20	0	0	0	0	10.18	0
Total Construction Diesel Demand							**4,790.8**

Table VI-3, Construction Hauling Diesel Demand, illustrates the demand of diesel fuel for construction hauling during demolition and site preparation phases. These trips are associated with the hauling of material from the demolished maintenance building. Construction hauling demand during demolition and site preparation equals a total of 16,591.3 gallons of diesel fuel.

Table VI-3 Construction Hauling Diesel Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	161	20	64,400	105,000	10.18	10,314.3
Site Prep.	10	80.7	20	16,140	26,600	10.18	2,573.7
Grading	30	38.8	20	23,280	37,700	10.18	3,703.3
Total Construction Diesel Demand							**16,591.3**

Table VI-4, Construction Equipment Diesel Fuel Demand, displays the demand of diesel fuel for construction vehicles on-site during the various construction phases. Construction equipment diesel demands for each phase of project development equals a total of 47,939 gallons of diesel fuel.

Table VI-4 Construction Equipment Diesel Demand

Const. Phase	Days	Equipment Units	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	6	31,200	10.18*	3,064.8
Site Prep.	10	7	24,100	10.18	2,367.4
Grading	30	8	90,100	10.18	8,850.7
Building Const.	300	9	327,600	10.18	32,180.7
Paving	20	6	13,800	10.18	1,355.6
Arch. Coating	20	1	1,220	10.18	119.8
Total Construction Equipment Diesel Demand					**47,939**

Overall, the project is estimated to consume approximately 13,292.5 gallons of gasoline and 69,321.1 gallons of diesel fuel during the project's construction phases, for a total of 82,613.6 gallons of petroleum consumed during construction of the project. The US EPA applied a Tier 3 program in order to reduce the impacts of motor vehicles on air quality and public health. The vehicle emissions standards will reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium duty passenger vehicles, and some heavy-duty vehicles. The construction equipment will utilize Tier 3 engines or higher, therefore will be newer off-road equipment units.

The energy used during the construction of the project would be limited to the development of the project and would not require long-term petroleum use. Additionally, there are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive that is used for comparable activities or use of equipment that would not conform to current emissions standards (and related fuel efficiencies). Thus, project construction would not consume petroleum in a wasteful or inefficient manner and impacts will be less than significant.

Operational Energy Demands

Energy consumption in support of or related to project operations would include facilities energy demands (energy consumed by building operations and site maintenance activities), and transportation energy demands (energy consumed by residence and patron vehicles accessing the project site).

Electricity

The project proposes to develop a residential community with up to 120 multifamily residential units on approximately 12 acres. The residential project is typical of existing developments within the City. The project would not result in the use of excessive amounts of fuel or electricity and would not result in the need to develop additional sources of energy. Although energy use at the project would not be excessive, the project would incorporate several measures directed at minimizing energy use. These measures include applying energy efficient design features, including using high efficiency lighting, such as LEDs, to meet the most current Title 24 Standards in place at the time of construction, and therefore, reducing electricity consumption during project operation. According to the CalEEMod calculations, the project is expected to generate approximately 855,090 kWh of annual electricity. This is depicted in Table VI-5, Operational Electricity Demand.

Table VI-5 Operational Electricity Demand

Land Use	Electricity Demand (kWh/yr)
Apartments Low Rise	792,675
Other Asphalt Surfaces	0
General Office Building	62,415
Total	**855,090**

It is anticipated that the project will use electricity during operation of the proposed project. As indicated in the table above, it is estimated that the project would consume approximately 855,090 kWh of electricity annually. The SCE planning area used approximately 39,400 gigawatt hours (GWh) of electricity in the residential sector in 2022. According to the CEC's Demand Analysis Office, SCE estimates that electricity consumption within SCE's planning area will be approximately 129,000 GWh (which equates to 129,000,000 MWh) annually by 2030. Based on the project's estimated annual electrical consumption of 855,090 kWh (855.090 MWh), the project would account for approximately 0.00066 percent of SCE's total estimated demand in 2030.

The project proposes the installation of high efficiency lighting and appliances onsite and water efficient irrigation systems. The project will also comply with California Building Code and Energy Code standards to ensure energy efficient technologies and practices are used at the project site. Therefore, the project will not consume an unnecessary amount of electricity during operation.

Natural Gas

The consumption of natural gas typically is consumed during building heating, water heating and cooking, which will occur during project operation. The project's expected natural gas consumption was calculated using the CalEEMod default values. Based on the CalEEMod calculations, the project is expected to consume approximately 2,135,187 kBTU of natural gas annually during operation of the entire project. This is displayed in Table VI-6, Operational Natural Gas Demand.

Table VI-6 Operational Natural Gas Demand

Land Use	Natural Gas Demand (kBTU/yr)
Apartment Low Rise	2,036,427
Other Asphalt Surfaces	0
General Office Building	98,760
Total	**2,135,187**

Note: 2,135,187 kBTU/yr is approximately 5,641.1 cf/day per the 1 cf to 1.037 kBTU conversion and 365 days year.

With the aforementioned calculations, the project would result in a long-term increase in demand for natural gas. The project would consume approximately 2,135,187 kBTU of natural gas annually. This equates to 5,641.1 cf of natural gas per day. The project would be designed to comply with Title 24, Part 6, of the CCR, and the City's Sustainability Plan. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within SoCalGas's planning area will be 2,310 million cf per day in 2030 (California Public Utilities Commission, 2018 California Gas Report, pg.

103). Therefore, the project would account for approximately 0.00024 percent of the 2030 forecasted consumption in SoCalGas's planning area (5,641.1 cf/day divided by 2,310 million cf/day) and would use the existing infrastructure. Natural gas consumption would be appropriate and not place a significant burden on SoCalGas services. Further, submittal, review, and approval of project plans through City and SoCalGas would ensure future natural gas demands to be manageable.

The project would be required to comply with the most recent California Building Code and Energy Code standards to ensure energy efficient technologies and practices are used at the project site. Therefore, the project will not result in the inefficient, wasteful, or unnecessary consumption of natural gas during project operation. Additionally, natural gas consumption would be appropriate and would not place a significant burden on SoCal Gas services.

Petroleum

According to the figures provided by the CalEEMod calculations, the project would result in 3,992,704 VMTs annually. Per the CalEEMod calculations, the trips during the weekdays will be 878, 977 on Saturdays, and 754 on Sundays. Total mobile source CO2e is 1,472 MT per year, or 1,472,000 kg per year. CalEEMod assumes 92.5 percent of VMT burns gasoline, while the remaining 7.5 percent burn diesel. Thus, of the 1,472,000 kg of mobile emissions, 1,591,351.4 kg is generated by gasoline combustion, and 110,400 kg is generated by diesel combustion. Project operation would have an annual gasoline demand of 179,004.7 gallons and an annual diesel demand of 10,844.8 gallons, as displayed in Table VI-8.

Table VI-7, Operational Petroleum Demand

	Annual VMT
Land Use	**Project Buildout**
Apartment Low Rise	3,992,704
Other Asphalt Surfaces	--
General Office Building	--
Total Annual VMT	**3,992,704**

Table VI-8 Operational Annual Petroleum

	Annual VMT	**KgCO2e**	**Kg/CO2/Gallon**	**Annual Gallons**
Gasoline	3,693,251.2	1,591,351.4	8.89	179,004.7
Diesel	299,452.8	110,400	10.18	10,844.8
			Total Annual Petroleum	**189,849.5**

Over the lifetime of the project, the fuel efficiency of vehicles in use is expected to increase, as older vehicles are replaced with newer more efficient models. Therefore, it is expected that the amount of petroleum consumed due to the vehicle trips to and from the project site during operation would decrease over time. Additional advancement of technology includes the use of plug-in hybrid and zero emission vehicles in California, which will also decrease the amount of future petroleum consumed in the state. With the foregoing,

operation of the project is expected to use decreasing amounts of petroleum over time, due to advances in fuel economy.

The project would provide for, and promote, energy efficiencies required under other applicable federal and State of California standards and regulations, and in doing so, would meet California Building Standards Code Title 24 standards. Moreover, energy consumed by the project's operation is modeled to be comparable to energy consumed by other residential uses of similar scale and intensity that are constructed and operating in California. On this basis, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the project would not cause or result in the need for additional energy producing facilities or energy delivery systems.

In conclusion, the project would result in an increase in energy use during construction and operation compared to the existing conditions. However, based on the findings described above, project construction and operation are not anticipated to result in potentially significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Additionally, the project would implement measures required under the City's General Plan, City Municipal Code, the California Building Code, and the California Energy Code. Given these considerations, energy consumption associated with the project operation would not be considered excessive.

b) **LESS THAN SIGNIFICANT IMPACT:** The project proposes to develop and operate up to 120 multifamily residential units on approximately 12 acres in the City of Rancho Mirage. As stated in the previous discussion, project development and operation are not anticipated to use an unnecessary amount of energy resources. To ensure the conservation of energy, the State of California and the City of Rancho Mirage implement various regulations in order to be more energy efficient and reduce the amount of greenhouse gas (GHG) emissions. Some of the State-wide and local regulations are listed below.

Federal Regulations

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

State Regulations

Assembly Bill 32

Assembly Bill 32 (AB 32) was signed in 2006 to establish and reduce the amounts of greenhouse gases being emitted on a state-wide level. Specifically, AB 32 requires a reduction of emissions to 1990 levels by 2020. It plans to do this by establishing an annual reporting program for significant sources. Energy efficiency goals listed in AB 32 includes maximizing energy efficiency building and appliance standards, and pursuing additional efficiency efforts including new technologies, and new policy and implementation mechanisms.

CARB Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561(h)). The California Air Resources Board (CARB) developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. The initial Scoping Plan was approved in 2008, and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. Updates to the Scoping Plan occurred in 2014 and in 2017.

In 2022, CARB released an update to the Scoping Plan. The update addresses recent legislation and direction from Governor Newsom, extends and expands upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. The 2022 Plan also adds carbon neutrality as a science-based guide and touchstone for California's climate work.

Assembly Bill 1493/Pavley Regulations

California Assembly Bill 1493 (AB 1493), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the Environmental Protection Agency (EPA) from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007, the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

Executive Order (EO) S-3-05, passed in 2005, established reduction targets of an 80 percent of 1990 levels reduction by 2050, and created agencies to achieve these targets. The passage of this regulation requires the use of more energy efficient practices regarding building development and operation in order to reduce the amount of GHGs produced.

State of California Energy Plan

The California Energy Commission (CEC) is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

Title 20: Appliance Efficiency Standards

The California Code of Regulations (CCR), Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608 (Appliance Efficiency Regulations) regulates the sale of appliances

in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

Title 24: Building Energy Efficiency Standards and CALGreen Building Standards Code

In addition to Title 20 (Sections 1601-1608) of the CCR, Title 24, parts 6 and 11, also outlines energy efficient building designs for new development. The CCR's Building Energy Efficiency Standards (Title 24, Part 6), and the CALGreen Building Standards Code (Title 24, Part 11), establish mandatory guidelines and standards requiring more energy efficient new and existing developments. The California Energy Commission adopted the Building Energy Efficient Standards for all new residential and nonresidential construction to reduce greenhouse gases, as a part of the California Building Code, Title 24. The code emphasizes heat pumps for space heating and water heating; and extends the benefits of photovoltaic and battery storage systems and other demand flexible technology. Title 24, Part 11, establishes design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties. The proposed project will be required to comply with the state implemented standards for energy efficient new developments.

Local and City Regulations

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction Mandates of AB 32. The project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has the authority to develop the sustainable communities strategy (SCS) or alternative planning strategy (APS). For the SCAG region, the targets set by the California Air Resources Board (CARB) are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions by 2035. These reduction targets became effective in October 2018.

Desert Cities Energy Partnership and Green for Life Project

Rancho Mirage is an active member of the Desert Cities Energy Partnership (DCEP), a partnership of Southern California Edison (SCE), Southern California Gas Company (SoCalGas), Imperial Irrigation District (IID), the Agua Caliente Band of Cahuilla Indians, and the cities of Blythe, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, La Quinta, Rancho Mirage, Palm Desert, and Palm Springs, managed by the Coachella Valley Association of Governments (CVAG). Green for Life is an energy-saving program funded by the California Public Utilities Commission (CPUC) through SCE and administered by CVAG.

Rancho Mirage Sustainability Plan

The City of Rancho Mirage established their Sustainability Plan in 2012 as a framework for the development and implementation of policies and programs that will reduce the City's GHG emissions. State-wide regulations, including previously mentioned AB 32, act

as policy guides for the City of Rancho Mirage to achieve GHG reduction goals. Through the Sustainability Plan, the City is determined to reduce energy use and waste, create local jobs, improve air quality, and preserve the local landscape and history in order to benefit the City in the future.

The Sustainability Plan addresses the major sources of emissions in seven spheres of daily life: Where We Live, Where We Work, How We Build, How We Get Around, How We Govern, Where We Visit and Play, and How We Teach and Learn. For each sphere, the Sustainability Plan suggests a number of programs or policies that can be implemented by Rancho Mirage to meet its goals by the year 2020.

Rancho Mirage Greenhouse Gas Inventory

The Rancho Mirage Greenhouse Gas Inventory (GHG Inventory) was published by the City in September 2012 to inform residents and businesses of its ecological footprint in significant detail. The GHG Inventory establishes a 2010 baseline of emissions from which reductions will be measured to be aligned with State of California law. The GHG Inventory, the City of Rancho Mirage can assess its GHG emissions and strategically implement policies that specifically target GHG emissions by sector or source. Thus, creating the most mitigating impact while introducing programs and initiatives.

Rancho Mirage General Plan 2017

The City of Rancho Mirage is committed to encouraging the conscious use of energy resources by encouraging the development and use of alternative and renewable reducing energy demand and consumption within their City. Energy efficiency is emphasized in the Conservation and Open Space (COS), Air Quality (AQ), and Community Design Elements (CD) of the Rancho Mirage General Plan. Some goals and policies encouraging energy efficiency are provided as follows:

- Goal COS 4 – The conservation, efficient use, and thoughtful management of energy sources and mineral deposits.
- Goal COS 5 – The long-term viability of limited and non-renewable resources.
- Policy COS 5.1 – The City shall promote energy efficiency and conservation in all areas of community development, including transportation, development planning, and public and private sector construction and operation, as well as in the full range of residential and non-residential projects.
- Policy CD 8.2 – The City shall encourage new development to incorporate “green building” practices to maximize resource conservation and be compatible with the surrounding desert environment.
- Program CD 8.2A – Encourage architects, developers and designers to implement all of the 2016 California Green Building Standards Code, as opposed to just the mandatory measures.

Rancho Mirage Municipal Code

Similar to the Sustainability Plan and the 2017 General Plan, the City’s Municipal Code also includes provisions that encourage the use of alternative transportation means that reduce the use of non-renewable energy and the use of energy efficient appliances and building design standards. The following list includes some of these provisions:

- Chapter 10.80, Transportation Demand Management, which is intended to protect the public health, safety and welfare by reducing air pollution, traffic congestion and energy consumption attributable to vehicle trips and vehicle miles traveled.
- Chapter 15.02.010, Codes of 2022 Edition of the California Building Standards Code adopted without local amendments, which states that the 2019 California Energy Code (Part 6 of Title 24 of the CCR), and the 2022 California Green Building Standards Code (Part 11 of Title 24 of the CCR) are applicable within the City, without local amendments.

Regarding federal transportation regulations, the project site is located in a developed area. Access to and from the project site is proposed to occur on existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by Southern California Edison and the Southern California Gas Company.

Regarding Pavley (AB 1493) regulations, an individual project does not have the ability to comply or conflict with these regulations because they are intended for agencies and their adoption of procedures and protocols for reporting and certifying GHG emission reductions from mobile sources.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CALGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

Additionally, the project is consistent with the applicable strategies of the City of Rancho Mirage's Sustainability Plan and Energy Action Plan, as well as CARB's Scoping Plan. The project property will comply with all applicable federal, State, and local guidelines and regulations regarding energy-efficient building design and standards. Therefore, the proposed project is not anticipated to conflict or obstruct a State or local plan for renewable energy or energy efficiency. The project proposes permanent lodging uses and will not have any long-term effects on an energy provider's future energy development or future energy conservation strategies. Less than significant impacts are expected.

6.3 Mitigation Measures: None required.

7 - Geology and Soils

GEOLOGY AND SOILS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☒	☐	☐

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Sources: The Alquist-Priolo Earthquake Fault Zoning (AP) Act, California Department of Conservation; 2017 Rancho Mirage General Plan Update; Rancho Mirage General Plan EIR May, 2005; Riverside County General Plan, 2016; Preliminary Geotechnical Investigation, GEOCON, May 2024 (Appendix D); Paleontological Resources Assessment, Material Culture Consulting, Inc., April 2024 (Appendix E); United States Department of Agriculture (USDA) Web Soil Survey.

7.1 Setting

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to prohibit the location of developments and structures for human occupancy across the trace of active faults. To assist with this, the State Geologist delineates appropriately wide earthquake fault zones (Alquist-Priolo Zones) to encompass potentially and recently active traces, which are submitted to city and county agencies to be incorporated into their land use planning and construction policies. A trace is a line on the earth's surface defining a fault, and an active fault is defined as one that has ruptured in the last 11,000 years. The minimum distance a structure for human occupancy can be placed from an active fault is generally fifty feet.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards.

The SHMA requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires.

California Code of Regulations, Title 24 (California Building Standard Code)

The California Building Standards Commission operates within the Department of General Services and is charged with the responsibility to administer the process of approving and adopting building standards for publication in the California Building Standards Code (Cal. Code Regs., Title 24). These regulations include provisions for site work, demolition, and construction, which include excavation and grading, as well as provisions for foundations, retaining walls, and expansive and compressible soils. The California Building Code also provides guidelines for building design to protect occupants from seismic hazards.

South Coast Air Quality Management District

South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for Orange County and portions of Los Angeles, San Bernardino, and Riverside counties, including the Coachella Valley. SCAQMD is responsible for controlling emissions primarily from stationary sources of air pollution, including grading and construction

sites. The main source of pollution from grading and construction activities is fugitive dust, which is particulate matter that is suspended in the air by direct or indirect human activities. Two South Coast AQMD rules were adopted with the purpose of reducing the amount of fugitive dust entrained as a result of human activities. Rule 403 applies to any activity capable of generating fugitive dust. Rule 403.1 is supplemental to Rule 403 and applies only to fugitive dust sources in Coachella Valley.

Rule 403 (Fugitive Dust) requires the implementation of best available dust control measures (BACM) during active operations capable of generating fugitive dust. This rule also requires activities defined as “large operations” to notify the South Coast AQMD by submitting specific forms. A large operation is defined as any active operation on property containing 50 or more acres of disturbed surface area; or any earth moving operation with a daily earth-moving or throughput volume of 5,000 cubic yards, three times during the most recent 365 day period.

Rule 403.1 (Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources) is a supplemental rule to Rule 403 and is applicable to man-made sources of fugitive dust in Coachella Valley. The purpose of this rule is to reduce fugitive dust and resulting PM10 emissions from man-made sources in the Coachella Valley. Rule 403.1 requires a Fugitive Dust Control Plan approved by South Coast AQMD or an authorized local government agency prior to initiating any construction/earth-moving activity. These requirements are only applicable to construction projects with 5,000 or more square feet of surface area disturbance.

Geotechnical Investigation

Geocon West, Inc. (Geocon) composed a project-specific Preliminary Geotechnical Investigation in April 2024. The purpose of the investigation was to evaluate subsurface soil and geologic conditions at the site and, based on the conditions encountered, provide preliminary recommendations pertaining to the geotechnical aspects of developing the property as presently proposed. The scope of the investigation included review of published geologic information, private and public subsurface utility location, subsurface exploration and sample collection, percolation and dry well testing, laboratory testing, engineering analyses, and preparation of the Preliminary Geotechnical Investigation.

The field investigation was conducted on March 14, 2024, and included the drilling of five geotechnical borings to depths ranging between approximately 21 ½ to 51½ feet below the existing ground surface, to observe the subsurface geological conditions at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to static groundwater. Percolation and dry well testing were performed at three locations each. Dry wells were drilled to 15 feet and percolation tests were drilled to 5 feet below ground surface. Testing was performed on March 14, 2024, in accordance with Riverside Flood Control and Water Conservation LID BMP Handbook.

The 2024 Preliminary Geotechnical Investigation was consulted throughout this Geology and Soils Section and discussed further below.

Paleontological Resources

In April 2024, Material Culture Consulting, Inc. conducted a Paleontological Resources Assessment for the project site. This assessment documents the potential for encountering paleontological resources during construction and operation of the project and provides recommendations on how to mitigate potential impacts to paleontological resources.

Paleontological resources are the fossilized remains of ancient plants and animals. They occur in older soils which have been deposited in the Valley over millions of years. Figure OS-8, *Paleontological Sensitivity*, in the Riverside County General Plan's Multipurpose Open Space Element recognized the subject property as having low potential for Paleontological Sensitivity. Areas recognized for having a "low" potential have a reduced likelihood of containing significant non-renewable paleontological resources, including vertebrate or significant invertebrate fossils.

During fieldwork for the paleontological assessment, survey conditions were fair due to the project Area being mostly developed. Ground visibility for the entire project Area ranged from poor to good (20-75%) due to density of overgrown grass and weeds. The average surface visibility was good (75%). The eastern portion of the project area had lowered visibility (10-25%) due to denser vegetation. Areas with poorer visibility were surveyed in 5-meter transects instead of 10-meter transects. Presently, the project area exists as an empty mobile home community with a gradual west-facing slope of less than 5-degrees. Furthermore, the entire area shows heavy disturbance from previous development.

7.2 Discussion of Impacts:

a i) **LESS THAN SIGNIFICANT IMPACT:** The City of Rancho Mirage, similar to most of Southern California, is susceptible to earthquakes due to the active faults that traverse the region. The Rancho Mirage General Plan Environmental Impact Report (EIR) states that classifying an active fault helps gauge the surface rupture potential of a fault and prevents development from being sited directly on an active fault. Additionally, the ability to identify and locate faults makes ground rupture the easiest seismic hazard to avoid.

According to City's General Plan Safety Element (Exhibit 21, *Faults in the Rancho Mirage General Plan Area*) and the Rancho Mirage General Plan ArcGIS Public Web Application, multiple faults are located in and near Rancho Mirage. These faults include the Santa Ana Thrust Fault, Deep Canyon Fault, Palm Canyon Fault, and the San Andreas Fault (North and South Branch) The faults can create an earthquake in the Rancho Mirage area; however, no known active or inactive faults traverse through or near the project site.

To reduce the losses from surface fault rupture on a statewide basis, the Alquist-Priolo (AP) Earthquake Fault Zone Act was passed in 1972 after the San Fernando earthquake a year prior. The AP Earthquake Fault Zone Act is intended to ensure public safety by prohibiting the location of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. After consulting the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist, it can be determined that the closest AP Earthquake Fault Zone to the project site is at the San Andreas Fault, approximately 6.5 miles northeast. Therefore, due to the distance of the fault zone, it can be concluded that risks associated with primary surface ground rupture are low.

Per the AP Earthquake Fault Zone Map and the 2017 Rancho Mirage General Plan, rupture from an earthquake fault is not anticipated on the project property. No known active faults traverse through or are found near the project site, although seismically induced ground shaking is expected in the City of Rancho Mirage. The project site is not located in an AP Earthquake Fault Zone; therefore, impacts would be less than significant.

ii) **LESS THAN SIGNIFICANT IMPACT:** Seismically induced ground shaking is anticipated in the entire Coachella Valley, due to the multiple northwest-southeast trending faults in the region. Although these faults produced the unique topography in the

Coachella Valley (high mountain ranges and a low valley floor), the major faults, such as the San Andreas Fault, have the potential to produce strong shaking during a seismic event. The strength of ground shaking is accredited to the distance from the fault; where the intensity of the seismic shaking decreases the further it is from the causative fault. The 2017 Rancho Mirage General Plan Safety Element indicates that ground shaking during an earthquake is the most significant seismic hazard that will impact Rancho Mirage.

The approximately 12-acre project property proposes the development of up to 120 multi-family residential units with a pool, recreational open space, gardens, a tot lot, and dog run and park. To ensure the safety of the project site against strong seismic ground shaking, construction shall be designed and implemented in accordance with the most current edition of the California Building Code (CBC) and all applicable provisions of the CBC.

Following the regulations provided by the City and the CBC, the proposed development will be constructed in a manner that reduces the risk of seismic hazards (Title 24, California Code of Regulations). The project shall also comply with the Preliminary Geotechnical Investigation. The Preliminary Geotechnical Investigation provides direction for site preparation, removal of artificial and undocumented soil, practices for engineered fill, remedial removals, seismic design criteria, and foundation design and construction. Findings and recommendations from the Geotechnical Investigation would work to reduce exposure of people or structures to adverse effects to the greatest extent possible against seismic hazards. The project shall comply with all recommendations set forth in the Preliminary Geotechnical Investigation as required by **Mitigation Measure GEO-1**. Site work would be conducted in accordance with the Rancho Mirage Municipal Code, and all grading and construction plans would be reviewed and approved by the City. These requirements are designed to reduce impacts related to strong ground shaking; therefore, less than significant impacts are anticipated for onsite construction.

iii) LESS THAN SIGNIFICANT IMPACT: The Rancho Mirage General Plan states that liquefaction may occur when loose, unconsolidated, saturated, sandy soils are subject to ground vibrations during a seismic event. This occurs in areas where the ground water table is within 50 feet of the ground surface and when seismic events occur that generate a Modified Mercalli Intensity value of VII or greater. Significant ground shaking can suddenly increase water pressure in the pores between soil particles and cause soils to lose cohesion and “liquefy.” This loss of soil strength can cause a building to sink, tilt and suffer structural damage. Other effects of liquefied soils include a loss of bearing strength, ground oscillations, lateral spreading, and ground lurching and slumping.

Exhibit 22 in the 2017 Rancho Mirage General Plan, *Areas Susceptible to Liquefaction Map*, identifies the project location to be in an area of moderate liquefaction susceptibility, primarily due to the liquefaction susceptible soils present at the project site. Based on the United States Department of Agriculture (USDA) Web Soil Survey, the site consists of Coachella fine sand (CpA), a sandy alluvium soil. However, the deep groundwater in Rancho Mirage does not allow the saturation of the sediments. Additionally, the Preliminary Geotechnical Investigation did not encounter groundwater while drilling boreholes; therefore, the potential for liquefaction to occur at the project site would be less than significant.

Although the project area for the project is not susceptible to liquefaction, the 2017 Rancho Mirage General Plan categorizes the project area as having a moderate susceptibility to

seismically induced settlement (Exhibit 23, *Seismically Induced Settlement Susceptibility*). This is due to the windblown sands and other recently deposited sediments that are typically loose and, therefore, potentially subject to seismically induced settlement. Strong seismic shaking, the 2017 General Plan states, can cause densification or compaction of soils resulting in local or regional settlement of the ground surface, which can cause damage to foundations and structures. As stated above, the site consists of Coachella fine sand, a sandy alluvium soil. To ensure less than significant impact from seismically induced settlement, the project site shall implement proper excavation, compaction, and foundation design during development of the site to avoid effects caused by seismically induced settlement.

To ensure the safety of the project against seismically induced hazards, the project site shall adhere to the standard design requirements stated in the most recent California Building Code (CBC), the recommendations provided in the Geotechnical Investigation as required in **Mitigation Measure GEO-1**, and the City's building standards. Overall, impacts from seismically induced ground failure such as liquefaction and settlement are anticipated to be less than significant.

iv) NO IMPACT: As discussed throughout this Geology and Soils Section, the City of Rancho Mirage, like most of Southern California, is susceptible to seismic ground shaking due to the multiple faults in the region. As a result of seismic ground shaking, slope failure, such as rockfalls and landslides, may occur, especially throughout elevated areas in the City.

According to the Safety Element in the 2017 Rancho Mirage General Plan, seismically induced landslides and rock falls can be expected primarily in the southern portion of the City including areas near the Santa Rosa Mountains (where the bedrock is intensely fractured or jointed), the Indio Hills area, and some sections of Highway 111. Exhibit 24 in the 2017 Rancho Mirage General Plan, *Seismically Induced Rock Falls and Landslide Susceptibility Map*, classifies the project location in an area of low susceptibility of being impacted by rock falls and seismically induced landsliding, due to the relatively flat topography found onsite and in the surrounding area. Therefore, no impacts to the project area are expected to occur regarding landslides and rockfalls.

b) LESS THAN SIGNIFICANT IMPACT: The 2017 Rancho Mirage General Plan states that most of the City is highly susceptible to wind erosion. The geomorphology of the Coachella Valley, its extreme aridity, and the marine air masses funneled from the west through the San Gorgonio Pass create strong and persistent winds in the valley. These strong winds have been blowing and redistributing sand deposits in the area for thousands of years. Additionally, lands disturbed by flooding, grading or agricultural activities are subject to significant erosive forces that suspend fine dust and transport sand over great distances. This is a concern for the City of Rancho Mirage because the eroded particles have the ability to damage vehicles, structures, and other improvements due to windblown sand.

The project site was once a mobile home park. According to historical aerial imagery, demolition of the site occurred in phases. Demolition began between 2006 and 2009, and all buildings had been demolished by August 2018. Remnants of the mobile home park consist of paved structure pads, sidewalks, driveways, and underground utilities. The project site proposes the development of up to 120 multi-family residential units with a pool, recreational open space, gardens, a tot lot, and dog run and park. Construction of

the site will result in ground disturbing activities such as demolition, the clearing and grubbing of vegetation, and grading, which may increase the potential of soil erosion. According to Exhibit 25 of the General Plan, *Wind Erosion Hazard*, the project site is characterized as being within an area exposed to “severe” wind erosion. Severe wind erosion hazard areas are properties exposed to erosive winds where soils show distinct evidence of wind removal and/or accumulation in hummocks 24 to 48 inches high.

Blowing sand and fugitive dust (discussed previously in the Air Quality section of this document) constitutes a significant local environmental and health hazard. Control of this hazard, as required by the City, includes a submittal of a Fugitive Dust Control Plan (Local Air Quality Management Plan) prior to development. Per South Coast Air Quality Management District (SCAQMD) Rule 403.1, the project would be required to submit a Local Air Quality Management Plan (LAQMP) to be reviewed as part of the grading permit process to minimize potential impacts caused by blowing dust and sand during construction. Procedures and best management practices (BMPs) set forth in the Plan would ensure that potential erosion is controlled during the construction process. These BMPs may include watering of the site during construction, the installation of retaining walls and landscaping materials, or the application of chemical soil stabilizers. As a standard condition, any ground surface area adjacent to the proposed development that is temporarily disturbed by construction activities must be entirely covered by the LAQMP and must be properly re-stabilized to satisfy the City, SCAQMD, and NPDES requirements. The adjoining areas disturbed during construction due to temporary staging or soil movement must be treated with an effective long-term soil stabilizer or an equivalent cover method, subject to review and approval by the City of Rancho Mirage. These actions would be regulated by the plan review process prior to obtaining a grading permit and would be enforced as part of the agency site inspection protocols during construction. See the Air Quality Section of this document for further discussion.

Along with the implementation of the LAQMP, to further avoid erosion at the project site, the developer must comply with the State’s most current Construction General Permit (CGP) (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). Compliance with the CGP involves the development and implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) designed to reduce potential adverse impacts to surface water quality during the period of construction. The required plan would identify the locations and types of construction activities requiring BMPs and other necessary compliance measures to prevent soil erosion and stormwater runoff pollution. The plan would also identify the limits of allowable construction-related disturbance to prevent any exceedances or violations. Waterborne erosion and the City’s Standard Conditions associated with it are thoroughly discussed in the Hydrology and Water Quality Section of the document.

In addition to the LAQMP and the SWPPP, the project would include the development of both pervious and impervious surfaces. The pervious surfaces would include landscaped areas and the proposed recreation and open space and the retention area, while the impervious surfaces will include the building areas, parking lots, sidewalks, and drive aisles. Landscaping of the project would contain trees, shrubs, and ground covers, as well as crushed rocks. The permanent stabilization methods of paving and landscaping at the project site would decrease the amount of erosion created at the property during project operation.

With the implementation of the LAQMP, and SWPPP (outlined above and in the Air Quality and Hydrology Sections of this document), along with the paved and landscaped surfaces on the property, impacts regarding erosion from the project site are expected to be less than significant.

c) LESS THAN SIGNIFICANT IMPACT: The approximately 12-acre project, consisting of APN 689-180-012, will include the development of a 120-unit, multi-family residential community in the City of Rancho Mirage. The project site was analyzed for the likelihood of potential hazards such as landslides, liquefaction, and subsidence. The findings are discussed as follows:

As identified in portion a) iii. of this Geology and Soils Section, liquefaction occurs when loose, unconsolidated, saturated, sandy soils are subjected to ground vibrations during a seismic event. This occurs in areas where the ground water table is within 50 feet of the ground surface and when seismic events occur the sudden increase in water pressure in the pores between soil particles and the loss of cohesion with the soils causes them to act like a liquid. Per the City General Plan, the depth to groundwater in most of Rancho Mirage, including the project property, is more than 50 feet below ground surface. Therefore, the potential for liquefaction at the project site improvements is considered negligible. No impacts are anticipated.

Lateral spreading is the lateral displacement of gently sloping ground as a result of pore pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. As discussed in a) iii, the risk of liquefaction at the project site is considered moderate due to the underlying soil type, however because of the presumed lack of shallow groundwater below the site, the potential for liquefaction is considered negligible; therefore, the potential for lateral spreading is low. Impacts are anticipated to be less than significant at the project site.

As discussed in portion a) iv. of this Geology and Soils Section, the City of Rancho Mirage indicates that the project is in an area of low susceptibility of being impacted by rock falls and landslides. The existing project site is characterized by relatively flat topography. Due to the absence of steep slopes around the project site, no impacts from landslides are expected.

The 2017 Rancho Mirage General Plan defines subsidence as gradual settling or sinking of the ground surface with little or no horizontal movement. Several regions of subsidence have been documented in Riverside County, all of them in deep, alluvium-filled valleys. Subsidence can be caused by both human activities and natural causes, such as earthquakes. In most cases, the cause of ground subsidence in the Coachella Valley is typically due to declining groundwater levels. The recognition that ground subsidence is an environmental restraint has forced agencies, such as the U.S Geological Survey and the Coachella Valley Water District, to devote resources to the study and mitigation of this potential hazard. Regional subsidence from groundwater withdrawal is a potential hazard that the City can proactively mitigate by supporting the proper management of the groundwater supplies, creating water conservation programs, encouraging water recycling, and educating the public. In addition, building and seismic code requirements assure that potential impacts associated with ground subsidence are reduced to less than significant levels.

According to the Rancho Mirage General Plan EIR, strong ground shaking can cause densification or compaction of soils resulting in local or regional settlement of the ground

surface. During strong shaking, soil grains become more tightly packed due to the collapse of voids and pore spaces, resulting in a reduction of the thickness of the soil column. This type of ground failure typically occurs in loose granular, cohesionless soils, and can occur in either wet or dry conditions. This can result in local differential settlement and damage to foundations and structures, as well as damage to water and sewer lines. According to Exhibit 23 in the General Plan, the project site is displayed as having moderate susceptibility to seismically induced settlement. As said before, the project site once existed as a mobile home park, but now only the paved structure pad, sidewalk, driveway, and underground utilities remain. To reduce the potential for seismic settlement in the project area, the City recommends proper excavation, compaction, and foundation design (page 86 of the General Plan). Grading plans and structural engineering plans will be reviewed and approved by the City.

The project would follow the recommendations in the Preliminary Geotechnical Investigation as required by **Mitigation Measure GEO-1**. The project would also be conditioned to comply with the recommendations within the General Plan and EIR, the Rancho Mirage Municipal Code, and the most recent California Building Code (CBC). Overall, less than significant impacts are anticipated.

d) LESS THAN SIGNIFICANT IMPACT: Expansive soils, as defined in the Riverside County General Plan, have a significant amount of clay particles which can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils, which is why they are a potential hazard. These soils can also be widely dispersed, occurring in both hillside areas and low-lying alluvial basins.

Based on the Preliminary Geotechnical Investigation which included laboratory testing, the soil encountered at the project site exhibits a very low expansion potential. Impacts from expansive soils are expected to be less than significant at the project site with the adherence to the recommendations set for in the Preliminary Geotechnical Investigation (**Mitigation Measure GEO-1**) County and City standard conditions during grading and construction.

e) NO IMPACT: The project property is located is located off Peterson Road, north of Juniper Lane in the City of Rancho Mirage. The project is bound by residential units to the north and south, commercial buildings to the west, and Morningside gated community golf course (and Whitewater River Channel) to the east. The project area would be provided with sanitary sewer service by the Coachella Valley Water District (CVWD). The proposed project will be required to connect to sanitary sewer lines and no septic systems will be permitted. No impacts are expected.

f) LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED: Paleontological resources provide evidence of past life forms and their biota, which is valued for the information they yield about the history of earth and its past ecological settings. According to Figure OS-8, *Paleontological Sensitivity*, in the Riverside County General Plan's Multipurpose Open Space Element, the property is recognized for having low potential for Paleontological Sensitivity. Areas recognized for having a "low" potential have a reduced likelihood of containing significant non-renewable paleontological resources, including vertebrate or significant invertebrate fossils. However, it must be noted that surface geology is not always indicative of subsurface geology or the potential for paleontological resources.

In April 2024, Material Culture Consulting conducted a Paleontological Resources Assessment ("paleontological assessment") for the project site. Overall, the project area is highly disturbed. The remnants of 125 individual mobile home lots and 3 parking lots were observed throughout the project area. Each mobile home lot consists of a paved structure pad, sidewalk, driveway, and underground utilities. Heavy grading and excavation would have taken place to build the lots, utilities, and the roads (Travelodge Lane) that connect them. Piles of modern refuse and landscaping material were observed throughout the project area. Evidence of imported landscaping material was observed with the presence of white quartz gravel, red lava rock and decorative clam shell. Soil in the area consisted of brown fine- to medium coarse-grained silty sand with imported quartz and volcanic pebble-sized inclusions.

No paleontological resources were observed during the field survey for the paleontological assessment. If during grading or construction, artifacts or other paleontological resources are discovered, all grading onsite shall be halted, and the applicant shall immediately notify the City Planner. A qualified paleontologist shall be called to the site, at the cost of the applicant, to identify the resource and recommend mitigation if the resource is significant. This is stated in the **Mitigation Measure GEO-2** and would reduce impacts on paleontological resources or geologic features to less than significant.

7.3 Mitigation Measures:

GEO-1 The applicant shall comply with all recommendations set forth in the Geotechnical Investigation prepared for the project (Appendix D) during the construction.

GEO-2 If paleontological materials are discovered during grading or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified paleontologist can assess the nature and significance of the find. Project personnel shall not collect or move any paleontological materials. To the extent feasible, project activities shall avoid these deposits.

8 – Greenhouse Gas Emissions

GREENHOUSE EMISSIONS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☒	☐

Sources: *Final 2022 Air Quality Management Plan* (AQMP), by SCAQMD, December 2022; *Final 2003 Coachella Valley PM10 State Implementation Plan* (CVSIP), by SCAQMD, August 2003; *Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan*, by the California Air Resources Board, February 2010; California Emissions Estimator Model (CalEEMod), Version 2022.1.1.23 (Appendix A); California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators, 2021 Edition, California Air Resources Board; Release No. 18-37 & 19-35, California Air Resources Board Press Release, July 2018 and August 2019.

8.1 Setting

Summary of Local and Statewide Greenhouse Gas Regulations and Trends:

Greenhouse gases (GHG) are a group of gases that trap solar energy in the Earth's atmosphere, preventing it from becoming too cold and uninhabitable. Common greenhouse gases in the Earth's atmosphere include water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), ozone, and chlorofluorocarbons to a lesser extent. Carbon dioxide is the main GHG thought to contribute to climate change. Carbon dioxide reflects solar radiation back to Earth, thereby trapping solar energy and heat within the lower atmosphere. Human activities (such as burning carbon-based fossil fuels) create water vapor and CO2 as byproducts, thereby impacting the levels of GHG in the atmosphere. Carbon dioxide equivalent (CO2e) is a metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas.

To address the long-term adverse impacts associated with global climate change, California's Global Warming Solutions Act of 2006 (AB 32) requires California Air Resource Board (CARB) to reduce statewide emissions of greenhouse gases to 1990 levels by 2020. In 2016, Governor Jerry Brown signed Senate Bill 32 (SB32) that requires California to reduce GHG emissions to 40 percent below 1990 levels by 2030. With the passage of the California Global Warming Solutions Act of 2006 (Assembly Bill 32) in California, environmental documents for projects pursuant to CEQA are required to analyze greenhouse gases and assess the potential significance and impacts of GHG emissions.

California's annual statewide GHG emission inventory is a relevant tool for tracking California's progress in reducing GHGs and achieving the statewide GHG target. The GHG inventory relies on data collected through various California Global Warming Solutions Act (AB 32) programs. On July 11, 2018, CARB announced in a press release (No. 18-37) that greenhouse gas pollution in

California fell below 1990 levels for the first time since emissions peaked in 2004, an achievement roughly equal to taking 12 million cars off the road or saving 6 billion gallons of gasoline a year. Moreover, according to the CARB report on California Greenhouse Gas Emissions for 2000 to 2017 (published in 2019), which tracks the trends of GHG emissions, California's GHG emissions have followed a declining trend between 2007 and 2017. In 2017, emissions from GHG emitting activities statewide were 424 million metric tons of CO2 equivalent (MMTCO2e), 5 MMTCO2e lower than 2016 levels and 7 MMTCO2e below the 2020 GHG Limit of 431 MMTCO2e. The data also show that for the first time since California started to track GHG emissions, the state power grid used more energy from zero-GHG sources like solar and wind power than from electrical generation powered by fossil fuels. On July 28, 2021, CARB announced via Press Release No. 21-34 that state Greenhouse Gas Inventory shows emissions have continued to drop below 2020 target, which is a return to the 1990 GHG levels. The target was achieved four years ahead of schedule in 2016.

On October 26, 2022, CARB published the California Greenhouse Gas Emissions for 2000 to 2020, Trends of Emissions and Other Indicators. Based on this report, in 2020, emissions from GHG emitting activities statewide were 369.2 million MMTCO2e, 35.3 MMTCO2e lower than 2019 levels and 61.8 MMTCO2e below the 2020 GHG Limit of 431 MMTCO2e. The 2019 to 2020 decrease in emissions was deemed likely due in large part to the impacts of the COVID-19 pandemic. Economic recovery from the pandemic may result in emissions increases over the next few years. As such, the total 2020 reported emissions are likely an anomaly, and any near-term increases in annual emissions should be considered in the context of the pandemic.

South Coast Air Quality Management District: On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. A threshold for projects where SCAQMD is not the lead agency has not been adopted. The City of Rancho Mirage also has not adopted a GHG numeric threshold of significance. From the interim GHG guidance, a GHG emission level of 3,000 metric tons of carbon dioxide equivalent (MTCO2e) has served as measure to distinguish small projects that can be screened out while achieving the emission capture rate of 90 percent for all new or modified projects subject to environmental review. According to the SCAQMD guidance, the 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. Small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

Rancho Mirage Sustainability Plan: The City of Rancho Mirage completed the 2013 Sustainability Plan: Leadership in Energy Efficiency (Sustainability Plan) in May 2013. The Sustainability Plan is a framework for the development and implementation of policies and programs that will reduce the City's emissions, working towards the Statewide target of 1990 levels by 2020, set by AB 32. For the City to achieve the Statewide target of 1990 levels by 2020, it will have to reduce emissions by 54,272 metric tons of carbon dioxide equivalent ($MTCO_2e$), a 19.8 percent reduction. The set of measures presented in the Sustainability Plan will reduce the City's GHG emissions by 60,411 $MTCO_2e$, which exceeds the reduction target by 6,139 $MTCO_2e$ (compared with the target amount of 54,272 $MTCO_2e$).

As previously discussed, CalEEMod Version 2022.1.1.23 was used to quantify GHG emissions associated with construction and operation of the proposed project. The parameters considered

for CalEEMod and air quality analysis involved up to 120 multi-family dwelling units with associated landscaping, hardscape, and parking facilities based on the current site dimensions and a population estimate based on the 2024 California Department of Finance average household size for the City of Rancho Mirage. The construction-related factors incorporated the demolition and removal of approximately 6,453 cubic yards of existing concrete and asphalt surfaces during the site preparation stages and approximately 9,300 cubic yards of soil export during the grading stage.

8.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT: The project parameters were factored into CalEEMod to evaluate whether the GHG emissions would exceed the screening levels and therefore conflict with the plans and efforts of reducing the emissions of greenhouse gases. Construction-related GHG emissions were amortized over a 30-year period and added to the project's annual operational GHG emissions. The operational GHG emissions can be attributed to area sources, mobile sources, solid wastes and water supply, treatment and distribution of the proposed operations.

As previously discussed, the screening threshold of 3,000 metric tons of carbon dioxide equivalent MTCO2e) per year will serve as the numeric threshold of significance. The GHG emissions estimates resulting from CalEEMod are displayed below in Table VIII-1.

Table VIII-1 Total Project Greenhouse Gas Emissions

Unmitigated Emission Source	Emissions (metric tons per year)
	Total CO2E
Annual Construction Emissions Amortized Over 30 Years	14.10
Mobile, Area, Energy, Water, Waste, Refrigerant Sources	1,795
Total CO2E (All Sources)	1,809.10
SCAQMD Screening Threshold	3,000
Threshold Exceeded?	NO

Table VIII-1 demonstrates that the project involving up to 120 multi-family dwelling units with associated improvements is expected to generate approximately 1,809.10 MTCO2e per year from construction, mobile, area, energy, water, waste, and refrigerant sources. Therefore, the residential project would not result in GHG emissions at a scale or level capable of having a significant impact on the environment. Less than significant impacts are anticipated.

b) LESS THAN SIGNIFICANT IMPACT: The project is expected to result in GHG emissions totaling 1,809.10 MTCO2e per year, which is below the applicable screening level of 3,000 MTCO2e per year set forth under the SCAQMD regional jurisdiction that generally categorizes small-scale projects. As a result, the project is not expected to conflict with any applicable plan, policy or regulation for the purpose of reducing GHG emissions. This includes the Rancho Mirage Sustainability Plan, which works in accordance with the AB 32 framework and strategies. The construction of new residential units would imply implementing the most current building energy efficiency and water

efficiency standards. The applicability and implementation of statewide vehicle emission standards would not be impeded or burdened by the proposed scale and land use of the project that has been factored into the governing General Plan. Less than significant impacts are anticipated.

8.3 Mitigation Measures: None required.

9 - Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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 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 to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Sources: Enforcement and Compliance Fault Zoning Act, California Department of Conservation; Enforcement and Compliance History Online, EPA, 2024; EnviroStor, Department of Toxic Substances Control, 2024; GeoTracker, State Water Resources Control Board, 2024; Phase I Environmental Site Assessment, Weis Environmental, LLC, April 2024 (Appendix F); Rancho Mirage General Plan 2017.

9.1 Setting

Hazardous Materials

The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials based on ignitability, reactivity, corrosivity, and/or toxicity properties. The State of California defines hazardous materials as substances that are toxic, ignitable, or flammable, reactive and/or corrosive, which have the capacity of causing harm or a health hazard during normal exposure or an accidental release. As a result, the use and management of hazardous or potentially hazardous substances is regulated under existing federal, state, and local laws.

Hazardous Waste

The United States Environmental Protection Agency (EPA) simply defines hazardous waste as a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from sources ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids, gases, and sludges. These can include everyday commercial products, such as pesticides, cleaning fluids, and household sprays, as well as byproducts of manufacturing processes. The EPA has classified hazardous waste into four categories:

- Listed wastes – wastes from common manufacturing and industrial processes, waste from specific industries such as petroleum refining or pesticide manufacturing, and discarded commercial products;
- Characteristic wastes – non-listed wastes that exhibit ignitability, corrosively, reactivity, and toxicity;
- Universal wastes – batteries, mercury-containing equipment, and fluorescent lamps and bulbs; and
- Mixed wastes – radioactive and hazardous waste components.

A hazardous material may become hazardous waste upon its accidental release into the environment. All hazardous wastes must be discharged into a Class I landfill. No Class I landfill is currently operated within Riverside County. Hazardous Waste generated within Riverside County and disposed of in Kern County or Santa Barbra County, where active Class I landfills are located. Some waste is also transported out of the State.

Many types of businesses can be producers of hazardous waste. Small businesses such as dry cleaners, auto repair shops, medical facilities or hospitals, photo processing centers, and metal plating shops are usually generators of small quantities of hazardous wastes. Generators of large quantities of hazardous waste include chemical manufacturers, large electroplating facilities, and petroleum refineries. All significant spills, releases or threatened releases of hazardous materials must be immediately reported.

Local Schools

The project site is located within the boundary of the Palm Springs Unified School District. The closest school is Rancho Mirage Elementary School, located 1.66 miles south of the project.

Public Airports/Private Airstrips

The Palm Springs International Airport is located approximately 4.90 miles to the northwest of the project, and the Bermuda Dunes Airport is located approximately 8.70 miles east of the project.

9.2 Discussion of Impacts:

a-b) LESS THAN SIGNIFICANT IMPACT: The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials based on ignitability, reactivity, corrosivity, and/or toxicity properties. The State of California defines hazardous materials as substances that are toxic, ignitable, or flammable, reactive and/or corrosive, which have the capacity of causing harm or a health hazard during normal exposure or an accidental release. As a result, the use and management of hazardous or potentially hazardous substances is regulated under existing federal, state and local laws. Hazardous wastes require special handling and disposal methods to reduce their potential to damage public health and the environment. Manufacturer's specifications dictate the proper use, handling, and disposal methods for the specific substances. In most cases, it is a violation of federal or state law to improperly store, apply, transport, or dispose of hazardous materials and waste.

Construction of the proposed project is expected to involve the temporary management and use of oils, fuels and other potentially flammable substances. The nature and quantities of these products would be limited to what is necessary to carry out construction of the project. Some of these materials would be transported to the site periodically by vehicle and would be stored in designated controlled areas on a short-term basis. When handled properly by trained individuals and consistent with the manufacturer's instructions and industry standards, the risk involved with handling these materials is considerably reduced. The contractor will be required to identify a controlled staging area within the project limits for storing materials and equipment and will be required to implement best management practices to assure that impacts are minimized and that any minor spills are immediately and properly remediated.

Furthermore, to prevent a threat to the environment during construction, the management of potentially hazardous materials and other potential pollutant sources will be regulated, in part, through the implementation of measures required in the Storm Water Pollution Prevention Plan (SWPPP) for the project. The SWPPP requires a list of potential pollutant sources and the identification of construction areas where additional control measures are necessary to prevent pollutants from being released on-site or into the surroundings. Best management practices (BMPs) are necessary for proper material delivery and storage; material use; and spill prevention and control. These temporary measures outline the required physical improvements and procedures to prevent impacts of pollutants and hazardous materials to workers and the environment during construction. For example, all construction materials, including paints, solvents, and petroleum products, must be stored in controlled areas and according to the manufacturer's specifications. In addition, perimeter controls (fencing with wind screen), linear sediment barriers (gravel bags, fiber rolls, or silt fencing), and access restrictions (gates) would help prevent temporary impacts. With such standard measures in place, less than significant impacts are anticipated during construction.

The operation of the residential project does not involve the routine transport, use, or disposal of hazardous materials in quantities or a manner that would pose a threat to the project and surroundings. Typical operational uses would involve the handling and application of cleaning agents, building maintenance products, paints and solvents, and similar items would be stored on-site. These potentially hazardous materials would not be present in significant quantities to pose a significant hazard to public health and safety or the environment.

Additionally, the handling, application, and storage of cleaning agents, building maintenance products, paints, solvents and other related substances is expected to occur within the project in order to carry out the necessary operations within each household. However, these materials would not be present in sufficient quantities to pose a significant hazard to public health and safety, or the environment.

By following the appropriate federal, State, and regional regulatory standards, less than significant impacts are expected pertaining to significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, and accident conditions involving the release of hazardous materials into the environment. Less than significant impacts are expected.

c) **NO IMPACT:** The project site is not located within ¼ mile of an existing or proposed school. The closest school to the project site is Rancho Mirage Elementary School, located approximately 1.66 miles north of the project. Therefore, the project is not expected to emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) **LESS THAN SIGNIFICANT IMPACT:** The project proposes the construction of up to 120 multifamily units on approximately 12 acres. In order to comply with Government Code 65962.5 and its subsections, record searches on the project property were performed within multiple database platforms. The resources consulted included GeoTracker, EnviroStor and the EPA Enforcement and Compliance History Online (ECHO).

GeoTracker is a database maintained by the State of California Water Resources Control Board that provides online access to environmental data. It serves as the management system for tracking regulatory data on sites that can potentially impact groundwater, particularly those requiring groundwater cleanup and permitted facilities, such as operating underground storage tanks and land disposal sites.

EnviroStor is a database maintained by the State of California Department of Toxic Substances Control (DTSC). The EnviroStor database identifies sites with known contamination or sites for which there may be reasons to investigate further. It includes the identification of formerly contaminated properties that have been released for reuse; properties where environmental deed restrictions have been recorded to prevent inappropriate land uses; and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Moreover, the ECHO database focuses on inspection, violation, and enforcement data for the Clean Air Act (CAA), Clean Water Act (CWA) and Resource Conservation and Recovery Act (RCRA) and also includes Safe Drinking Water Act (SDWA) and Toxics Release Inventory (TRI) data.

In March 2024, a search was performed on all three database platforms. The GeoTracker, EnviroStor, and ECHO database results did not identify any Leaking Underground Storage Tank (LUST) Cleanup Sites, Land Disposal Sites, Military Sites, DTSC Hazardous Waste Permits, DTSC Cleanup Sites, or Permitted Underground Storage Tanks on or in connection with the project property. The following discussion summarizes the findings of the database search conducted within a half-mile radius from the project.

GeoTracker identified four sites within a half-mile radius of the project. The closest site was Palm Springs Oil/Express Oil, located approximately 600 feet south of the project, at 70255 Highway 111. The second site was CVWD 80 06 Lift Station on Country Club Drive, approximately 0.28 miles southeast of the project. The third site was Morningside Country Club, at 39039 Morningside Drive, approximately 0.50 miles east of the project site. Finally, the fourth site within a half-mile of the project was Thunderbird Country Club at 70612 Highway 111, approximately 0.50 miles southeast of the project. Each site was listed as LUST Cleanup Sites, with statuses of "Completed – Case Closed." Therefore, the registered sites are not anticipated to impact the project.

ECHO identified 11 registered facilities within a half-mile radius of the project. The facilities are listed as follows:

- Rancho Mirage Cleaners, at 70223 #A Highway 111 (approximately 572 feet southwest of the project), is listed by the RCRA as an active facility. No violation.
- Valero Corner Store 3769, at 70255 Highway 111 (approximately 620 feet south of the project), is listed by the RCRA as an active facility. No violation.
- Palm Springs Oil #7, at 70255 Highway 111, (approximately 620 feet south of the project), is listed by the RCRA as an active small quantity generator (SQG) facility. No violation.
- Club at Morningside, 84 Mayfair Drive, (approximately 1,048 feet northeast of the project), is listed by the RCRA as an active facility. No violation.
- Morningside Community Association, 82 Mayfair Drive, (approximately 1,166 feet northeast of the project), is listed by the RCRA as an active facility. No violation.
- Sasco CO Summit Team, Inc., at 70007 Highway 111, (approximately 1,590 feet northwest of the project), is listed by the RCRA as an active SQG facility. No violation.
- Desert Braemar, 69850 Highway 111, (approximately 2,440 feet northwest of the project), is listed by the RCRA as an active facility. No violation.
- Thunderbird Country Club, at 70612 Highway 111, (approximately 2,550 feet southeast of the project), is listed by the RCRA as an active facility. No violation.
- Jennifer Ruddell, at 40215 Club View Drive, (approximately 3,175 feet southeast of the project), is listed by the RCRA as an active facility. No violation.
- Springs Club Inc, at 58 Princeton Drive, (approximately 3,338 feet northeast of the project), is listed by the RCRA as an active facility. No violation.
- Monroe R Sternlieb DDS, at 69846 Highway 111, (approximately 3,513 feet northwest of the project), is listed by the RCRA as an active facility. No violation.

Each of the registered facilities listed within the ECHO database do not currently have any violations (as indicated on the ECHO database).

The Envirostor database search did not identify sites within a half-mile radius of the project.

Per the records search pursuant of Government Code 65962.5, the project site was not registered as having any Leaking Underground Storage Tank (LUST) Cleanup Sites, Land Disposal Sites, Military Sites, DTSC Hazardous Waste Permits, DTSC Cleanup Sites, or Permitted Underground Storage Tanks onsite. No violations were recorded with the associated site. Less than significant impacts are anticipated.

A Phase I Environmental Site Assessment (ESA) was completed by Weis Environmental, LLC ("Weis Environmental") in April 2024. The purpose of the Phase I ESA is to identify, to the extent feasible, recognized environmental conditions. The term recognized environmental condition is defined as (1) the presence of hazardous substances or petroleum products in, on, or at a property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at a property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at a subject property under conditions that pose a material threat of a future release to the environment.

During the records search through various databases, Weis Environmental concluded that the project site is not listed on any regulatory databases. Some properties in the surrounding area are listed on the researched databases; however, none of the listings are indicative of releases of hazardous substances or petroleum products to the subsurface that are considered to have the potential to adversely impact the site. Therefore, these properties are not considered to be significant environmental concerns to the site.

Weis Environmental' s assessment revealed no evidence of recognized environmental conditions in connection with the site. In addition, no significant data gaps were identified during the completion of the assessment and additional assessment at the site is not necessary.

Overall, the project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the site would not create a significant hazard to the public or the environment. Less than significant impacts are anticipated.

e) **NO IMPACT:** The project is not located within an airport land use plan or private airstrip. The Palm Springs International Airport is located approximately 4.90 miles northwest of the project site. The Bermuda Dunes Airport is located approximately 8.70 miles east of the project. As a result, the project is located outside both of the airport facilities' influence and planning area. Flights approaching and departing the Palm Springs International Airport and the Bermuda Dunes Airport may fly over the City and the project site with an intermittent frequency, however, no impacts are anticipated.

f) **LESS THAN SIGNIFICANT IMPACT:** The Emergency Preparedness Element of the City's General Plan provides information on the critical facilities necessary to effectively respond in the event of an emergency. The City has also adopted a Multi-Hazard Functional Plan, which is continually updated, addresses the planned response to extraordinary emergency situations associated with natural or human caused disasters, technical incidents and nuclear defense operations. Additionally, the City participates in the Riverside County Multi-Jurisdictional and Local Hazard Mitigation Plan (LHMP). Based

on these resources, the two main evacuation routes in the City and region include I-10 and Highway 111, while the City's primary and minor arterial streets serve as secondary routes. At project build-out and operation, roadways and emergency evacuation routes will not be altered or reconfigured.

Development of the 12-acre project would result in a minimal increase in demand for fire services, however based on the project site's proximity to Fire Station 50, located at 70801 Highway 111 (approximately 0.9 driving miles southeast), the proposed project could be adequately served by fire protection services within the 5-minute response time and no new or expanded facilities would be required. The project will be reviewed by City and Fire officials to ensure adequate fire service and safety as a result of project implementation.

By implementing the appropriate federal, State, and local regulatory standards, the project is not expected to interfere with the critical facilities, emergency transportation and circulation, or emergency preparedness coordination. Less than significant impacts are anticipated.

g) **NO IMPACT:** The project property is located on approximately 12 acres west of Peterson Road. The project site is surrounded by developed land to the north, south, east and west. The project site is currently vacant.

The proposed site intends to develop up to 120 multifamily residential units and associated improvements. Based on the 2017 General Plan Fire Hazard Severity Zone Map (Exhibit 27), the project property is not located in an area with moderate, high, or very high fire hazard severity. Areas identified as having moderate, high or very high fire threats are areas in the southern part of the City, south of Highway 111 at the hillside of the Santa Rosa Mountains. Consult the Wildfires Section of this environmental document for further discussion. Conclusively, the project site is located in an area with no fire threat to the City; therefore, impacts regarding wildland fires are not expected.

9.3 Mitigation Measures: None required.

10 - Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
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 offsite?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Sources: Flood Insurance Rate Map # 06065C1595G, Federal Emergency Management Agency (FEMA), Effective August 28, 2008; Water Quality Control Plan for the Colorado River Basin Region, January 2019; 2020 Coachella Valley Regional Urban Water Management Plan, June 2021. Drainage Study for The

Crossing at Rancho Mirage (Preliminary Engineering), Rick Engineering, May 24, 2024; Project Specific Water Quality Management Plan for The Crossing at Rancho Mirage, RICK - Water Resources Division, May 24, 2024

10.1 Setting

Summary of Regulatory Framework Relevant to Hydrology and Water Quality:

Hydrology refers to the occurrence, distribution, and movement of surface water, including water found in rivers and stormwater drainage systems. Stormwater particularly refers to the surface runoff and drainage resulting from rain events. Stormwater runoff and surface drainage patterns are determined by the soil conditions, topography, and associated gradients of the land. Surface water quality refers to selected physical, chemical, or biological characteristics found in stormwater in relation to existing standards. Groundwater is the water found underground in the voids in soil, sand, and rock. It is stored in and moves slowly through aquifers. Groundwater supplies are naturally replenished, or recharged, by precipitation that seeps into the land's surface and by replenishment efforts made by local water agencies.

The Clean Water Act (CWA) of 1972 was enacted to restore and maintain the chemical, physical, and biological integrity of the nation's waters by regulating the discharge of pollutants to waters of the U.S. from point sources. The National Pollutant Discharge Elimination System (NPDES) was enacted as a program under the CWA to regulate non-point source discharges from urban land runoff and other diffused sources that were also found to contribute to runoff pollution. Under CWA, the Environmental Protection Agency (EPA) delegated the NPDES program responsibility to various state, tribal, and territorial governments, enabling them to perform many of the permitting, administrative, and enforcement aspects of the program. California is a delegated NPDES state and has authority to administer the NPDES program within its limits.

The Porter-Cologne Water Quality Control Act (California Water Code section 13000 et seq.) is the principal law governing water quality regulation for surface waters in California, thus effectuating the delegated provisions of the federal CWA and its NPDES program. It has set forth a comprehensive program to protect water quality and the beneficial uses applicable to surface waters, wetlands, and ground water and to point and nonpoint sources of pollution. The Porter-Cologne Act establishes that, as a matter of policy, all the waters of the State shall be protected; all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and that the state must be prepared to exercise its full power and jurisdiction to protect the quality of water in the state from degradation. The Porter-Cologne Act established the State Water Resources Control Board (SWRCB) and nine California Regional Water Quality Control Boards (RWQCBs), including Region 7, Colorado River Basin Regional Water Quality Control Board, which has jurisdiction in the City of Rancho Mirage and project site.

Under this framework, the Colorado River Basin Water Quality Control Plan (Basin Plan) serves as the guiding document prepared, adopted, and maintained to identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. It is worth noting that as defined in Section 13374 of the California Water Code (CWC), the term "Waste Discharge Requirements" (WDRs) is equivalent of the term "permits" and is therefore attained through a regulatory compliance process. Compliance with WDRs is achieved through the appropriate permit registration process under the applicable National Pollutant Discharge Elimination System (NPDES) programs described in this section.

At the regional level, the project is located within the Whitewater River Watershed, which is an arid desert region encompassing approximately 1,645 square miles. Within this watershed, an area of approximately 367 square miles (22 percent) encompassing most of the existing

development in the Coachella Valley region, is regulated under the established Whitewater River Region Municipal Separate Storm Sewer System Permit (MS4 Permit). The Riverside County Flood Control and Water Conservation District (RCFC&WCD), Coachella Valley Water District, and the incorporated Coachella Valley cities, including Rancho Mirage have joint permittee responsibility for coordinating the regional MS4 Permit compliance programs and other activities aimed at reducing potential pollutants in urban runoff from land development construction, municipal, commercial, and industrial areas to the maximum extent possible. These public entities are generally in charge of stormwater management within their jurisdiction.

At the City level, stormwater management and on-site stormwater retention are codified in Rancho Mirage Municipal Code Chapter 7.03 and Section 13.05.010 respectively. Chapter 7.03 encompasses a broad range of stormwater management and discharge control requirements, including regulatory consistency with the federal Clean Water Act and NPDES programs. According to Section 13.05.010 of the Municipal Code, the project site is not subject to the traditional on-site retention requirements because it is not located northerly of the Whitewater River Channel. However, the project is still understood to be subject to implementing the required storm drainage facilities to the satisfaction of the City engineer.

The analysis and findings provided in this section rely in part on preliminary engineering documents consisting of the *Drainage Study* and the *Project Specific Water Quality Management Plan (WQMP)*, both prepared specifically for the proposed development by Rick Engineering on May 24, 2024. A Stormwater Pollution Prevention Plan (SWPPP) will also be prepared in conjunction with the construction documents as a compliance plan and requirement for obtaining a grading permit.

Existing Drainage Conditions:

In its existing condition, the project site contains ground-level remnants of the prior mobile home uses and facilities, including concrete slabs (former mobile home foundations), paved driveways, paved parking areas, and concrete swales representing impervious ground coverage. A majority of the site perimeter is delineated by existing walls. Based on the Drainage Report (Preliminary Engineering), the site generally drains from west to east. The northern portion of the site drains to an existing 24-inch diameter corrugated metal pipe that discharges directly to the Whitewater River Channel, while the southern portion discharges to the Whitewater Channel via overland flow. There is no existing onsite retention of stormwater flow and there is no off-site run-on in the existing site condition.

The neighboring Whitewater River Channel occurs within a 500-foot-wide right-of-way. In this vicinity, the Whitewater River Channel is improved and maintained with grass-lined embankments as part of the Morningside Country Club golf course facilities. The west edge of the channel and top of the embankment is improved and operated as the Butler-Adams Trail. The Whitewater River Channel is the primary regional flood control facility serving the City of Rancho Mirage and other areas of the Coachella Valley.

Based on the current U.S. Geological Survey (USGS) Topographic Map, named Cathedral City Quadrangle, covering the project area in the City of Rancho Mirage, the project site does not contain any mapped drainage courses, washes, rivers, and water bodies. The Whitewater River Channel is located to the east. Moreover, based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels 06065C1595G and 06065C1589G, a majority of the project site (approximately 11.2 acres) has a designation of Zone X (Shaded), corresponding to the 0.2-percent annual chance flood hazard, while the remaining southeast portion of approximately 0.8 acres is deemed to be in a Zone X designation, corresponding to an

area of minimal flood hazard. The neighboring Whitewater River Channel is mapped as Zone A and the containment of the 100-year base flood condition.

Proposed Storm Drain Improvements:

The Drainage Study and WQMP results indicate the proposed project condition will result in a slight increase in stormwater runoff totaling approximately 2.2 CFS compared to the existing condition. The project does not propose to change the average land cover coefficient or increase imperviousness, and drainage areas are to remain the same between the pre-project and post-project conditions. Therefore, the proposed hydrology and stormwater management condition will follow a similar drainage pattern to the existing condition by conveying flows to the east portion of the project site via two backbone storm drain lines. The project will introduce one infiltration-based retention basin with a capacity to meet or exceed water quality design capture volume for the site. Preliminarily, the design capture volume for the site is approximately 7,122 cubic feet. Once the design capture volume is reached, high or otherwise excess stormwater flows will exit the basin facility via two (2) outfalls designed to collectively mimic the pre-project condition into the Whitewater River Channel. As a result, the estimated stormwater flows directed to the existing CMP will not exceed the existing condition and the project will comply Section 13.05.010 of the City's Municipal Code.

10.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT:

Project implementation will require compliance with the applicable CWA, NPDES, state, and local regulations designed to prevent violations or impacts to surface water quality standards and waste discharge requirements pertinent to surface or ground water quality. This form of compliance must be demonstrated to the City and other regulatory entities prior to site disturbance and grading.

During the period of construction, the project proponent must comply with the State's most current NPDES Construction General Permit (2022 CGP), which requires the preparation of a Notice of Intent (NOI) and a project-specific Storm Water Pollution Prevention Plan (SWPPP), designed to prevent potential adverse impacts to surface water quality, including erosion and siltation, during the period of construction. The NOI and SWPPP are submitted to the State Water Resources Control Board (SWRCB) for approval and permit coverage. The SWPPP is a site-specific compliance plan required to identify a strategy of storm water Best Management Practices (BMPs) in accordance with Section XIV (SWPPP Requirements) of the CGP. Storm water BMPs refer to a schedule of activities, prohibitions, practices, maintenance procedures, and other management practices to avoid, eliminate, or reduce the pollution of the receiving waters, primarily focused on preventing erosion, siltation, illicit discharge, and contamination. The SWPPP will include such measures as erosion control, sediment control, storm drain inlet protection, proper waste management and pollution prevention. The SWPPP must be prepared concurrently with final engineering design and must meet all NPDES plan review elements for acceptance by the City of Rancho Mirage. Compliance and plan implementation during construction will be regulated and enforced as part of the local agency site inspection protocols.

In order to obtain a grading permit, the project proponent is required to submit and obtain approval for a Final Project-Specific Water Quality Management Plan (WQMP) in accordance with the current standards of the Whitewater River Region Water Quality

Management Plan for Urban Runoff, the Whitewater River Watershed MS4 Permit, and the City's on-site stormwater retention requirements (Municipal Code Section 13.05.010). The WQMP is a compliance plan required to account for the stormwater facilities and management conditions during the life of the project. Based on preliminary engineering plans, the project includes a private storm drainage system designed to convey post-construction runoff from the entire site toward a designated retention facility that must be sized to contain and infiltrate the water quality design capture volume prior to any discharge into the Whitewater River Channel. This approach will ensure that the project does not result in direct stormwater runoff rates in excess of the existing condition or in a manner that is considered untreated. Therefore, the project will not result in discharge capable of resulting in downstream hydrologic modifications or a contribution of urban runoff pollutants that would affect surface water quality in the Whitewater River Channel.

A standard requirement for Final WQMP approval will involve an agreement between the developer and the City to ensure that the responsible parties are properly informed of the stormwater measures and facilities and to allow City access and enforcement on this matter during the life of the project.

The retention capacity demonstrated in the preliminary engineering plans for the project is deemed to abide by the requirements set forth in Municipal Code Section 13.05.010 and Chapter 7.03 (stormwater management and discharge control) applicable to properties located south of the Whitewater River Channel. Stormwater runoff produced by the project will be properly intercepted, conveyed and retained on-site up to the water quality design capture volume prior to any runoff production. In providing new retention facilities, the proposed project will protect water quality in comparison to the existing condition involving direct runoff discharge.

In summary, during construction and operation, project implementation will require plan- and permit-based compliance with CWA, NPDES, and local regulations to prevent impacts to water quality standards and the beneficial uses assigned to local receiving waters. Following City engineering review and approval, the stormwater capture and management strategy for on- and off-site runoff will avoid waste discharge violations through the implementation of properly sized retention facilities. Less than significant impacts are expected.

b) LESS THAN SIGNIFICANT IMPACT:

The project site and a majority of the City of Rancho Mirage are located within the domestic water service area of Coachella Valley Water District (CVWD), which covers approximately 1,000 square miles and serves approximately 110,000 homes and businesses. The Coachella Valley Groundwater Basin is the primary groundwater source for the project region's domestic water purveyors, including CVWD. Based on the California Department of Water Resources (DWR), the Coachella Valley Groundwater Basin has an approximate storage capacity of 39.2 million acre-feet (AF) of water within the upper 1,000 feet and is divided into four subbasins: Indio, Mission Creek, Desert Hot Springs, and San Gorgonio. The project site is specifically underlain by the Indio Subbasin, which is also known as the Whitewater River Subbasin. DWR has estimated that the Indio Subbasin contains approximately 29.8 million AF of water in the first 1,000 feet below the ground surface, representing approximately 76 percent of the total groundwater in the Coachella Valley Groundwater Basin. Local groundwater management is currently taking place under the framework of the 2020 Coachella Valley Regional Urban Water

Management Plan (2020 RUWMP), the preparation of which involved the collaboration of the six urban water suppliers in the Coachella Valley, including CVWD. The 2020 RUWMP describes the region's water supplies and anticipated demands through 2045, along with each agency's programs to encourage efficient water use.

CVWD, Coachella Water Authority (CWA), Desert Water Agency (DWA), and Indio Water Authority (IWA) collectively represent the Indio Subbasin Groundwater Sustainability Agencies (GSAs). In January 2017, the GSAs submitted to DWR the 2010 Coachella Valley Water Management Plan (2010 CVWMP), accompanied by an Indio Subbasin Bridge Document, as a SGMA-compliant Alternative Plan. On July 17, 2019, DWR approved the Alternative Plan with a requirement to submit an Alternative Plan Update by January 1, 2022 and every five years thereafter. Based on the Indio Subbasin SGMA documentation, the combined strategies have resulted in significant groundwater storage increases across the subbasin, thus allowing the region to comply with the framework for sustainable management.

CVWD collaborates with the operation and maintenance of three replenishment facilities serving the Indio Subbasin: Whitewater River Groundwater Replenishment Facility, the Thomas E. Levy Groundwater Replenishment Facility, and the Palm Desert Groundwater Replenishment Facility. Artificial replenishment, or recharge, is recognized by the water districts as one of the most effective methods available for preserving local groundwater supplies, reversing aquifer overdraft and meeting demand by domestic consumers. According to the CVWD web site on Groundwater Replenishment and Imported Water, local agencies have percolated over 650 billion gallons of water back into the aquifer. In the central part of the Coachella Valley, groundwater recharge is provided by the recently constructed first phase of the Palm Desert Groundwater Replenishment Facility, operated by CVWD. According to the CVWD web site, this facility is expected to add up to 25,000 acre-feet of Colorado River water annually into the aquifer. Combined with water conservation and efficiency requirements, individual development projects can contribute to groundwater sustainability by implementing the required stormwater runoff retention and infiltration facilities. The established groundwater replenishment facilities described above for the Indio Subbasin are not located on or near the project. Therefore, from the aspect of land use and location, project implementation is not deemed to be in conflict with any existing or planned groundwater recharge facility or associated infrastructure.

The proposed residential development will include up to 120 multi-family dwelling units with associated parking, landscaping, and recreational amenities for on-site residents. The residential land use and associated improvements are expected to incorporate water conservation measures, including the use of low-flow plumbing fixtures, drought-tolerant (native) outdoor landscaping, and water-efficient irrigation systems. Moreover, as a standard requirement, the project's landscaping is expected to incorporate the use of inert material and drought-tolerant accent, shrub, and tree plantings.

As such, the proposed scale and intensity, scale of this residential project is not expected to incur an increase in water demand capable of affecting groundwater resources or otherwise interfere with the groundwater management or related conservation efforts.

As a standard condition for service connections, the project operators will be expected to furnish the appropriate rate payment to CVWD based on the meter size, ongoing flow charges, agency fees, and groundwater recharge fees.

Furthermore, the project will incorporate on-site retention facilities to ensure that stormwater runoff is adequately intercepted, conveyed, and retained on-site to the satisfaction of the City's engineering standards. As a function of the WQMP, operation of the development will include the required operational source control measures that work toward prohibiting pollution discharge and other conditions capable of affecting stormwater.

Source control measures include activity restrictions, site maintenance, and other operational controls aimed at preventing potential sources of pollution from coming into contact with the storm drain system and impacting groundwater. Structural source control measures consist of physical facility design standards to prevent direct contact between potential pollutants and stormwater runoff. The storm drain and basin system will be maintained during the life of the project per a required WQMP agreement to be entered between the project proponent and the City. The proposed facilities are therefore not expected to violate or interfere with the groundwater quality. Regarding ground water quality, less than significant impacts are anticipated.

c i) **LESS THAN SIGNIFICANT IMPACT:** The project site has previously been disturbed, developed and operated as a mobile home park. Although the dwelling structures are no longer present, the groundcover includes remnants of concrete slabs, paved driveways and related hardscape. The previously improved drainage pattern utilized concrete-lined v-gutters to convey runoff toward the east side of the property prior to discharging into the Whitewater River Channel. The prior and existing conditions did not involve any form of on-site retention or other discernable water quality protection facilities.

Based on the current U.S. Geological Survey (USGS) Topographic Map, the project site does not contain any mapped drainage courses, washes, rivers, and water bodies. The Whitewater River Channel is located to the east within a designated easement and improved with grass-lined embankments as part of the Morningside Country Club golf course facilities. Moreover, based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels 06065C1595G and 06065C1589G, a majority of the project site (approximately 11.2 acres) has a designation of Zone X (Shaded), corresponding to the 0.2-percent annual chance flood hazard, while the remaining southeast portion of approximately 0.8 acres is deemed to be in a Zone X designation, corresponding to an area of minimal flood hazard. The neighboring Whitewater River Channel is mapped as Zone A and provides containment of the 100-year base flood condition within its embankments.

As a standard practice, erosion and siltation conditions will be prevented during construction and operation through the required compliance plans. The required Stormwater Pollution Prevention Plan (SWPPP) will include best management practices for proper soil stabilization and perimeter controls to prevent erosion and siltation from being generated by asphalt demolition, site clearing, grading, and construction activities until the point of achieving final construction stabilization. Upon completion, all construction related soil disturbance will be properly restored to a stabilized condition consisting of permanent project improvements (residential structures, hardscape, pavement, and landscaping) with the properly designed storm drainage system conveying into the on-site retention system.

During the life of the project, the ongoing maintenance and operation of the residential amenities, open space, and storm drain system will ensure that all permanently improved

ground surfaces are adequately maintained. As required by the City's engineering standards and practices, all project-related runoff must be adequately handled along engineered conveyances (sheet flow, swales, gutters, or pipes) to the designated retention facilities. Such storm drain system will be a function of the site plan and final engineering plans subject to City review and approval. Less than significant impacts are anticipated regarding substantial erosion or siltation, on- or off-site.

ii) LESS THAN SIGNIFICANT IMPACT: Based on FEMA FIRM Panels 06065C1595G and 06065C1589G, a majority of the project site (approximately 11.2 acres) has a designation of Zone X (Shaded), corresponding to the 0.2-percent annual chance flood hazard, while the remaining southeast portion of approximately 0.8 acres is deemed to be in a Zone X designation, corresponding to an area of minimal flood hazard. Therefore, the project site is not deemed to occur within a defined Special Flood Hazard Area (SFHA) or a designated floodway. The neighboring Whitewater River Channel located to the east is mapped as Zone A and provides containment of the 100-year base flood condition within its embankments.

As a standard condition, the project is required to include adequate improvements and site design features to handle the relevant hydrologic conditions in a way that prevents inundation to the proposed structures and facilities. The project will introduce impervious surfaces (buildings, hardscape, asphalt, etc.) to a vacant property, but will also include the required private storm drain system (catch basins, lines, outlets, and retention facilities) to intercept, convey and retain the controlling storm event stormwater volume from the site to a retention basin located at the east end of the project site. Since the proposed condition will result in a slight increase in stormwater runoff totaling approximately 2.2 CFS, the proposed storm drain and retention facilities have been sized to infiltrate and treat the water quality design capture volume on site while also controlling the flow rate to match the existing conditions prior to any discharge. Moreover, as part of the site design, the project will not place any housing structure within the easternmost 300 feet of the site. In adhering to the City's engineering and retention requirements, the proposed development is not expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Less than significant impacts are anticipated.

iii) LESS THAN SIGNIFICANT IMPACT: The City of Rancho Mirage is a Permittee of the Whitewater River Watershed Municipal Separate Storm Sewer System (MS4) permit area. Within the City limits, MS4 facilities include a system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) designed for collecting and conveying stormwater. Storm drain facilities can be public or private. Examples of public facilities include pipes, gutters, channels, and basins occurring on the public right-of-way and/or maintained by a public agency. Private facilities are distinguished by being maintained separately by a private entity.

The project site was formerly improved and operated as a mobile home park with on-site surface drainage swales (v-gutters) designed to convey runoff eastward prior to off-site discharge into the Whitewater River Channel. The existing conditions lack any form of on-site retention or water quality devices.

The traditional land development process generally results in the conversion of pervious ground surface (pre-development condition) into a setting with a higher impervious cover, occurring through the introduction of buildings, driveways, and hardscape (post-

development condition). This conversion generally leads to an increase in post-construction runoff volumes and rates compared to the pre-development or pervious condition. The findings of the Drainage Study indicate that the proposed project condition will result in a slight increase in stormwater runoff totaling approximately 2.2 CFS. The project will include on-site storm drainage facilities designed to capture and infiltrate the water quality design capture volume while being equipped to adequately convey high flows in an equivalent manner to the existing condition. As a result, the project will not result in a net increase of volume or flow rate to the existing Whitewater River Channel.

The project's final engineering plans and retention levels will be subject to standard City review and approval. Therefore, by complying with the local retention requirements that take into account the existing facilities, the project will prevent a runoff discharge condition capable of contributing to or exceeding the MS4 capacity. Less than significant impacts are anticipated.

iv) LESS THAN SIGNIFICANT IMPACT: The project site is located outside of any designated SFHA, floodway, or drainage flow line as determined by FEMA and USGS maps. The Whitewater River Channel located to the east within a designated easement, is improved with grass-lined embankments (levee system) and maintained as part of the Morningside Country Club golf course facilities. As currently mapped by FEMA, the Whitewater River Channel levee system completely contains the mapped Zone A, which would be considered an SFHA. The project is not designed to significant encroach or improve upon the existing Whitewater River Channel, nor will the project increase the amount of stormwater runoff volume or rate into this facility. Therefore, the project will not impede or redirect any discernable drainage course, floodplain, or flood prone area. As a standard condition, the proposed development will include a storm drain system and associated on-site retention capacity to meet the City's engineering requirements and to provide adequate protection to the new facilities. The associated grading and hydrology plans will be subject to standard City review and approval. In doing so, the project will not be capable or permitted to impede or redirect flood flows, resulting in less than significant impacts.

d) NO IMPACT: The project is not located near any coastal areas or any large body of water and therefore is not prone to tsunami hazards or seiche risks. The neighboring Whitewater River Channel is a regional drainage and flood control facility designed to contain the design flood conditions within its embankments and levee system. The project site is not located in a floodplain or special flood hazard area. As a standard requirement, the project incorporates on-site retention facilities sized to convey and retain the required volume to the satisfaction of the City's engineering requirements. The nature of the residential project will not involve the storage or handling of any significant quantities of hazardous substances or petroleum products that would in turn be vulnerable to release due to flooding. With these required improvements subject to City review and approval, less than significant impacts are anticipated pertaining to flood hazard.

e) LESS THAN SIGNIFICANT IMPACT: The project proponent is required to implement a project-specific Water Quality Management Plan (WQMP) to comply with the most current standards of the Whitewater River Region MS4 Permit and with the City's on-site retention standards. The final form of the WQMP will be consistent with final engineering documents to incorporate the grading, hydrology, and other improvement plans to demonstrate how the site design, source controls, and operation and maintenance program will achieve compliance. The combined retention capacity for the project will meet

the water quality design capture volume. Moreover, the project's storm water retention facilities will ensure that only stormwater runoff is recharged into the ground via infiltration. Therefore, project implementation is not expected to conflict with the regional groundwater management strategies or with the Indio Subbasin Sustainable Groundwater Management Plan. Less than significant impacts are expected.

10.3 Mitigation Measures: None required.

11 - Land Use and Planning

LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☒	☐

Sources: Rancho Mirage 2017 General Plan Update; Rancho Mirage Municipal Code.

11.1 Setting

The approximately 12-acre project is located west of Peterson Road and approximately 460 feet north of Highway 111 in Rancho Mirage. The land use and zoning designation for the project site is currently Residential High Density (R-H) with Affordable Housing Overlay (AHO). R-H designations in Rancho Mirage identify areas appropriate for the greatest diversity of residential development, including attached single-and multi-family uses. The allowable density range is from five to nine units per gross acre. This zoning district is most suitable for affordable and senior housing, including apartments and condominiums. The Affordable Housing Overlay allows for the creative and efficient development of affordable residential properties as identified in the City's Housing Element. The proposed project and its impacts to land use and planning are discussed below.

The project proposes the construction of up to 120 multifamily units with associated improvements, including retention areas, paved drive aisle, landscaped areas, and recreational areas. The project and the associated uses are compliant with the R-H/AHO land use and zoning designation.

11.2 Discussion of Impacts:

a) **NO IMPACT:** The proposed project site occupies approximately 12 acres of developed and vacant land. The project site previously operated as a mobile home park, with a clubhouse, paved drive aisles, and perimeter block walls and landscaping. The mobile home park was demolished in its entirety by 2018. Since then, it has remained vacant. The project is surrounded by developed commercial uses to the west, residential uses to the north and south, and the Whitewater River Channel and Morningside golf course to the east. Peterson Road delineates the project's western boundary. The site does not operate in connection to the properties north, south, east, and west of the project. The residential communities to the north and south are separated from the project site by block walls. Therefore, the proposed project site will not divide an established community, and no impacts are expected.

b) LESS THAN SIGNIFICANT IMPACT: As stated throughout this document, the project site occupies approximately 12 acres of land east of Peterson Road and 460 feet north of Highway 111 in Rancho Mirage. The land use and zoning designation for the 12-acre project site is currently Residential High Density (R-H) with an Affordable Housing Overlay (AHO). R-H designations in Rancho Mirage allows the greatest diversity of residential development, including attached single-and multi-family uses. AHO designation allows 28 dwelling units per acre. The project site is surrounded by vacant and developed properties, located in the City's land use and zoning designations Mobile Home Park (MHP), Estate Residential (R-E), General Commercial (C-G), and Open Space Waterways (OS/W). The surrounding properties and their land use and zoning designations are presented in the table below.

Table XI-1 Surrounding Land Use and Zoning Designations

	Jurisdiction	General Plan/ Zoning	Existing Use
Project Site	Rancho Mirage	R-H/AHO	Vacant land previously a mobile home park
North	Rancho Mirage	R-E	Residential Estates
East	Rancho Mirage	OS/W	Whitewater River Channel/Golf
West	Rancho Mirage	C-G	Commercial businesses (storage)
South	Rancho Mirage	MHP	Santa Rosa Villas Residential Community

The project proposes a multifamily residential community with up to 120 units, retention areas, landscaped frontages, recreational areas, and paved drive aisles. The proposed project is consistent with the land use and zoning designations for the project area. Project site plans and entitlements will require approval by the City of Rancho Mirage.

Proposed Project Consistency with General Plan

As previously stated, the existing General Plan land use designation at the project site includes R-H/AHO designation. An analysis of applicable goals, policies and programs contained in the General Plan was conducted. The findings of that analysis are summarized below.

Land Use

Goal LU 1: A resort residential community of desirable neighborhoods, a variety of community facilities, and high-quality development.

Goal LU 2: A balanced mix of functionally integrated land uses, meeting the general social and economic needs of the community through simplified, compatible, and consistent land use and zoning designations.

- *Policy LU 2.4:* Infill development shall be encouraged by prioritizing capital improvements in the developed areas of Rancho Mirage.
- *Policy LU 2.6:* The City shall ensure privacy and safety for residential neighborhoods by providing adequate buffering and screening, particularly where neighborhoods adjoin or are integrated with commercial developments.

Goal LU 3: The preservation and enhancement of the predominately low-density, high-quality residential character of Rancho Mirage.

- *Policy LU 3.1:* Areas of existing residential development and surrounding vacant lands shall be planned in a manner that preserves neighborhood character and assures a consistent and compatible residential land use pattern.

Consistency: The project proposes a multifamily residential community on currently vacant land that previously operated as a mobile home park. The project is located in a developed area of Rancho Mirage. Currently, the vacant project site is surrounded by existing residential estate homes to the north, a multifamily community to the south, and commercial businesses to the west (separated by Peterson Road). See Table 11-I, above, for a description of the surrounding land uses. The proposed residential project would preserve the residential character of Rancho Mirage and will be consistent with the surrounding land uses.

Housing

- *Goal H 1:* A variety of housing types that meet the needs of residents in Rancho Mirage.

Consistency: The project proposes the development of up to 120 multifamily units on approximately 12 acres. The residential properties will include fourplex and eight-plex buildings with a clubhouse, paved drive aisles, parking, and recreational areas. The residential dwellings will contribute to the Regional Housing Needs Allocation (RHNA) for the 2021-2029 planning period, which assigns 1,746 new housing units within the City.

Noise

- *Goal N 1:* A noise environment providing peace and quiet that complements and is consistent with Rancho Mirage's resort residential character.

Consistency: The project proposes a multifamily residential community on approximately 12 acres. Typically, residential uses do not result in substantially increased noise levels. The up to 120 residential units would be consistent with the existing resort residential character in the City.

Overall, the project will be consistent with the applicable goals and policies within the Rancho Mirage General Plan. The project will also provide housing to contribute to RHNA requirements; and surrounded by land designated for residential uses.

Proposed Project Consistency with Zoning Code

The existing zoning designation for the project site is R-H/AHO. According to Chapter 17.08.010, R-H zones identify areas appropriate for the greatest diversity of residential development, including attached single-and multi-family uses. The allowable density range is from five to nine units per gross acre. This zoning district is most suitable for affordable and senior housing, including apartments and condominiums. The R-H zoning district is consistent with the high density residential land use designation of the General Plan. AHO designations allows 28 dwelling units per acre.

The project proposes up to 120 multifamily units on approximately 12 acres. Development of the project would result in approximately 9.6 du/ac, which is consistent with the R-H/AHO zoning. Additionally, the proposed project will comply with Section 17.08.020 of the RMMC, which establishes development standards for the residential zones in the City, including setbacks (20 feet front, 10 feet side, 15 feet street side, 20 feet rear), and

maximum building heights (20 feet or 1 story). Additionally, Section 17.20.100 of the RMMC establishes additional building height standards and exceptions.

The project site shall adhere to the standards and requirements set forth in the municipal code for the R-H zoning district. Therefore, impacts would be less than significant.

Proposed Project Consistency with Surrounding Areas

As previously stated, the project is surrounded by developed commercial and residential properties to the north, south, and west. The surrounding developed areas include well-maintained landscaping, building frontages, public and pedestrian areas, and roadways. The project proposes up to 120 multifamily units and associated improvements (i.e., paved vehicular access, landscaping). Therefore, the project would be consistent with the surrounding land uses. Additionally, the project would continue to provide residential properties to the City of Rancho Mirage, per the RHNA allocation.

Therefore, the project would not introduce inconsistent land uses in the area.

Based on the consistency analysis presented in this discussion, the project will be consistent with the land use goals and policies of the Rancho Mirage General Plan and the City Municipal Code. Impacts will be less than significant.

11.3 Mitigation Measures: None required.

12 - Mineral Resources

MINERAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☐	☒

Sources: Mineral Land Classification Map, Riverside County, 2007; Rancho Mirage General Plan 2017; Rancho Mirage General Plan EIR, May 2005.

12.1 Setting

The State of California has recognized the importance of mineral resources for construction materials and other economic purposes. Mining and extraction of mineral resources continues to be threatened by urbanization and development in areas where important mineral resources exist. The California Surface Mining and Reclamation Act of 1975 (SMARA) addresses the loss of regionally significant mineral deposits to urban development.

The Act requires the Department of Conservation to create Production-Consumption Regions which are areas where significant mineral resources of statewide importance and regional significance are produced and consumed, and a classification system that identifies lands where significant mineral resource deposits are located. Rancho Mirage is located in the Palm Springs Production-Consumption Region. The Palm Springs Production-Consumption Region covers approximately 631 square miles of the Coachella Valley, from near Cabazon to Thermal. Lands within the Production-Consumption Region are classified according to the presence of valuable mineral resources. Rancho Mirage has two Mineral Resource Zones, MRZ-1 and MRZ-3. MRZ-1 are areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. MRZ-3 are areas containing known or inferred mineral deposits, the significance of which cannot be evaluated from available data.

12.2 Discussion of Impacts:

a-b) NO IMPACT: The mineral resources that are attributed to the Coachella Valley desert floor primarily consists of sand, gravel (aggregate) and other important mineral deposits that have eroded from the surrounding mountains and hills. To ensure the protection of important mineral resources, the Surface Mining and Reclamation Act of 1975 (SMARA) developed Mineral Land Classification Maps and reports to identify the presence or absence of suitable sources of aggregate (sand, gravel or stone deposits) into Mineral Resource Zones. According to this Classification Map, the project site is located within Mineral Resource Zone 1 (MRZ-1). This specific zone identifies areas where adequate information indicates that no significant mineral deposits are present or likely to be

present. Additionally, there are currently no mines or extraction sites in the City. According to the California Department of Conservation Mines Online web-application, the closest mines to the project site are Mesa Blanca Mine and Vista Mine, approximately 6 miles north. No impacts to mineral resources are anticipated.

12.3 Mitigation Measures: None required.

13 - Noise

NOISE – Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☐	☒

Sources: Rancho Mirage General Plan 2017; Rancho Mirage Municipal Code; Rancho Mirage General Plan Environmental Impact Report, 2005.

13.1 Setting

Noise

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. Noise is defined as sound that is loud, unpleasant, unexpected, or unwanted.

A continuous sound is described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude.

The amplitude of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude is measured in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (uPa). One uPa is approximately one hundred billionths of normal atmospheric

pressure. Sound pressure level (SPL or Lp) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated “dB”.

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound. The A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Table XIII-1 Changes in Noise

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

Noise in the daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 pm and after addition of ten (10) decibels to sound levels in the night before 7:00 am and after 10:00 pm.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level.

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

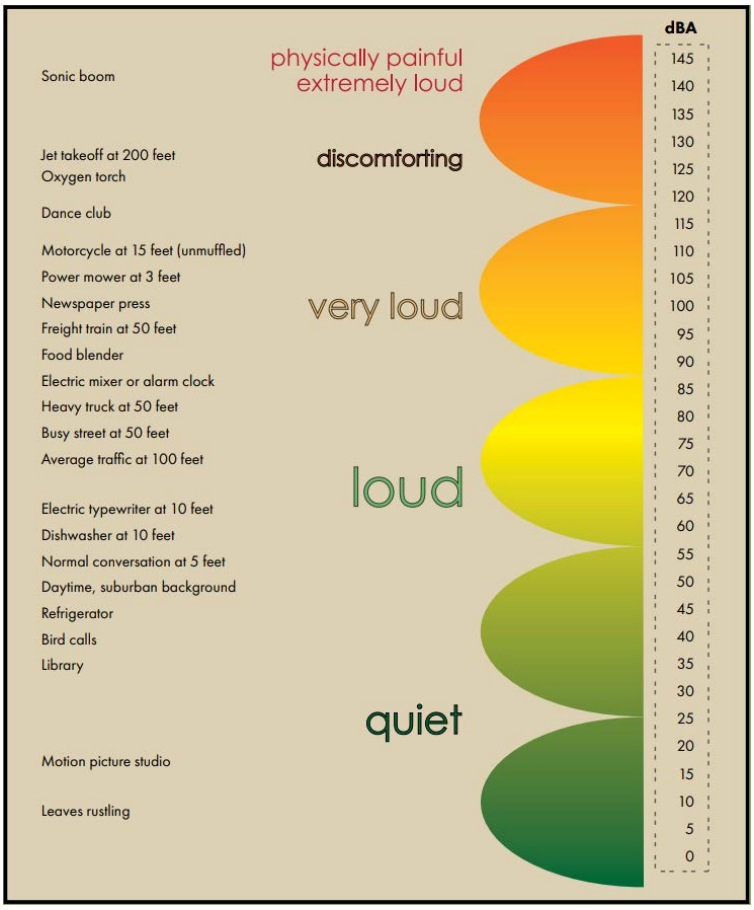
L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90, and L99, etc.

Noise: Any unwanted sound or sound which is undesired because it interferes with speech and hearing or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "…excessive undesirable sound…".

City of Rancho Mirage

According to the Rancho Mirage General Plan, the most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at three feet away is roughly at 60 dBA, and loud engine noise can be as loud as 110 dBA. The higher level can cause serious physical or psychological discomfort. The exhibit below illustrates various examples of noise sources and their associated decibel levels.

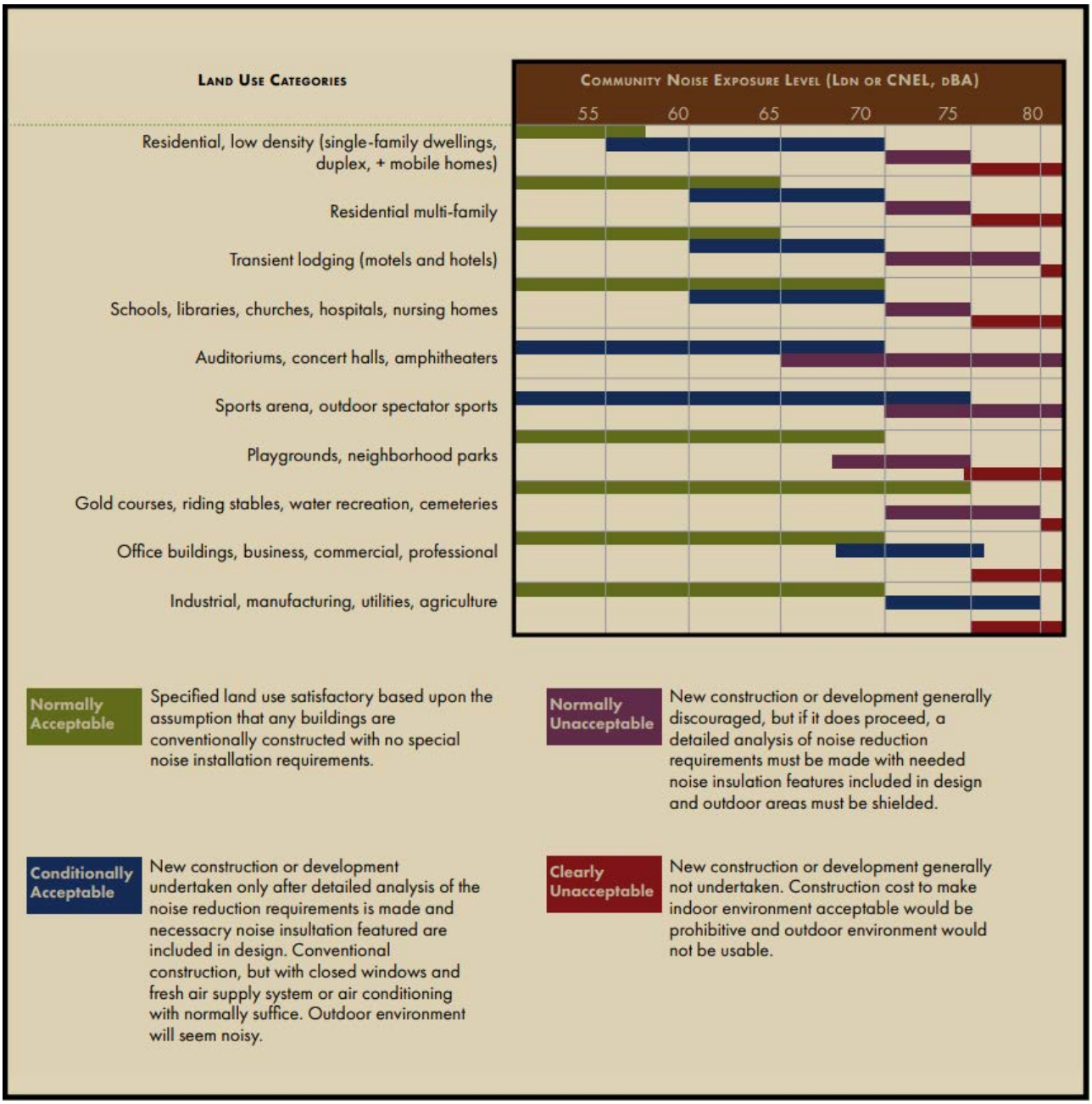
Exhibit XIII-1 Noise Levels of Familiar Noise Sources



Source: Exhibit 17, Noise Levels of Familiar Noise Sources, Rancho Mirage General Plan, 2017.

To assist the City of in the planning of compatible uses, a range of exterior noise thresholds for various land uses have been developed and are provided in the exhibit below. Particularly sensitive land uses include residences, schools, libraries, churches, hospitals and nursing homes, and destination resort areas.

Exhibit XIII-2 Noise Level and Land Use Compatibility



Source: Exhibit 20, Noise Level and Land Use Compatibility, Rancho Mirage General Plan, 2017.

The City's Municipal Code establishes the exterior noise limits as it relates to stationary noise sources in Chapter 8.45 – Noise.

8.45.030 – Exterior noise level limits: No person shall operate or cause to be operated any source of sound or allow the creation of sound or noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, as measured on any other property, to exceed:

- The noise level for the applicable zone specified in the table below for a cumulative period of more than thirty minutes in any hour of the applicable time period.

Table XIII-2 Noise Level Limits

Land Use/Zone	Noise Level (dBA)		
	Daytime (7 am to 6 pm)	Evening (6 pm to 10 pm)	Nighttime (10 pm to 7 am)
Residential, Low Density	55	50	45
Residential, Medium and High Density, Hospital, Open Space	60	55	50
Commercial Office, Resort Commercial, Mixed Use, Institutional	65	60	55
Commercial Neighborhood, General Commercial, Commercial Recreation, Light Industrial	70	65	60

- For cumulative periods of time less than thirty minutes in an hour, all the noise standards in the table above are increased according to table below.

Table XIII-3 Noise Level Limit Adjustment

Duration of Sound	dBA Adjustment
15-30 minutes per hour	+3
10-15 minutes per hour	+5
5-10 minutes per hour	+10
1-5 minutes per hour	+15
Any period of time less than 1 minute per hour	+20

Special provisions and exemptions include school activities, City special events, public playgrounds, and emergency vehicles/work that generate noise. Construction work is also exempt from provisions in the noise code and shall occur within allowable hours of 7 am to 7 pm, and is prohibited to occur on Sundays and holidays.

Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

Vibration

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibrations levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the

motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude.

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source.

The discussion below analyzes the project's impact relative to noise and vibration.

13.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT: The project site is located east of Peterson Road and approximately 460 feet north of Highway 111. The existing noise environment is defined by the commercial businesses to the west and the residential properties and neighborhoods to the north and south. Noise generated in commercial and residential areas is generally quiet, and consists of people talking, automobile door closing, automobile traffic, and periodic maintenance activities such as landscaping (lawn mowers, etc.) and trash collection. Automobile traffic along Peterson Road also contributes to the existing noise environment in the area.

The project is proposing the development of up to 120 residential units with associated infrastructure (i.e., paved drive aisle, recreational areas, etc.). The onsite project-related noise sources are expected to include outdoor seating activity, vehicular activity, trash collection activity, outdoor air conditioning units, and pool activity. The project site is currently vacant and does not contribute to the existing noise environment.

The City of Rancho Mirage has the authority to establish land use noise standards and corresponding restrictions under the City's Noise Ordinance. A range of noise standards apply to different receiving land uses based on sensitivity and compatibility. According to Exhibit 20, Noise Level and Land Use Compatibility, in the Rancho Mirage General Plan Noise Element, multifamily residential land uses have a normally acceptable noise level between 50 to 65 dBA CNEL, and a conditionally acceptable noise level between 60 to 70. The project falls under the multifamily residential land use category defined by the exhibit.

Construction Noise

Construction of the project site is expected to generate short-term noise increases compared to the existing levels. A temporary incremental increase in noise levels along local roadways is expected to occur during the transport of workers and equipment to and from the site. Noise increases will also be generated by the actual on-site construction activities. Equipment used during the construction phases would generate both steady state and episodic noise that would be heard both on and off the project site. The residential homes in the surrounding area may be affected by construction noise generated by the project.

Noise levels generated during various phases are presented in Table XIII-4, Typical Maximum Noise Levels for Construction Phases. Equipment estimates used for the analysis for grading and building construction noise levels were provided by the U.S. Department of Transportation and are representative of worst-case conditions, since it is unlikely that all the equipment contained on-site would operate simultaneously.

Table XIII-4 Typical Maximum Noise Levels for Construction Phases

	Appropriate Leq dBA without Noise Attenuation			
Construction Phase	25 Feet	50 Feet	100 Feet	200 Feet
Clearing	90	84	78	72
Excavation	94	88	82	78
Foundation/Conditioning	94	88	82	78
Laying Subbase/Paving	85	79	73	67

Source: U.S. Department of Transportation, Construction Noise Handbook, Chapter 9.0, August 2006.

Residential properties, located immediately north and south of the project, will be impacted by construction noise due to their close proximity. Per the table above, at 25 feet, typical maximum noise observed is 94 Leq dBA during excavation and foundation/conditioning, without factoring attenuation (i.e., block walls, landscaping, etc.). The existing residential property is surrounded by concrete block walls, which would reduce construction noise levels observed.

During construction, the project shall follow common industry standards that will help limit noise level increases. For example, all construction equipment, fixed or mobile, should be equipped with properly operating and maintained mufflers and the engines should be equipped with shrouds. Approved haul routes shall be used to minimize exposure of sensitive receptors to potential adverse levels from hauling operations. All construction equipment shall be in proper working order and maintained to reduce backfires. Grading activities would involve the use of standard earth moving equipment, which would be stored on the site during construction to minimize disruption of the surrounding land uses. Above-grade construction activities would involve the use of standard construction equipment, such as hoist, mixer trucks, concrete pumps, laser screeds and other related equipment.

Construction traffic and equipment is also anticipated to generate noise along access routes to the proposed development. The larger pieces of heavy equipment would be moved onto the development only one time for each construction activity (i.e., site prep, grading, etc.). Daily transportation of construction workers and the hauling of materials

both on and off the project site are expected to cause increases in noise levels along surrounding roadways.

As a standard requirement, the project is expected to abide by the Municipal Code regulations on construction hours, which limit activities to the less sensitive times of the day. The RMMC Section 15.04.030 [A][11] indicates that construction shall be limited to the hours of 7:00 a.m. and 7:00 p.m. with no activity on Sundays and holidays. Impacts are less than significant.

Operational Noise

As previously stated, the existing noise environment is defined by commercial businesses, residential properties and neighborhoods, and vehicle traffic in the surrounding area. Noise generated in residential areas is generally quiet, and consist of people talking, automobile door closing, automobile traffic, and periodic maintenance activities such as landscaping (lawn mowers, etc.) and trash collection. Automobile traffic along Peterson Road also contributes to the existing noise environment in the area. Currently, the vacant project site does not contribute to the existing noise environment.

According to the City of Rancho Mirage Municipal Code, the following exterior noise levels are appliable to the associated zone, as illustrated in the table below.

Table XIII-5 Exterior Noise Level Limits

Land Use/Zone	Time of Day	Noise Level (dBA)
Residential, Low Density (R-E, H-R, R-L-2, R-L-3)	7:00 am to 6:00 pm	55
	6:00 pm to 10:00 pm	50
	10:00 pm to 7:00 am	45
Residential, Medium and High Density, Hospital, Open Space (OS, R-M, R-H, MHP)	7:00 am to 6:00 pm	60
	6:00 pm to 10:00 pm	55
	10:00 pm to 7:00 am	50

Noise sources associated with the proposed multifamily residential development are expected to include opening and closing of vehicle doors in driveways, people talking, car alarms, trash pick-ups, and operating HVAC equipment. According to Exhibit 17 of the Rancho Mirage General Plan, daytime suburban background has a noise level of 50 dBA, while a normal conversation at five feet has a noise level of 55 dBA. These noise levels will be typical of the proposed residential neighborhood. A power mower at 3 feet has a typical noise level of 105 dBA. However, these activities typically occur for short periods of time and during the daytime hours. To minimize noise conflicts between properties, the existing and proposed solid barriers (such as walls) are expected to reduce noise levels. Additionally, the existing residential homes to the north are separated by approximately 118 feet (from existing building frontage to proposed building frontage), while the existing residential homes to the south are separated from the project by more than 80 feet (from existing building frontage to proposed building frontage). The project is not anticipated to exceed noise levels typical of residential neighborhoods during operation.

Overall, the project will result in less than significant impacts regarding short-term construction and long-term operational noise.

b) LESS THAN SIGNIFICANT IMPACT: Groundborne vibration also referred to as earthborne vibration, can be described as perceptible rumbling, movement, shaking or rattling of structures and items within a structure. Groundborne vibration can generate a heightened disturbance in residential areas. These vibrations can disturb residential structures and household items while creating difficulty for residential activities such as reading or other tasks. Although groundborne vibration is sometimes perceptible in an outdoor environment, it does not result in the degree of disturbance that is experienced inside a building. Groundborne vibration can be measured in terms of amplitude and frequency or vibration decibels (VdB). Trains, buses, large trucks and construction activities that include pile driving, blasting, earth moving, and heavy vehicle operation commonly cause these vibrations. Other factors that influence the disturbance of groundborne vibration include distance to source, foundation materials, soil and surface types. The table below indicates groundborne vibration and noise from typical construction equipment, from CalTrans.

Table XIII-6 Groundborne Vibration and Noise from Typical Construction Equipment

Equipment	Peak Particle Velocity (in/sec) (A)			Velocity Decibels (VdB) (B)		
	25 feet	50 feet	100 feet	25 feet	50 feet	100 feet
Small bulldozer	0.003	0.001	0.001	58	49	40
Jackhammer	0.035	0.016	0.008	79	70	61
Rock Breaker	0.059	0.028	0.013	83	74	65
Loaded truck	0.076	0.035	0.017	86	77	68
Auger Drill Rig	0.089	0.042	0.019	87	78	69
Large bulldozer	0.089	0.042	0.019	87	78	69
Vibratory Roller	0.210	0.098	0.046	94	85	76
Impact Pile Driver (upper range)	1.518	0.708	0.330	112	103	94
Impact Pile Driver (typical)	0.644	0.300	0.140	104	95	86
Sonic Pile Driver (upper range)	0.734	0.42	0.160	105	96	87
Sonic Pile Driver (typical)	0.170	0.079	0.037	93	84	75

Sources: Caltrans 2013b 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).

(B) Estimated Lv calculated as: Lv(D)=Lv(25 feet)-30Log(D/25) where Lv(D)= estimated velocity level in decibels at distance, Lv(25 feet)= RMS velocity amplitude at 25 ft; and D= distance from equipment to receiver.

Note: No pile drivers, bulldozers, rock breakers, or auger drill rigs would be utilized during construction of the project.

As shown in Table XIII-2, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. Vibration levels dissipate rapidly with distance, such that even maximum impact pile driving activities would result in vibration levels below Caltrans' recommended 0.5 PPV threshold for transient vibration-induced damage in historic, older buildings at a distance of 100 feet. All other activities would be below Caltrans' threshold for transient vibration-induced damage in historic, older buildings at a distance of 25 feet. Historic, older buildings are not located adjacent or in the vicinity of the project property. Standard construction equipment (e.g., bulldozers, trucks, jackhammers) generally does not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receptors. However, the use of bulldozers,

rock breakers, auger drill rigs, or pile drivers will not occur onsite. Vibratory rollers are typically utilized at construction sites to compact and densify soil, asphalt or other materials. It is likely that a vibratory roller will be used during construction to compact the soils and asphalt materials used for the project's proposed internal street. Additionally, the use of the vibratory roller will not occur in the same location for prolonged periods of time. Therefore, the impact of a vibratory roller to the existing residential community will be less than significant.

The project is largely surrounded by a combination of developed commercial and residential land uses. Developed residential homes are located approximately immediately north and south of the project, while commercial businesses are located to the west (separated by Peterson Road). The existing source of groundborne vibration is attributed to the circulation of vehicles along Peterson Road, to the west. As previously stated, the closest sensitive land uses are located to the north and south of the project site. Therefore, the residential properties may be impacted by project-related construction activities that generate vibration. However, construction activities would only be for a temporary amount of time and would only occur during permitted construction hours (Section 15.04.030 [A][11] of RMMC).

Construction of the project will involve the temporary operation of vehicles and equipment that could result in localized, short-term vibration increases during the permitted hours of construction established by the City. All construction equipment staging will be located within the temporary construction limits, while vehicular and equipment access to the construction site would be restricted to only the approved entry point that minimizes disturbance to local traffic. Short-term increases in vibration and sound during construction are not expected to result in significant impact.

After construction, the nature of the proposed residential property would not typically involve activities expected to generate excessive vibration or groundborne noise. All activities within the project will be required to adhere to the City's Noise Ordinance. Less than significant impacts are anticipated.

c) **NO IMPACT:** The project is not located within an airport land use plan or private airstrip. The project is located approximately 4.90 miles from the closest airport, the Palm Springs International Airport. The project is also located outside of the 70, 65 and 60 CNEL noise contours associated with this facility. Furthermore, the Palm Springs Airport Land Use Plan does not identify the project as being located within its planning area. No impacts are expected.

13.3 Mitigation Measures: None Required

14 - Population and Housing

POPULATION AND HOUSING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☐	☒

Sources: Department of Finance E-5 City/County Population and Housing Estimates, 2023. Rancho Mirage General Plan Housing Element 2021-2029.

14.1 Setting

According to the Department of Finance (DOF), the City of Rancho Mirage had a population of 17,012 people in 2023. The City of Rancho Mirage's population accounts for approximately 0.70 percent of the County of Riverside's total population. The median age in the City was 45.6 in 2010 (US Census data). The most recent Census data (2021) shows the median age in the City to be 65, compared to the median age in Riverside County (35) and the Nation (38). Additionally, the number of jobs in 2017 in Rancho Mirage was 16,901 an approximately 76 percent increase in jobs since 2010 (SCAG).

The City of Rancho Mirage updated their Housing Element of the General Plan in August 2022 for the 2021 to 2029 planning period. Per the Housing Element, the character of the City's housing has not significantly changed over time. The Department of Finance estimates that as of January 2020, there are 14,788 housing units in the City, a 3.4 percent increase from 14,307 units in 2012. The predominant type of dwelling unit in the City of Rancho Mirage continues to be single-family detached, which increased by 485 units. All other housing types remain largely consistent, where mobile homes increased by 2 units, and multifamily complexes with 5 or more units decreased by 6 units.

Table XIV-1 Housing Stock Trends – 2012 and 2020

Unit Type	**2012**		**2020**	
	Number of Units	**% of Total Units**	**Number of Units**	**% of Total Units**
Single Family Detached	7,659	53.5	8,144	55.1
Single Family Attached	4,187	29.3	4,187	28.3
Multi-Family, 2-4 Units	725	5.1	725	4.9
Multi-Family, 5 or More Units	841	5.9	835	5.6
Mobile Homes	895	6.3	897	6.1
Total	14,307	100	14,788	100

The 2014-2018 American Community Survey showed an overall vacancy rate of 39.5 percent. Correcting for seasonal or recreational units, which are considered vacant by the Census but are not available or used for permanent occupancy, the vacancy rate decreases to 8 percent. Of the 9,406 (60.5 percent) occupied housing units in the City, about 80.7 percent are owner-occupied, and 19.3 percent are renter occupied. The homeowner vacancy rate is 3.9 percent, while the rental vacancy rate is 12.6 percent, which can indicate excess supply or decreased property values in the rental market.

According to the Housing Element, the Regional Housing Needs Assessment (RHNA) generated by the Southern California Association of Governments (SCAG) is presented in the table below for the 2022 to 2029 planning period.

Table XIV-2 Regional Housing Needs Allocation, 2022 to 2029

Income Category	Number of Units
Extremely low income	215
Very low income	215
Low income	318
Moderate income	328
Above moderate income	670
Total	1,746

14.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The approximately 12-acre project is located west of Peterson Road in the City of Rancho Mirage. The project site and the surrounding areas are characterized as developed land, with residential communities located north and south of the project, commercial businesses to the west, and the Whitewater River Channel to the east. The land use and zoning designation for the 12-acre project site is currently High Density Residential (R-H). R-H designations identifies areas appropriate for the greatest diversity of residential development, including attached single-and multi-family uses. The allowable density range is from five to nine units per gross acre.

The development of the residential project site (120 units) could result in approximately 220 residents in the project area, based on the City's 1.83 persons per household, as provided by the Department of Finance's (DOF) 2023 population and housing elements. The City of Rancho Mirage accounts for this growth in their General Plan Housing Element and General Plan Environmental Impact Report (EIR), which analyzes City buildout conditions. Per the City's General Plan EIR, buildout of the City and Sphere of Influence (SOI) area, would result in a population of 44,268 people by the year 2025. Meanwhile, the Southern California Association of Governments (SCAG) predicts that the City of Rancho Mirage will have a population of 25,200 people by the year 2045. However, it shall be noted that the SCAG population forecast does not include the City's Sphere of Influence area, thus, resulting in a reduced number. Currently, the City of Rancho Mirage has 16,804 residents (DOF), which is 27,464 less people than the General Plan EIR predicted for the buildout of the City and SOI, and 8,396 less people than the SCAG population growth forecast for the City by 2045. The development of the proposed project may increase the population by approximately 1.3 percent to 17,026 people. However, this is a conservative figure because it assumes that none of the future residents would

come from the City of Rancho Mirage. It is possible that some new residents of the project will be existing residents of the City. Based on the General Plan EIR, the maximum addition of approximately 222 residents as a result of the proposed project would not result in unplanned population growth within the City. Population growth within the City of Rancho Mirage is accounted for in the General Plan EIR, and less than significant impacts are anticipated.

The project would result in the planned growth of infrastructure in the area. Currently, the project site is located on previously developed land. The site operated as a mobile home park until at least 2011, when a majority of the mobile homes were demolished. In 2018 all buildings onsite were demolished. The site was served by water, sewer, electric and natural gas infrastructure. Areas surrounding the project site are developed. Residential homes are located north and south of the project, commercial businesses are located west of the project, and the Whitewater River Channel is located east of the project. Development of the proposed project would result in the property's connection to existing infrastructure to serve the project site. See Utilities for further discussion. Therefore, the project would not result in unplanned indirect growth. Less than significant impacts.

b) **NO IMPACT:** The project site previously operated as a mobile home park; however, it is currently vacant and all structures have been demolished and the site does not provide existing housing. Therefore, the project would not require the construction of replacement housing elsewhere. The proposed project will not displace substantial numbers of exiting people or housing. No impacts are anticipated.

14.3 Mitigation Measures: None required.

15 - Public Services

PUBLIC SERVICES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Sources: Department of Finance E-5 City/County Population and Housing Estimates, 2022; City of Rancho Mirage Fire and Police Department Website, City of Rancho Mirage 2017 General Plan Update, 2017 Rancho Mirage General Plan EIR Addendum, PSUSD Fee Justification Study, 2022; Police Officer Kyle Albenesius, 2022.

15.1 Setting

Fire Protection Services

The Riverside County Fire Department (RCFD), under contract with the City of Rancho Mirage, provides a full range of 24-hour fire protection and emergency medical services to the City. The City's Fire Department serves approximately 25 square miles with an estimated population of 16,992. RCFD maintains two fire stations within the City of Rancho Mirage, Fire Station 50, and Fire Station 69.

Police Protection Services

Law enforcement services are provided to the City of Rancho Mirage through a contractual agreement with Riverside County Sheriff's Department. The Sheriff's department provides 24-hour municipal police services associated with a City police department. The Rancho Mirage police department has a small police substation at the Rancho Mirage Public Library; deputies assigned to work in Rancho Mirage primarily operate out of the Palm Desert station located at 73-705 Gerald Ford Drive. This station is approximately 6 miles from the project site. The police

substation at the Rancho Mirage public library is 1.5 miles away. The City's police department patrols 7 days a week, 365 days a year and 24-hours a day. The police department serves nearly 17,000 residents, patrolling 25 square miles of City streets.

Schools

The project site is within the boundary of the Palm Springs Unified School District (PSUSD). The School District provides education to students in grades transitional kindergarten through 12 residing within portion of the cities of Cathedral City, Desert Hot Springs, Palm Desert, Palm Springs, Rancho Mirage, and a portion of the unincorporated County of Riverside.

Parks

The City of Rancho Mirage provides both public and private parks, open space, and multi-city recreational facilities with various amenities. See Section 16, Recreation, below for further background.

Other Facilities

Other facilities within the City of Rancho Mirage include City Hall, hospitals, and the public library and observatory. These facilities provide services and amenities for the residents of the City.

15.2 Discussion of Impacts:

a) FIRE

LESS THAN SIGNIFICANT IMPACT: Currently there are two fire stations within the City of Rancho Mirage. Fire Station 50 is located at 70-801 Highway 111 and is approximately 1 driving mile from the proposed project site. This station covers the southern portion of the City. According to the City's General Plan, Fire Station 50 is equipped with a Medic Engine and Paramedic Ambulance. Five firefighters are staffed at this station daily and three of the five firefighters are paramedics.

Fire Station 69 is located at 71-751 Gerald Ford Drive and is approximately 4.3 driving miles northeast from the project site. This station covers the northern portion of Rancho Mirage and is also staffed with five firefighters daily, with three of the five fire fighters being paramedics (General Plan 2017). The Riverside County Fire Department operates under a Regional Fire Protection Program, which allows all of its fire stations to provide support as needed regardless of jurisdictional boundaries.

The project proposes the construction of up to 120 multi-family residential units with a pool, recreational open space, gardens, a tot lot, and dog run and park. The development of the project would result in an increase in demand for fire services. According to the 2024 Department of Finance Population and Housing Estimates, the City of Rancho Mirage has an average of 1.83 persons per household (PPH). Based off this number, the project would be expected to house 220 persons. Service calls made by the residents could place an additional demand on fire personnel, fire apparatus and equipment. However, the project site is located in a developed urban area of the City, and approximately 1 driving mile from Fire Station No. 50. Therefore, the project would not necessitate the construction or alternation of a fire station in order to continue to serve the site at its current level, nor would it impact the current response times. Additionally, the project would comply with the 2017 General Plan *Public Service and Facilities Policy PS&F 6.1* in that all new developments are reviewed for their impacts on safety and the provision of police and fire protection services. The project would be required to implement

all applicable fire safety requirements, including the installation of fire extinguishers, fire hydrants, and sprinkler systems.

Additionally, the City enacts a development fee on all new development within the City to finance public facilities which goes towards the funding of fire services. The project would be required to comply with Development Impact Fees in place at the time of construction. The project will be required to annex into the City's Community Facilities District No.1, which is a special tax used to pay for public services. Payment of these fees helps offset impacts by providing sufficient revenue for necessary improvements to ensure acceptable fire facilities, response times, equipment and personnel are maintained. Less than significant impacts to fire services are anticipated with project implementation.

POLICE

LESS THAN SIGNIFICANT IMPACT: The basic law enforcement protection is provided to the City of Rancho Mirage by contractual agreement with the Riverside County Sheriff's Department. The Riverside County Sheriff's Department provides over sixteen (16) uniformed deputy sheriffs for patrol and traffic enforcement.

The department has a staff of 29 full-time officers (24 sworn and 5 non-sworn). The officers have a daily staffing of 7 officers that work in two, 12-hour shifts. Four deputy patrol officers work the day shift, and 3 deputy patrol officers work that night shift. The City currently provides 1.7 officers per 1,000 residents, which is well above the commonly used and accepted ratio of one officer per 1,000 residents. Police response times vary and are dependent on the location of patrol cars. The average response time for priority 1 calls in the City of Rancho Mirage was 5 to 6 minutes.

The project site is approximately 12 acres of land located within the City of Rancho Mirage. The project proposes to develop up to 120 multi-family residential units with a pool, recreational open space, gardens, a tot lot, and dog run and park.

The development of the project is expected to have an incremental increase to the number of calls for police services. The project site is in an existing urban area and is currently serviced by the Sheriff's Department. Therefore, the proposed project would not substantially increase the need for new or expanded police facilities and response times are not expected to be impacted. Additionally, all new construction in the City will be required to pay Development Impact Fees to assist in offsetting impacts to police services. These development fees on new development allow the City to continue to finance public facilities which goes towards the funding of various public services to include police. The project will be required to annex into the City's Community Facilities District No.1, which is a special tax used to pay for public services. Payment of these fees helps offset impacts by providing sufficient revenue for necessary improvements to ensure acceptable response times, equipment and personnel are maintained. Development of the proposed project will result in less than significant impacts to police services. Impacts to police services are less than significant.

SCHOOLS

LESS THAN SIGNIFICANT IMPACT: As previously stated, the project site is within the boundary of the Palm Springs Unified School District (PSUSD). Development of the project would not create a substantial demand on school services. The development of the proposed project could generate school age children requiring public education. The

project has the potential to generate 23 new students based on the District's Student Generation Rate (See Table XVI-1).

Table XVI-1 PSUSD District Wide Student Generation Rate

School Type	Multi-Family Dwelling Units*	Generation Rate**	Students Generated***
Elementary School	120	0.0893	11
Middle School	120	0.0394	5
High School	120	0.0566	7
Total New Students			**23**

*up to 120 multi-family dwelling units proposed for the project.
**Source: Table 4 Student Generation Factors for Multi-Family Attached Homes, PSUSD Fee Justification Study for New Residential and Commercial/Industrial Development, March 2024
***Numbers were rounded.

Per the PSUSD 2022 Fee Justification Report, the District has an excess capacity at the elementary school level by 3,019. Middle schools in the district are over capacity by 153 students and high schools have an excess capacity of 2,076 students. An additional 23 students would not necessitate the construction of new school facilities. Education funding comes from a combination of federal, state, and local sources. Assembly Bill 2926 and Senate Bill 50 (SB 50) allow school districts to collect "development fees" for all new construction for residential/commercial and industrial use. At the time of writing, development fees are $5.17/ sq.ft. for residential and $0.84/ sq.ft for commercial. Monies collected are used for construction and reconstruction of school facilities. Moreover, school age children may also attend several private schools located in the Coachella Valley. The project will comply with PSUSD development fees and less than significant impacts on local schools are expected.

PARKS

NO IMPACT: The City of Rancho Mirage provides both public and private parks, open space, and multi-city recreational facilities with various amenities. As discussed below in the Recreation Section of this document, the proposed project would not create additional demand for public park facilities, nor result in the need to modify existing or construct new park facilities. Therefore, no impacts are expected.

OTHER FACILITIES

NO IMPACT: No increase in demand for government services or other public facilities is expected beyond those discussed in this section.

15.3 Mitigation Measures: None required.

16 - Recreation

RECREATION – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☒	☐

Source: 2017 Rancho Mirage General Plan

16.1 Setting

The City oversees parks that are a mix of mini and local parks. The 2017 Rancho Mirage General Plan EIR indicates that the existing and planned parks are sufficient to meet the forecast demand in the City's 2017 General Plan. Mini parks are generally less than one acre in size and are intended to complement adjacent uses, while local parks are intended to provide for the active and passive recreation needs of nearby residents in the vicinity of the park. The City of Rancho Mirage also provides a variety of hiking trails and equestrian trails within the City. The closest park to the project site is Wolfson Park, approximately 2 driving miles north of the project. The Butler-Abrams Trail runs along the eastern side of the project.

16.2 Discussion of Impacts:

a-b) LESS THAN SIGNIFICANT IMPACT: The project site is 12 acres and consists of up to 120 multi-family residential units with a pool, recreational open space, gardens, a tot lot, and dog run and park. According to the Department of Finance, Population and Housing Estimates, the City of Rancho Mirage has an estimated 1.83 PPH. Based on the PPH, the proposed project can be expected to house 220 people. Some residents of the project may attend events and participate in activities at local parks in the City; however, such visits are expected to be minimal. The project will comply with the City's parkland in-lieu fee (Quimby) and other development impact fees. The future residents generated by project implementation may lead to an incremental increase in physical deterioration of City public recreational facilities. The operation of the proposed project will not substantially increase the use of existing parks as to accelerate their physical deterioration since the project consists of up to 120 residential units and will include onsite recreational amenities that include a pool, open and recreational space, gardens, a tot lot, and a dog run and park. Additionally, the project will be required to comply with the City's Development Impact Fees. Impacts will be less than significant.

16.3 Mitigation Measures: None required.

17 - Transportation

TRANSPORTATION – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines § 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?	☐	☐	☒	☐

Source: Rancho Mirage General Plan, 2017.City of Rancho Mirage Active Transportation Guidelines and Best Practices, July 15, 2019, City of Rancho Mirage Vehicle Miles Traveled Transportation Analysis Policy, February 18, 2021; Transportation Analysis and Guidelines for Level of Service Vehicle Miles Traveled, December 2020. Crossings at Peterson Rd. Vehicle Miles Traveled Evaluation, March 20, 2024 (Appendix G).

17.1 Setting

According to the City of Rancho Mirage General Plan, the City's character is described as a premier residential resort community. The Circulation Element of the City General Plan aims to preserve the City's character while providing the safest and most efficient roadway system possible, by documenting the road system's status, identifying problems, and proposing solutions.

17.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project property occupies approximately 12 acres east of Peterson Road and north of Juniper Lane in Rancho Mirage. The project site is surrounded by developed residential communities to the north and south, the Whitewater River Channel to the east, and Peterson Road and commercial uses to the west. Building pads and foundation and paved roads from the previous mobile home community remain onsite. The site is surrounded by fencing.

Proposed Project

The project proposes the construction of a residential community, consisting of up to 120 affordable residential units, a recreational building, open space areas, fitness trails, pool, and 178 parking spaces. Access to the project will occur at two locations along Peterson

Road. The residential units will consist of 88 one-bedroom units, and 28 two-bedroom units.

Level of Service Standard (LOS)

With the implementation of SB 743, intersection Level of Service (LOS) is not calculated to determine transportation impacts, however it provides information regarding intersection capacity and General Plan consistency for the City. The transportation assessment of LOS was conducted for consistency with the City of Rancho Mirage General Plan and to evaluate the proposed project's effect on the surrounding transportation network.

Average Daily Trips (ADT) refers to the total number of vehicles that travel a defined segment of roadway over a twenty-four-hour period. The standard most often used to evaluate the operating conditions of the transportation system is called level of service (LOS). LOS is a qualitative assessment of the quantitative effect of factors such as: speed and travel time, traffic volume, geometric features, traffic interruptions, delays, and freedom to maneuver, driver comfort and convenience, and vehicle operating costs. LOS allows operating conditions to be categorized as LOS "A" through LOS "F", where LOS "A" represents the most favorable free flow condition and LOS "F" the least favorable forced flow driving condition. The LOS categories are based on relative levels of driver acceptability of various delays. A given lane or roadway may provide a wide range of service levels, depending upon traffic volumes and speeds.

Roadway capacity has been defined as the maximum number of vehicles that can pass over a given roadway during a given time under prevailing roadway and traffic conditions. The capacity of a roadway used for design purposes (generally defined as LOS D) is the level at which the facility is handling the maximum traffic volume that it can accommodate while maintaining an acceptable level of driver satisfaction. The City of Rancho Mirage has defined Level of Service "D" as the minimum adequate intersection service level during peak hours for planning and design purposes.

The volume-to-capacity ratio (V/C) indicates the overall performance of the roadway segment or intersection and corresponds to a rating of A through F identifying its level of capacity utilization and relative level of congestion. For roadway segment travel LOS is a measure of the flow of traffic, while for intersections, the LOS is based on the number of seconds the vehicle is delayed in passing through the intersection. Although accepting a lower level of service (LOS E or even F) at certain intersections and segments during peak season may result in periodic congestion, once familiar with network constraints, travelers will seek alternative paths and traffic will be distributed to those parts of the network with surplus capacity.

Table XVII-1
Level of Service - Roadway Segment
Description Mid-Link and Uninterrupted Flow

Level of Service	Volume/Capacity Ratio
A	0.00 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Not Meaningful

Source: Highway Capacity Manual, Transportation Research Board – Special Report 209, National Academy of Science, Washington, D.C. 2000.

Existing Roadway System

Regional access to the site vicinity is provided by the Interstate 10 Highway. Local access is provided by a multitude of roadways including Bob Hope Drive and Highway 111.

Peterson Road is a two (2) lane undivided roadway trending in a north-south direction. Via Josephina is classified as a Local roadway (60 feet of right-of-way) in this location. The curb-to-curb measurement is 40-feet. Local roadways include one lane of travel in each direction. On-street parking is allowed. It is currently fully improved with curb and gutter on either side.

Project Impacts:

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) trip generation rates were utilized to determine trip generation for the proposed project. Based on the proposed project description the following ITE land use Code was utilized: 223 – Affordable Housing; These rates were determined to represent the proposed project most closely. The analysis calculates that, upon buildout, the project will generate approximately 577 new daily vehicle trips or average daily trips (ADT), with 43 ADT expected to be generated in the morning peak hour and 55 ADT in the evening peak hour.

Table XVII-2
Project Trip Generation Summary

Trip Generation Rates						
Land Use (ITE Code)	**Unit**	**AM Peak Hour**		**PM Peak Hour**		**Daily Trip Rate**
		In:Out Split	**Trip Rate**	**In:Out Split**	**Trip Rate**	
Affordable Housing (223)	DU	29%/71%	0.36	59%/41%	0.46	4.81

Trips Generation Results								
Land Use (ITE Code)	**Quantity**	**AM Peak Hour**			**PM Peak Hour**			**Daily**
		In	**Out**	**Total**	**In**	**Out**	**Total**	
Affordable Housing (223)	120 DU	13	31	43	33	23	55	577

1. Source ITE = Institute of Transportation Engineers, Trip Generation Manual, 11th, 2021
2. DU = Dwelling Unit

According to Appendix B of the *Riverside County Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled*, Traffic Analysis Exemptions, certain types of development proposals are generally exempt from Traffic Analysis requirements per Board of Supervisor's action November 5, 1996 (Item no. 3.27). **Exemption #10** indicates that an exemption is appropriate for any use which can demonstrate, based on the most recent edition of the Trip Generation Report published by the Institute of Transportation Engineers (ITE) or other approved trip generation data, trip generation of less than 100 trips during the peak hours. As noted above the project is anticipated to generate

approximately 577 ADT for the project and 43 ADT during the AM peak hour and 55 ADT during the PM peak hour and is therefore not required to prepare a formal Traffic Study.

Proposed Private Street: is not a General Plan designated roadway. It is a private roadway with a proposed right of way of 57 feet, with 37 feet of pavement curb to curb, two lanes undivided and on-street parking.

Peterson Road is a two (2) lane undivided roadway trending in a north-south direction adjacent to the project. Peterson Road is classified as a Local roadway (60 feet of right-of-way) in this location. The curb-to-curb measurement is 40-feet. Local roadways include one lane of travel in each direction. On-street parking is allowed. It is currently fully improved with curb and gutter on either side.

General Plan buildout street improvements have been designed to accommodate increasing traffic conditions associated with planned land uses.

LOS Conclusion

The proposed project is not expected to have a significant adverse impact on the area transportation network over those analyzed in the City of Rancho Mirage General Plan EIR.

This analysis also assumes the project shall comply with the following conditions as part of the City of Rancho Mirage standard development review process to ensure adequate geometric design and emergency access:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction-related trips shall be restricted to off-peak hours to the extent possible.
- All on-site and off-site roadway design traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Rancho Mirage.
- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Rancho Mirage.
- Adequate off-street parking shall be provided to the satisfaction of the City of Rancho Mirage based on supporting parking and density analysis prepared for the project.
- Prior to project entitlement, the grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with the applicable City of Rancho Mirage/California Department of Transportation sight distance standards.

Alternative Transportation

SunLine Transit Agency (SunLine) provides bus services to the City of Rancho Mirage and other various jurisdictions throughout the Coachella Valley. Route 1 WV provides

service along Highway 111 within the study area. The nearest bus stop is located on Highway 111 southeast of the Peterson Road intersection. The bus stop is approximately 745 feet walking distance to the southeast.

SunLine buses are wheelchair accessible and include bicycle racks accommodating two or three bicycles. The potential use of local bus services by future Project residents is not expected to conflict with or substantially increase the demand for this transit service. Project implementation is not anticipated to interfere with the existing service or performance at bus stop facilities. Less than significant impacts are anticipated.

If future demand warrants, expansion of available services may be appropriate. Transit services are monitored by both the City and SunLine. Additional services are periodically considered in response to the anticipated increase in use. Less than significant impacts are anticipated.

Congestion Management Plan

The County Congestion Management Plan (CMP) requires a LOS E or better for regional roadways. As noted previously the generation, distribution, and management of project traffic is not expected to conflict with the CMP; no CMP roadways were identified in the vicinity of the project. The project and background traffic will not exceed City level of service standards or travel demand measures, or other standards established by the City or Riverside County Transportation Commission (RCTC) for designated roads or highways.

The Transportation Uniform Mitigation Fees (TUMF) program identifies network backbone and local roadways that are needed to accommodate growth. The regional program was put into place to ensure that developments pay their fair share and that funding is in place for the construction of facilities needed to maintain an acceptable level of service for the transportation system. The TUMF is a regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

According to the Coachella Valley Association of Governments TUMF Handbook, effective November 1, 2018, Revised January 1st, 2023, Low Income Housing is EXEMPT from paying TUMF obligations.

Therefore, less than significand impacts are anticipated relative to the CMP.

The following Standard Conditions are anticipated to be implemented by the proposed project.

Standard Conditions

1. Clear unobstructed sight distances shall be provided at site access and internal routes. Sight distances shall be reviewed at the time of preparation of final grading, landscape and street improvement plans.
2. The project shall accommodate the largest service and delivery vehicles expected to negotiate the site access and internal circulation system. Landscaping, monuments, and other objects shall be avoided in the off-tracking area at the site access connections.
3. Off-street parking shall be provided to meet the anticipated parking demand as required by the parking standards in Section 17.26 of the Rancho Mirage Municipal Code and the Uniform Federal Accessibility Standards.

4. Project layout and site access design shall be subject to the review and approval of the City Traffic Engineer prior to project entitlement.
5. Emergency police, fire and paramedic vehicle access shall be provided for all new developments to the satisfaction of the City of Rancho Mirage.
6. A traffic signing and striping plan shall be developed in conjunction with detailed construction plans for the project site and submitted to the City of Rancho Mirage for review and approval.
7. The applicant shall coordinate with the SunLine Transit Agency regarding the need for public transit facilities.
8. The project proponent shall contribute development impact fees, as required by the City of Rancho Mirage.
9. A Construction Traffic Control Plan shall be prepared for use during construction activities. Construction includes onsite and offsite improvements.
10. A Knox-Box Rapid Entry System or similar device shall be installed at the gated entry to facilitate emergency access by fire fighters and other emergency first responders.

Following implementation of Standard Conditions, Project Design Features the project is expected to result in less than significant impacts relative to conflicting with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b) LESS THAN SIGNIFICANT IMPACT:

Vehicle Miles Travelled (VMT)

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020.

City of Rancho Mirage Resolution 2021-06 aligns the City's VMT analysis policy (City Guidelines) with SB 743 and the City's goals as set forth in the General Plan Update (2017). The purpose of the policy is to comply with State laws while maintaining the resort residential character of the community. The City's VMT policy establishes VMT as the metric to measure transportation impacts in conformance with. This VMT analysis/screening has been developed based on the adopted City Guidelines.

A VMT Evaluation was prepared for the project. Exhibit A of Resolution 2021-06 sets forth screening criteria under which Projects are not required to submit detailed VMT analysis. This guidance for determination of non-significant VMT impact is primarily intended to avoid unnecessary analysis and findings that would be inconsistent with the intent of SB 743. VMT screening criteria for development projects include the following:

- **Small Local Serving Projects (Project Type Screening)** with low trip generation per existing CEQA exemptions or resulting in a 3,000 metric tons of Carbon Dioxide Equivalent per year screening level threshold. Specific examples include Single Family Housing projects less than or equal to 110 Dwelling Units, Multi-Family (low-rise) Housing projects less than or equal to 147 Dwelling Units or Multi-Family (mid-rise)

Housing projects less than or equal to 194 Dwelling Units. **The small project screening threshold is met.**

As noted previously the proposed project includes 116 units of multi-family (low-rise) housing. This is below the threshold for VMT screening which is 147 units. Additional description of the VMT concept is provided in the Greenhouse Gas and Energy sections of this Initial Study. Following implementation of the project design features, DIF and standard conditions, the project is expected to result in less than significant impacts.

c) LESS THAN SIGNIFICANT IMPACT: The project will be developed in accordance with City of Rancho Mirage design guidelines and will not create a substantial increase in hazards due to a design feature. The project's access point will be located with adequate sight distances, and project-generated traffic will be consistent with existing traffic in the area. The internal circulation system would be designated in accordance with the City of Rancho Mirage guidelines and would provide adequate fire department access and widths as required. Sharp curves are avoided by design guidelines.

A Traffic Control Plan may be required as a condition of approval to be implemented throughout all construction activities. This plan will work to reduce potential impacts that may arise due to conflicts with construction traffic. Impacts will be less than significant. The project's access points will be located with adequate sight distances, and project-generated traffic will be consistent with existing traffic in the area.

The project is not anticipated to increase hazards due to geometric design features or incompatible uses. Following implementation of the Standard Conditions within this CEQA document as well as the review and approval process at the City of Rancho Mirage, impacts are less than significant without mitigation.

d) LESS THAN SIGNIFICANT IMPACT: The proposed Project will provide adequate access to emergency response vehicles, as required by the City of Rancho Mirage and in accordance with the Fire Department review and requirements. Site plan review would include in-depth analysis of emergency access to the site to ensure proper access to facilities. As mentioned previously, the proposed site plan provides one primary proposed vehicular access point and one secondary access point. The design details of the vehicular driveways will be reviewed and approved by the Fire Department and the City.

The Project is anticipated to provide proper premises identification with legible site name, address numbers, and clear signage indicating the site access points. Operational fire hydrants and extinguishers are also required in accordance with the Rancho Mirage Municipal Code.

Prior to construction, both the Fire Department and Police Department will review the project site plan to ensure safety measures are addressed, including emergency access. The project is not anticipated to result in inadequate emergency access. Therefore, impacts are less than significant relative to inadequate emergency access.

17.3 Mitigation Measures: None required.

18 - Tribal Cultural Resources

TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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 section5020.1(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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Source: Public Resource Code §21074; Rancho Mirage 2017 General Plan. Phase 1 Cultural Resources Assessment (Appendix C), Material Culture Consulting, Inc. April 2024 (Appendix E)

18.1 Setting

The Coachella Valley is a historical center of Native American settlement, where U.S. surveyors noted large numbers of Indian villages and *rancherías* occupied by the Cahuilla people in the mid-19th century. The origin of the name “Cahuilla” is unclear, but it may have originated from their own word *káwiya*, meaning master or boss (Bean 1978). The Takic-speaking Cahuilla are generally divided by anthropologists into three groups, according to their geographic setting: the Pass Cahuilla of the San Gorgonio Pass-Palm Springs area, the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountains and the Cahuilla Valley, and the Desert Cahuilla of the eastern Coachella Valley.

Today, Native Americans of Pass or Desert Cahuilla heritage are mostly affiliated with one or more of the Indian reservations in and near the Coachella Valley, including Torres Martinez, Augustine, Cabazon, Agua Caliente, and Morongo. There has been a resurgence of traditional ceremonies, and the language, songs, and stories are now being taught to the younger generations.

18.2 Discussion of Impacts:

a i) **NO IMPACT:** As previously discussed in the Cultural Resource section of this document, no previously recorded resources were identified within the project area. MCC submitted a request for a Sacred Lands File Search to the Native American Heritage Commission (NAHC) on in January 2024. On February 26, 2024, the NAHC responded and indicated that the results of the Sacred Lands File Search were negative for known cultural resources within the vicinity of the project area. No resources were found to be listed in the catalog of CHLs. There are no previously recorded resources located within the project boundaries, however, the records search identified one (1) previously recorded cultural resource within a 1-mile radius of the project site consisting of a historic building. As discussed in the Cultural section, the structure is not eligible for the NRHP, CR, or Local listing, but is recognized as historically significant by local government. No additional information was identified relating to the residence. Available aerial imagery shows no historical-period structures within the project area. Therefore, the project site is not expected to cause a substantial adverse change in the significance of a Tribal cultural resource as defined by Public Resource Code §21074 and no impacts are expected.

ii) **LESS THAN SIGNIFICANT IMPACT:** As previously discussed, the field survey complete by MCC did not uncover any sensitive cultural resources and the Sacred Lands File search by the NAHC was negative for Native American cultural resources.

Assembly Bill 52 (AB 52) requires lead agencies to notify their local tribes about development projects. It also mandates lead agencies consult with Tribes if requested and sets the principles for conducting and concluding the required consultation process. Pursuant to AB 52 consultation requirements, the City of Rancho Mirage initiated AB52 consultation. The City contacted twenty-one Tribes and representatives provided by the NAHC. During the consultation period, the City received four responses as of July 31, 2024. The letters were from the Agua Caliente Band of Cahuilla Indians (ACBCI), Augustine Band of Cahuilla Indians, Morongo Band of Mission Indians (MBMI), and the Cahuilla Band of Indians.

The Augustine Band of Cahuilla Indian's response letter stated that they are unaware of specific cultural resources in the project area, however, requested to be notified if cultural resources are discovered during development. The MBMI stated that the project is not located within the boundaries of the ancestral territory or traditional use area of the Cahuilla and Serrano people of the Tribe and encouraged consultation with tribes more closely associated with the project area. The Cahuilla Band of Indians asked whether there was a cultural report and mitigation measures associated with the project. The City responded by sending the Tribe the project-specific cultural report and the proposed mitigation measures. The Tribe reviewed the material and deferred to the ACBCI, however, requested that if the ACBCI is unable to provide monitoring, that the Cahuilla Band of Indians would be interested. Finally, the ACBCI, in their letter, requested formal government to government consultation under AB 52, copies of any project-specific cultural resource documentation and records search from the information center associated with the reports, and a cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in the project area. The cultural resources inventory will be required as Mitigation Measure TRC-1.

The City had a meeting with the ACBCI on August 8, 2024. During the meeting the ACBCI requested that the project include additional mitigation measures (discussed

subsequently). In order to ensure that notification of earth-moving activity on the project site occurs, Mitigation Measure TCR-2 is required. Mitigation Measure TCR-2 states that the ACBCI must be notified a minimum of 30 days prior to any earth-moving activities including grading, grubbing, trenching, or excavations at the site. All earth-moving activities including grading, grubbing, trenching, or excavations at the site shall be monitored by a qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s). In addition to Mitigation Measure TCR-2, a qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor(s) shall provide preconstruction training for all earthmoving construction personnel prior to the start of any ground-disturbing activities, regarding how to recognize the types of Tribal Cultural Resources and/or archaeological resources that may be encountered and to instruct personnel about actions to be taken in the event of a discovery. Should cultural materials be discovered, they shall be recorded and evaluated in the field. The monitors shall be prepared to recover artifacts to avoid construction delays but must have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered. If artifacts are discovered, these shall be cataloged and analyzed. The archaeologist and monitor shall determine and implement the best course of action for the treatment and disposition of the artifacts. Preservation in place of the cultural resources is the preferred course of action. If deemed necessary by the qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor, the artifacts shall be prepared for permanent curation in a repository with permanent storage. Only non-destructive methods shall be allowed in regards to Tribal Cultural Resources. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the California Historical Resources Information System. This is required as Mitigation Measure TCR-3.

The inclusion of Mitigation Measure TCR-2 and Mitigation Measure TCR-3 satisfies the requests of the ACBCI.

In addition to the inclusion of Mitigation Measure TCR-1 through TCR-3, the project will also include Mitigation Measure TCR-4. Mitigation Measure TCR-4 requires that in the unexpected event human remains are uncovered during construction activities, all construction work taking place within the vicinity of the discovered remains must cease and the necessary steps to ensure the integrity of the immediate area must be taken. The County Coroner must be notified within 24 hours of the discovery of human remains. If the remains discovered are determined by the Coroner to be of Native American descent, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would in turn contact the Most Likely Descendant (MLD) would determine further action to be taken. The MLD would have 48 hours to access the site and make a recommendation regarding disposition of the remains.

The implementation of Mitigation Measure TCR-1 through TCR-4 will ensure that the lead agency properly considers the significance of any resources on the project site to local tribes. Therefore, less than significant impacts would occur.

18.3 Mitigation Measures:

TCR-1: Prior to the start of construction, a cultural resources inventory of the project should be conducted by a qualified archaeologist.

TCR-2: The Agua Caliente Band of Cahuilla Indians must be notified a minimum of 30 days prior to any earth-moving activities including grading, grubbing, trenching, or excavations at the site. All earth-moving activities including grading, grubbing, trenching, or excavations at the site shall be monitored by a qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s).

TCR-3: A qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor(s) shall provide preconstruction training for all earthmoving construction personnel prior to the start of any ground-disturbing activities, regarding how to recognize the types of Tribal Cultural Resources and/or archaeological resources that may be encountered and to instruct personnel about actions to be taken in the event of a discovery. Should cultural materials be discovered, they shall be recorded and evaluated in the field. The monitors shall be prepared to recover artifacts to avoid construction delays but must have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered. If artifacts are discovered, these shall be cataloged and analyzed. The archaeologist and monitor shall determine and implement the best course of action for the treatment and disposition of the artifacts. Preservation in place of the cultural resources is the preferred course of action. If deemed necessary by the qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor, the artifacts shall be prepared for permanent curation in a repository with permanent storage. Only non-destructive methods shall be allowed in regards to Tribal Cultural Resources. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the California Historical Resources Information System.

TCR-4: In the unexpected event human remains are uncovered during construction activities, all construction work taking place within the vicinity of the discovered remains must cease and the necessary steps to ensure the integrity of the immediate area must be taken. The County Coroner must be notified within 24 hours of the discovery of human remains. If the remains discovered are determined by the Coroner to be of Native American descent, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would in turn contact the Most Likely Descendant (MLD) would determine further action to be taken. The MLD would have 48 hours to access the site and make a recommendation regarding disposition of the remains.

19 - Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm 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 projects projected demand in addition to the providers existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statues and regulations related to solid waste?	☐	☐	☒	☐

Sources: Rancho Mirage 2017 General Plan Update; CVWD; 2020 Regional Urban Water Management Plan.

19.1 Setting

Domestic Water & Waste Water

CVWD provides domestic and wastewater service to the project vicinity and is the largest provider of potable water in the Coachella Valley. It operates more than 100 wells and serves a population of 283,000 in its service areas. CVWD's adopted 2020 Coachella Valley Regional Urban Water Management Plan has been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. Additionally, CVWD treats nearly 6.3 billion gallons of wastewater a year. CVWD operates six water reclamation plants and maintains more than 1,000 miles of sewer pipeline and more than 30 lift stations that transport wastewater to the nearest treatment facility. No new water or wastewater treatment facilities are required as a result of the project's development.

Groundwater is the primary source of domestic water supply in the Coachella Valley. CVWD is the largest provider of potable water in the Coachella Valley and currently provides potable water to the City of Rancho Mirage. CVWD's 2020 Regional Urban Water Management Plan and 2022 Indio Subbasin Water Management Plan have been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. The comprehensive Water Management Plan guides efforts to eliminate overdraft, prevent groundwater level decline, protect water quality, and prevent land subsidence. The 2020 UWMP serves as a planning tool that documents actions in support of long-term water resources planning and ensures adequate water supplies are available to meet the existing and future urban water demands.

CVWD has developed a Sewer System Management Plan (SSMP) pursuant to the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. The primary goal of the SSMP is to minimize frequency and severity of Sanitary Sewer Overflows (SSOs). The SSMP will cover the management, planning, design, and operation and maintenance of the District's sanitary sewer system. The wastewater system serves approximately 265,000 customers. The system collects municipal waste from residential and commercial users, delivering the collected wastewater to one of six Wastewater Reclamation Plants. The system includes approximately 1,100 miles of sewer, 34 lift stations and approximately 17,000 manholes.

Solid Waste

Solid waste disposal and recycling services for the City of Rancho Mirage is provided by Burrtec. Solid waste and recycling collected from the proposed project will be hauled to the Edom Hill Transfer Station. Waste from this transfer station is then sent to a permitted landfill or recycling facility outside of the Coachella Valley. These include Badlands Disposal Site, El Sobrante Sanitary Landfill and Lamb Canyon Disposal Site. Cal-Recycle data indicates the Badlands Disposal site has 15,748.799 cubic yards of remaining capacity, the El Sobrante Landfill has a remaining capacity of 145,530,000 tons of solid waste, and Lamb Canyon Disposal has a remaining solid waste capacity of 19,242,950 cubic yards. As part of its long-range planning and management activities, the Riverside County Department of Waste Resources (RCDWR) ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal. The 15-year projection of disposal capacity is prepared each year as part of the annual reporting requirements for the Countywide Integrated Waste Management Plan. The most recent 15-year projection by the RCDWR indicates that no additional capacity is needed to dispose of countywide waste through 2024, with a remaining disposal capacity of 28,561,626 tons in the year 2024.

Other Utilities

The site is under the jurisdiction for power from Southern California Edison (SCE), natural gas from Southern California Gas Company (So Cal Gas), and Frontier and Charter Communications for telecommunications. All utility services are located on Peterson Road.

19.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project site is in an urban setting with utility connections located on Peterson Road. Domestic water and wastewater services are provided to the site by the Coachella Valley Water District (CVWD). The project would connect to the existing water and sewer mains along Peterson Road. The project would connect to Southern California Edison for electric power to the site and SoCal Gas for

natural gas services, telecommunication connections are provided by Spectrum, all connections of these utilities are located within the project's boundary.

The project will include stormwater drainage and retention facilities sized to adequately retain and convey the runoff conditions to the satisfaction of the City's engineering requirements. The category of stormwater retention facilities may consist of surface basins and/or underground structures, both of which have a precedent of City approval.

The extension of all other onsite utilities will occur within the project's existing footprint and no new construction of public water, electric power, natural gas, or telecommunications facilities will need to be constructed or relocated. Therefore, less than significant impacts are expected.

b) **LESS THAN SIGNIFICANT IMPACT:** Groundwater is the primary source of domestic water supply in the Coachella Valley. CVWD is the largest provider of potable water in the Coachella Valley and currently provides potable water to the City of Rancho Mirage. CVWD's domestic water system has 64 pressure zones and consists of approximately 97 groundwater production wells, 2,000 miles of pipe, and 133 million gallons of storage in 65 enclosed reservoirs. CVWD's 2020 Urban Regional Water Management Plan has been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. The comprehensive Water Management Plan guides efforts to eliminate overdraft, prevent groundwater level decline, protect water quality, and prevent land subsidence.

Per CVWD's 2020 Regional Urban Water Management Plan (RUWMP), the district had a 2020 target water use demand of 473 gpcd. The District's 2015 actual per capita daily water use of 383 gpcd is currently 19 percent below the 2020 target of 473 gpcd. CVWD has currently achieved its 2020 water use target but continues to implement demand management measures to reduce per capita water use. Per the 2020 RUWMP, CVWD anticipates that future residential development would be expected to use less water than existing properties due to the mandated use of high efficiency plumbing fixtures under the CalGreen building standards and reduced landscape water use mandated by CVWD's Landscape Ordinance.

The project will connect to the existing water main along the project's Peterson Rd. to adequately serve the project in addition to an internal network of 8' water lines to serve on-site development. The proposed residential project would result in an increased use of water supplies. It is estimated that a project of this size could use 87.10 AFY.

CVWD's 2020 RUWMP projected demands are shown in Table 4-8. The demand projections in Table 4-8 are for future municipal demands within CVWD's jurisdictional boundary. Some of these areas are currently served by private domestic wells and are not yet connected to the CVWD system. CVWD plans to consolidate and provide service to these areas, but the timing will depend on the availability of grant funding. For planning purposes, all municipal demands within the jurisdictional boundary are included beginning in 2025. The estimated 2.47 AFY is approximately .006% of the total projected water use of 123,461 AFY projected for 2025. Additionally, new development is accounted for in CVWD's projected water use.

Table XIX-1 DWR 4-2R Projected Retail Demands for Water (AFY)

Use Type	Additional Description	Projected Water Use				
		2025	2030	2035	2040	2045
Single Family		60,142	63,824	67,331	69,816	71,695
Multi-Family		6,873	7,245	7,742	8,267	9,045
CII		7,060	7,244	7,438	7,709	7,985
Landscape		34,193	36,205	38,226	39,865	41,516
Other		1,457	1,563	1,670	1,755	1,840
Losses		13,736	14,501	15,222	15,670	16,085
Total		123,461	130,582	137,629	143,082	148,166

Note: Projections based on demand projections in draft Alternative Plan Updates for Indio Subbasin and Mission Creek Subbasin. The projected demand increase from 2020 to 2025 reflects planned expansion of the service area to include areas not current connected to the CVWD system. The timing of this expansion will depend on the availability of grant funding.

The infrastructure and design components for the project will be consistent with CVWD requirements and water management plan. The proposed development will be expected to follow water conservation guidelines to mitigate impacts to public water supplies. Examples of these water conservation methods include water conserving plumbing fixtures, drought tolerant landscaping, and drip irrigation systems as well as on-site stormwater infiltration. Additional domestic water improvements necessary to serve this development will be identified by CVWD and included as conditions of approval by the City of Rancho Mirage during the City's standard review process. Therefore, less than significant impacts relative to water supply are expected.

c) LESS THAN SIGNIFICANT IMPACT: CVWD's wastewater reclamation system collects and treats approximately 17 million gallons per day (MGD) from approximately 103,616 active accounts. The system consists of approximately 1,160 miles of collection piping and five wastewater reclamation plants (WRPs). Some areas within the CVWD service area remain on septic systems. Additionally, CVWD treats nearly 6.2 billion gallons of wastewater a year. The District operates six (6) water reclamation plants and maintains more than 1,000 miles of sewer pipeline and twenty-seven (27) lift stations that transport wastewater to the nearest treatment facility. CVWD maintains 5 sewer lift stations within the City's boundaries. Wastewater from the City is conveyed to CVWD's Cook Street Water Reclamation Plant No.10 (WRP-10), which treats an average of 10 mgd and has a capacity of 18 mgd.

The proposed project would connect into the existing sewer main on Peterson Road and provide waste water services to the site through a series of 8" sewer laterals. The estimated sewer demand project for the project is 24,000 gpd or 0.24 mgd (million gallons per day). This increase would be treated by WRP-10 and is within the treatment capacity of this plant.

The project will undergo review by CVWD and City staff to ensure wastewater capacity and compliance with the current wastewater treatment requirements. Additionally, sewer and water installation and connection fees in place at the time of development will be collected by CVWD. No new or expanded treatment facilities are expected as a result of project implementation, or is the project expected to exceed wastewater capacity. Less than significant impacts are expected.

d) **LESS THAN SIGNIFICANT IMPACT:** Solid waste disposal and recycling services for the City of Rancho Mirage is provided by Burrtec. Solid waste and recycling collected from the proposed project will be hauled to the Edom Hill Transfer Station. The estimated solid waste for the project is shown in the Solid Waste Generation Table below.

Table XIX-2 Solid Waste Generation Table

Land Use	Units	Rate	Solid Waste (pounds per day)	Solid Waste (tons per year)
Residential	120	6.0 lb/resident/day	720	0.36

Source: CalRecycle. California's 2016 Per Capita Disposal Rate Estimate. Available at: https://calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/2016-2/.

The project would generate an average of approximately 0.36 tons per day. This estimate does not account for any required solid waste reductions. Waste from the project site will be sent to the Edom Hill Transfer station which can receive a maximum of 3,500 tons per day. The project's 0.36 tons of solid waste is less than one percent of this transfers station's daily capacity. The solid waste would then be transferred to one of the County's permitted landfills. The Lambs Canyon Landfill is the nearest landfill. This landfill has a permitted capacity of 5,000 tons per day and 319,242,950 cubic yards of remaining capacity with a closure date of 2032. The solid waste generated by the project is approximately less than one percent of the 5,000 tons per day at the Lambs Canon landfill. Therefore, the project would be served by a landfill with sufficient capacity.

As part of its long-range planning and management activities, the Riverside County Department of Waste Resources (RCDWR) ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal. Pursuant to AB939, the County prepared the 1996 Countywide Integrated Waste Management Plan (CIWMP) in collaboration with its cities to ensure a coordinated effort at solid waste reduction and landfilling. The 15-year projection of disposal capacity is prepared each year as part of the annual reporting requirements for the CIWMP. The most recent 2019 Annual Summary has a 19-years of disposal capacity, and no additional capacity is needed to dispose of countywide waste through 2038. Less than significant impacts are anticipated.

e) **LESS THAN SIGNIFICANT IMPACT:** The project will comply with all applicable solid waste statutes and guidelines. All development is required to comply with the mandatory commercial and multi-family recycling requirements of Assembly Bill 341. The project will also comply with the recycling requirements of Cal Green and develop a waste management plan that will include diverting at least 50% of construction and demolition material fill from landfills. No impacts are expected relative to applicable solid waste statues and regulations.

19.3 Mitigation Measures: None required.

20 - Wildfire

WILDFIRE – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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?	☐	☐	☒	☐

Sources: Rancho Mirage General Plan, 2017; Rancho Mirage General Plan EIR May, 2005; CAL FIRE High Fire Severity Zone Maps.

20.1 Setting

A wildfire is an unplanned fire that burns in a natural area such as a forest, grassland, or prairie. Wildfires are often caused by humans or lighting and are exacerbated by steep slopes, dense vegetation (fuel), and dry and windy weather conditions. When these conditions are present, a wildfire can burn quickly and over a vast area, damaging hillsides, essential infrastructure, and homes and buildings.

The City of Rancho Mirage is primarily comprised of urban and developed uses. The western and southern boundaries of the City are defined by the Santa Rosa Mountains. The undeveloped Santa Rosa Mountains are characterized by steep topographic gradients that are typically conducive to spreading wildfires. Furthermore, the region's hot, dry summer and autumn weather

is considered ideal for generating the dry vegetation that fuel most wildfires. However, wildfires in the undeveloped local mountains adjacent to the Coachella Valley cities are not common due to the mountain's natural terrain, which is steep, rocky, and dry soil. Furthermore, the Santa Rosa Mountains are made up primarily of Granitic rock and sparse desert vegetation. The topographic character of the Santa Rosa Mountains is not conducive for the growth of dense vegetation; and as a result, the amount of fuel available for wildland fires is limited. Additionally, the distance between the existing vegetation does not allow wildfires to spread easily.

A Wildland Urban Interface (WUI) is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels. People and man-made structures in WUI areas are more susceptible to the impacts of wildfires due to their adjacency to areas that provide fuel to wildfires, such as forests with dense vegetation.

The City of Rancho Mirage is situated at the base of the Santa Rosa Mountains, introducing an urban-wildland interface to the western and southern portions of the City. The project site is located on relatively flat land. As stated previously, the Santa Rosa Mountains are made up primarily of Granitic rock and sparse desert vegetation. The limited vegetative conditions on the Santa Rosa Mountains and throughout the City portion, are unlikely to cause a major wildfire. Additionally, the flat urban areas of the City are considered low wildfire areas, as indicated in the Rancho Mirage General Plan.

20.2 Discussion of Impacts:

a-d) LESS THAN SIGNIFICANT IMPACT: The project site currently resides in an urban and developed area within the City of Rancho Mirage. Areas north, west, south, and east of the project are currently characterized by residential communities, commercial businesses, and the Whitewater River Channel. The paved roadway, Peterson Road, delineates the project's western boundary. The approximately 12-acre project is located within the City of Rancho Mirage's Mobile Home Park land use and zoning designation.

According to CAL FIRE's Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas (SRA) Map, the project site is not located in an SRA or located in an area classified as very high fire hazard severity zone. Per CAL FIRE's map, the project property is located in a (incorporated) Local Responsibility Area (LRA). The project is not located in or near state responsibility areas or lands classified as very high, high or moderate fire hazard severity zones, therefore, no impacts are anticipated.

Wildfire risk is related to a number of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazards by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. According to the Riverside County General Plan, wildfire susceptibility is moderate to low in the valley and desert regions on the western and eastern sides of the Salton Sea. Methods in which developments address wildland fires hazards includes establishing setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, use of low fuel landscaping, and use of fire-resistant building techniques.

As previously stated, the project property is located in an urban and developed area of the City. Thick vegetation, which acts as wildfire fuel, does not occur in areas adjacent to the project. Additionally, the project is not located adjacent to steep slopes. The closest slope

to the project occurs approximately 0.36 miles southwest of the project, at the Santa Rosa Mountains. However, the Santa Rosa Mountains do not provide an environment conducive to wildfires because of the sparce vegetation that occurs on the slopes. Therefore, a wildfire is not expected to occur in the City and at the project site. The project site will be developed to the most current California building standards and fire code. As a result, the project site is not expected to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

The project will connect to existing water and sewer infrastructure located along Peterson Road. The proposed infrastructure would allow for a decrease of fire risk during operation of the project. The development of this infrastructure will not exacerbate fire risk or result in short- or long-term impacts to the environment. The project site will be connecting to an existing network of streets. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project is not expected to require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building. The site is located on flat ground and, as previously stated, the closest slope to the project is located approximately 0.36 miles southwest; therefore, risks associated with slope instability are not significant. As a result, the project is not expected to expose people or structures to significant risks including downslope or downstream flooding or landslides, due to runoff, post-fire slope instability, or drainage changes. Overall, less than significant impacts are anticipated.

20.3 Mitigation Measures: None required.

21 - Mandatory Findings of Significance

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

20.1 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** As concluded in the Biological and Cultural Resources sections of this document, the proposed project would result in no impacts or less than significant impacts to these resources with the implementation of mitigation. The project is compatible with the City of Rancho Mirage General Plan and Zoning and its surroundings. The project will not significantly degrade the overall quality of the region's environment, or substantially reduce the habitat of a wildlife species, case a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare of endangered plant or animal or eliminate important examples of the major periods or California history or prehistory.

Based upon the information provided within this Initial Study, approval and implementation of the project is not expected to substantially alter or degrade the quality of the environment, including biological, cultural or historical resources.

b) **LESS THAN SIGNIFICANT IMPACT:** The proposed project and its location is found to be adequate and consistent with existing federal, state, and local policies and is consistent with the City of Rancho Mirage General Plan and surrounding land use. As stated throughout, the proposed project is located in an area of Rancho Mirage that is developed. Future development in the vicinity of the project is anticipated to occur, however, developments would be consistent with the surrounding land uses, which includes residential communities to the north and south, commercial uses to the west, and the Coachella Valley Stormwater Channel to the east. The cumulative impact of project development, future development and the existing uses are anticipated to be less than significant. Approval and implementation of the proposed project would result in less than significant impacts related to cumulatively considerable impacts.

c) **LESS THAN SIGNIFICANT IMPACT:** The proposed project will not result in impacts related to environmental effects that will cause substantial adverse effects on human beings. The project has been designed to comply with established design guidelines and current building standards. The City's review process will ensure that applicable guidelines are being followed. Based upon the findings provided in this document, and mitigation measures and standard conditions incorporated into the project, less than significant impacts are expected.

21.3 Mitigation Measures: See Biological Resources and Cultural Resources discussions.

Table 9: Mitigation Monitoring and Reporting Program			
Mitigation Measure	**Responsible Agency**	**Timing**	**Verification (Date and Initials)**
AESTHETICS			
AGRICULTURAL RESOURCES			
AIR QUALITY			
BIOLOGICAL RESOURCES			
BIO-1: If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.	City Planning Department Project Applicant/ Developer CVCC	Prior to construction and issuance of any grading permit	
CULTURAL RESOURCES			
CUL-1: Prior to the start of construction, a cultural resources management plan (CRMP) should be	City Planning Department	During any ground	

prepared and implemented. It is recommended the Project's CRMP implement the following procedures: • Archaeological monitoring during all ground-disturbance activities, such as site preparation, demolition of historic structures, and grading up to 5 feet below surface, in order to quickly identify and assess any discoveries of cultural resources during Project implementation. • Development of an inadvertent discovery plan in place to expediently address archaeological and / or tribal cultural resource discoveries should these be encountered during any phase of development associated with the Project. If these resources are inadvertently discovered during ground disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the appropriate regulatory agency/agencies.	Qualified Archaeologist Project Applicant/ Developer	disturbing activities	
GEOLOGY AND SOILS			
GEO-1 The applicant shall comply with all recommendations set forth in the Geotechnical Investigation prepared for the project (Appendix C) during the construction	City Planning Department Project Applicant/ Developer	Prior to and during any ground disturbing activities	
GEO-2 If paleontological materials are discovered during grading or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified paleontologist can assess the nature and significance of the find. Project personnel shall not collect or move any paleontological materials. To the extent feasible, project activities shall avoid these deposits.	City Planning Department Qualified Paleontologist Project Applicant/ Developer	During any ground disturbing activities	
GREENHOUSE GAS EMISSIONS			
HAZARDS AND HAZARDOUS MATERIALS			
HYDROLOGY AND WATER QUALITY			
LAND USE AND PLANNING			
MINERAL RESOURCES			

NOISE			
POPULATION AND HOUSING			
PUBLIC SERVICES			
RECREATION			
TRANSPORTATION/TRAFFIC			
TRIBAL CULTURAL RESOURCES			
TCR-1: Prior to the start of construction, a cultural resources inventory of the project should be conducted by a qualified archaeologist.	City Planning Department Qualified Archaeologist Project Applicant/ Developer	Prior any ground disturbing activities	
TCR-2: The Agua Caliente Band of Cahuilla Indians must be notified a minimum of 30 days prior to any earth-moving activities including grading, grubbing, trenching, or excavations at the site. All earth-moving activities including grading, grubbing, trenching, or excavations at the site shall be monitored by a qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s).	City Planning Department Qualified Archaeologist Project Applicant/ Developer	Prior and during any ground disturbing activities	
TCR-3: A qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor(s) shall provide preconstruction training for all earthmoving construction personnel prior to the start of any ground-disturbing activities, regarding how to recognize the types of Tribal Cultural Resources and/or archaeological resources that may be encountered and to instruct personnel about actions to be taken in the event of a discovery. Should cultural materials be discovered, they shall be recorded and evaluated in the field. The monitors shall be prepared to recover artifacts to avoid construction delays but must have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered. If artifacts are discovered, these shall be cataloged and analyzed. The archaeologist and monitor shall determine and implement the best course of action for the treatment and disposition of the	City Planning Department Qualified Archaeologist Project Applicant/ Developer	During any ground disturbing activities	

artifacts. Preservation in place of the cultural resources is the preferred course of action. If deemed necessary by the qualified archaeologist and approved Agua Caliente Native American Cultural Resource Monitor, the artifacts shall be prepared for permanent curation in a repository with permanent storage. Only non-destructive methods shall be allowed in regards to Tribal Cultural Resources. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the California Historical Resources Information System.			
TCR-4: In the unexpected event human remains are uncovered during construction activities, all construction work taking place within the vicinity of the discovered remains must cease and the necessary steps to ensure the integrity of the immediate area must be taken. The County Coroner must be notified within 24 hours of the discovery of human remains. If the remains discovered are determined by the Coroner to be of Native American descent, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would in turn contact the Most Likely Descendant (MLD) would determine further action to be taken. The MLD would have 48 hours to access the site and make a recommendation regarding disposition of the remains.	City Planning Department Project Applicant/ Developer	During any ground disturbing activities	
UTILITIES AND SERVICE SYSTEMS			

CHAPTER 3: REFERENCES

Alquist-Priolo Earthquake Fault Zoning (AP) Act, California Department of Conservation

Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan, by the California Air Resources Board, February 2010

CAL FIRE High Fire Severity Zone Maps

California Emissions Estimator Model (CalEEMod) Version 2022.1.1.21, California Air Pollution Officers Association (CAPCOA) and California Air Districts.

California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators, 2021 Edition, California Air Resources Board

California Health and Safety Code Section 7050.5, Human Remains

City of Rancho Mirage Active Transportation Guidelines and Best Practices, July 2019

City of Rancho Mirage Fire and Police Department Website

City of Rancho Mirage Vehicle Miles Traveled Transportation Analysis Policy, February 2021

Cultural Resources Assessment, Material Culture Consulting, April 2024.

Department of Finance E-5 City/County Population and Housing Estimates, 2023

Enforcement and Compliance Fault Zoning Act, California Department of Conservation

Enforcement and Compliance History Online, EPA, 2024

EnviroStor, Department of Toxic Substances Control, 2024

Farmland Mapping and Monitoring Program, California Department of Conservation

Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP), by SCAQMD, August 2003

Final 2022 Air Quality Management Plan (AQMP), by SCAQMD, December 2022.

Flood Insurance Rate Map # 06065C1595G, Federal Emergency Management Agency (FEMA), Effective August 28, 2008

GeoTracker, State Water Resources Control Board, 2024

Greenhouse Gas Inventory, Rancho Mirage, 2012

Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis Report, ELMT Consulting, February 2024.

Mineral Land Classification Map, Riverside County, 2007

Paleontological Resources Assessment, Material Culture Consulting, April 2024.

Phase I Environmental Site Assessment, Weis Environmental, LLC, April 2024.

Police Officer Kyle Albenesius, 2022

Preliminary Geotechnical Investigation, Geocon, April 2024

PSUSD Fee Justification Study, 2022

Public Resource Code Section 21074

Rancho Mirage General Plan, 2017

Rancho Mirage General Plan EIR, 2005

Rancho Mirage Municipal Code

Release No. 18-37 & 19-35, California Air Resources Board Press Release, July 2018 and August 2019

Riverside County General Plan, 2016

Riverside County General Plan Geotechnical Report, 2000

South Coast AQMD Rule Book

State Scenic Highways, California Department of Transportation (Caltrans), 2024

Sustainability Plan, Rancho Mirage, 2012

Transportation Analysis and Guidelines for Level of Service Vehicle Miles Traveled, December 2021

Vehicle Miles Traveled Evaluation, Trames Solutions, Inc., May 2024.

Water Quality Control Plan for the Colorado River Basin Region, January 2019

2020 Coachella Valley Regional Urban Water Management Plan, June 2021

2020 Regional Urban Water Management Plan

CHAPTER 4: APPENDICES

Appendix A	California Emissions Estimator Model (CalEEMod) Version 2022.1.1.21
Appendix B	Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis Report, ELMT Consulting
Appendix C	Cultural Resources Assessment, Material Culture Consulting
Appendix D	Preliminary Geotechnical Investigation, Geocon
Appendix E	Paleontological Resources Assessment, Material Culture Consulting
Appendix F	Phase I Environmental Site Assessment, Weis Environmental, LLC.
Appendix G	Vehicle Miles Traveled Evaluation, Trames Solutions, Inc.

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PETERSON ROAD

RANCHO MIRAGE

Initial Study
Mitigated Negative Declaration
Appendix

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Rancho Mirage, California 92270

Prepared by:

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September 2024

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PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix A
CalEEMod

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The Crossing at Peterson Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	The Crossing at Peterson
Construction Start Date	10/1/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	0.80
Location	33.76204079144247, -116.43711124315811
County	Riverside-Salton Sea
City	Rancho Mirage
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5621
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Low Rise	120	Dwelling Unit	3.82	127,200	0.00	—	220	Multi-Family Dwelling Units
Other Asphalt Surfaces	8.10	Acre	8.10	0.00	172,918	—	—	Parking/Hardscape/Landscaping
General Office Building	3.58	1000sqft	0.08	3,580	0.00	—	—	Clubhouse

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-9	Use Dust Suppressants
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Energy	E-2	Require Energy Efficient Appliances

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.71	46.6	10.5	18.7	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,624	3,624	0.14	0.10	3.70	3,660
Mit.	1.71	46.6	10.5	18.7	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,624	3,624	0.14	0.10	3.70	3,660
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	4.17	46.5	38.3	32.3	0.11	1.47	12.2	13.3	1.36	4.35	5.72	—	14,553	14,553	0.30	1.80	0.63	15,095
Mit.	4.17	46.5	38.3	32.3	0.11	1.47	12.2	13.3	1.36	4.35	5.72	—	14,553	14,553	0.30	1.80	0.63	15,095
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18	2.79	7.54	12.2	0.02	0.27	1.30	1.51	0.25	0.38	0.57	—	2,532	2,532	0.08	0.16	1.14	2,556
Mit.	1.18	2.79	7.54	12.2	0.02	0.27	1.30	1.51	0.25	0.38	0.57	—	2,532	2,532	0.08	0.16	1.14	2,556
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.51	1.38	2.24	< 0.005	0.05	0.24	0.28	0.05	0.07	0.10	—	419	419	0.01	0.03	0.19	423
Mit.	0.22	0.51	1.38	2.24	< 0.005	0.05	0.24	0.28	0.05	0.07	0.10	—	419	419	0.01	0.03	0.19	423
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.71	1.46	10.5	18.7	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,624	3,624	0.14	0.10	3.70	3,660
2027	0.21	46.6	0.89	2.16	< 0.005	0.02	0.16	0.18	0.02	0.04	0.05	—	307	307	0.01	0.01	0.51	309
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.17	3.48	38.3	32.3	0.11	1.47	12.2	13.3	1.36	4.35	5.72	—	14,553	14,553	0.30	1.80	0.63	15,095
2026	1.64	1.39	10.6	16.4	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,494	3,494	0.12	0.10	0.10	3,526

2027	1.57	46.5	10.1	16.2	0.03	0.34	0.88	1.23	0.31	0.21	0.53	—	3,471	3,471	0.12	0.09	0.09	3,502
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.64	0.53	5.78	4.82	0.01	0.21	1.30	1.51	0.20	0.38	0.57	—	1,907	1,907	0.05	0.16	0.97	1,959
2026	1.18	1.01	7.54	12.2	0.02	0.27	0.63	0.90	0.25	0.15	0.40	—	2,532	2,532	0.08	0.07	1.14	2,556
2027	0.22	2.79	1.43	2.36	< 0.005	0.05	0.10	0.16	0.05	0.02	0.07	—	458	458	0.02	0.01	0.17	461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	1.06	0.88	< 0.005	0.04	0.24	0.28	0.04	0.07	0.10	—	316	316	0.01	0.03	0.16	324
2026	0.22	0.18	1.38	2.24	< 0.005	0.05	0.12	0.17	0.05	0.03	0.07	—	419	419	0.01	0.01	0.19	423
2027	0.04	0.51	0.26	0.43	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	75.8	75.8	< 0.005	< 0.005	0.03	76.4

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.71	1.46	10.5	18.7	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,624	3,624	0.14	0.10	3.70	3,660
2027	0.21	46.6	0.89	2.16	< 0.005	0.02	0.16	0.18	0.02	0.04	0.05	—	307	307	0.01	0.01	0.51	309
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.17	3.48	38.3	32.3	0.11	1.47	12.2	13.3	1.36	4.35	5.72	—	14,553	14,553	0.30	1.80	0.63	15,095
2026	1.64	1.39	10.6	16.4	0.03	0.38	0.88	1.27	0.35	0.21	0.56	—	3,494	3,494	0.12	0.10	0.10	3,526
2027	1.57	46.5	10.1	16.2	0.03	0.34	0.88	1.23	0.31	0.21	0.53	—	3,471	3,471	0.12	0.09	0.09	3,502
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.64	0.53	5.78	4.82	0.01	0.21	1.30	1.51	0.20	0.38	0.57	—	1,907	1,907	0.05	0.16	0.97	1,959
2026	1.18	1.01	7.54	12.2	0.02	0.27	0.63	0.90	0.25	0.15	0.40	—	2,532	2,532	0.08	0.07	1.14	2,556

2027	0.22	2.79	1.43	2.36	< 0.005	0.05	0.10	0.16	0.05	0.02	0.07	—	458	458	0.02	0.01	0.17	461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	1.06	0.88	< 0.005	0.04	0.24	0.28	0.04	0.07	0.10	—	316	316	0.01	0.03	0.16	324
2026	0.22	0.18	1.38	2.24	< 0.005	0.05	0.12	0.17	0.05	0.03	0.07	—	419	419	0.01	0.01	0.19	423
2027	0.04	0.51	0.26	0.43	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	75.8	75.8	< 0.005	< 0.005	0.03	76.4

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	39.6	38.8	7.08	110	0.26	8.68	8.64	17.3	8.52	2.19	10.7	1,163	14,203	15,366	7.78	0.52	30.1	15,747
Mit.	39.6	38.8	7.08	110	0.26	8.68	8.64	17.3	8.52	2.19	10.7	1,163	14,175	15,338	7.78	0.52	30.1	15,719
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	38.2	37.5	7.37	89.0	0.25	8.68	8.64	17.3	8.52	2.19	10.7	1,163	13,017	14,180	7.80	0.54	1.68	14,536
Mit.	38.2	37.5	7.37	89.0	0.25	8.68	8.64	17.3	8.52	2.19	10.7	1,163	12,989	14,152	7.79	0.54	1.68	14,509
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.99	8.46	4.47	36.4	0.10	0.69	7.73	8.43	0.68	1.96	2.64	116	10,463	10,579	4.63	0.44	12.2	10,839
Mit.	5.99	8.46	4.47	36.4	0.10	0.69	7.73	8.43	0.68	1.96	2.64	116	10,435	10,552	4.63	0.44	12.2	10,811
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.09	1.54	0.82	6.64	0.02	0.13	1.41	1.54	0.12	0.36	0.48	19.2	1,732	1,752	0.77	0.07	2.02	1,795
Mit.	1.09	1.54	0.82	6.64	0.02	0.13	1.41	1.54	0.12	0.36	0.48	19.2	1,728	1,747	0.77	0.07	2.02	1,790
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Area	35.4	35.0	2.56	68.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,167	3,291	3.35	0.04	—	3,387
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,523	1,523	0.14	0.01	—	1,530
Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Total	39.6	38.8	7.08	110	0.26	8.68	8.64	17.3	8.52	2.19	10.7	1,163	14,203	15,366	7.78	0.52	30.1	15,747
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Area	34.8	34.4	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,523	1,523	0.14	0.01	—	1,530
Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92

Total	38.2	37.5	7.37	89.0	0.25	8.68	8.64	17.3	8.52	2.19	10.7	1,163	13,017	14,180	7.80	0.54	1.68	14,536
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.22	2.90	3.72	28.5	0.09	0.06	7.73	7.79	0.06	1.96	2.02	—	8,750	8,750	0.31	0.40	11.3	8,889
Area	2.71	5.53	0.20	7.62	0.01	0.59	—	0.59	0.58	—	0.58	77.0	156	233	0.23	< 0.005	—	240
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,523	1,523	0.14	0.01	—	1,530
Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Total	5.99	8.46	4.47	36.4	0.10	0.69	7.73	8.43	0.68	1.96	2.64	116	10,463	10,579	4.63	0.44	12.2	10,839
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472
Area	0.49	1.01	0.04	1.39	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	25.9	38.6	0.04	< 0.005	—	39.7
Energy	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	252	252	0.02	< 0.005	—	253
Water	—	—	—	—	—	—	—	—	—	—	—	1.70	5.62	7.32	0.17	< 0.005	—	12.9
Waste	—	—	—	—	—	—	—	—	—	—	—	4.79	0.00	4.79	0.48	0.00	—	16.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	1.09	1.54	0.82	6.64	0.02	0.13	1.41	1.54	0.12	0.36	0.48	19.2	1,732	1,752	0.77	0.07	2.02	1,795

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Area	35.4	35.0	2.56	68.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,167	3,291	3.35	0.04	—	3,387
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,495	1,495	0.14	0.01	—	1,502

Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Total	39.6	38.8	7.08	110	0.26	8.68	8.64	17.3	8.52	2.19	10.7	1,163	14,175	15,338	7.78	0.52	30.1	15,719
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Area	34.8	34.4	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,495	1,495	0.14	0.01	—	1,502
Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Total	38.2	37.5	7.37	89.0	0.25	8.68	8.64	17.3	8.52	2.19	10.7	1,163	12,989	14,152	7.79	0.54	1.68	14,509
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.22	2.90	3.72	28.5	0.09	0.06	7.73	7.79	0.06	1.96	2.02	—	8,750	8,750	0.31	0.40	11.3	8,889
Area	2.71	5.53	0.20	7.62	0.01	0.59	—	0.59	0.58	—	0.58	77.0	156	233	0.23	< 0.005	—	240
Energy	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,495	1,495	0.14	0.01	—	1,502
Water	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Waste	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Total	5.99	8.46	4.47	36.4	0.10	0.69	7.73	8.43	0.68	1.96	2.64	116	10,435	10,552	4.63	0.44	12.2	10,811
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472
Area	0.49	1.01	0.04	1.39	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	25.9	38.6	0.04	< 0.005	—	39.7
Energy	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	248	248	0.02	< 0.005	—	249
Water	—	—	—	—	—	—	—	—	—	—	—	1.70	5.62	7.32	0.17	< 0.005	—	12.9
Waste	—	—	—	—	—	—	—	—	—	—	—	4.79	0.00	4.79	0.48	0.00	—	16.8

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	1.09	1.54	0.82	6.64	0.02	0.13	1.41	1.54	0.12	0.36	0.48	19.2	1,728	1,747	0.77	0.07	2.02	1,790

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	9.15	9.15	—	1.39	1.39	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.09	< 0.005	0.05	—	0.05	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.50	0.50	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2

Demolitio	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	0.01	0.01	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.32	0.21	13.2	2.91	0.07	0.21	2.92	3.13	0.21	0.75	0.96	—	10,996	10,996	0.10	1.76	0.62	11,525
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	7.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.71	0.16	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	602	602	0.01	0.10	0.56	632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.13	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	99.7	99.7	< 0.005	0.02	0.09	105

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	9.15	9.15	—	1.39	1.39	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.09	< 0.005	0.05	—	0.05	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.50	0.50	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	0.01	0.01	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.32	0.21	13.2	2.91	0.07	0.21	2.92	3.13	0.21	0.75	0.96	—	10,996	10,996	0.10	1.76	0.62	11,525
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	7.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.71	0.16	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	602	602	0.01	0.10	0.56	632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.13	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	99.7	99.7	< 0.005	0.02	0.09	105

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.69	7.69	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.09	0.87	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.71	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	154	154	0.01	0.01	0.02	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.10	6.59	1.46	0.04	0.11	1.46	1.57	0.11	0.37	0.48	—	5,500	5,500	0.05	0.88	0.31	5,764
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.50	4.50	< 0.005	< 0.005	0.01	4.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.18	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	< 0.005	0.02	0.14	158
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.69	7.69	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.71	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	154	154	0.01	0.01	0.02	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.10	6.59	1.46	0.04	0.11	1.46	1.57	0.11	0.37	0.48	—	5,500	5,500	0.05	0.88	0.31	5,764
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.50	4.50	< 0.005	< 0.005	0.01	4.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.18	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	< 0.005	0.02	0.14	158
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.9	24.9	< 0.005	< 0.005	0.02	26.2

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.44	2.33	0.01	0.10	—	0.10	0.09	—	0.09	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.81	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	176	176	0.01	0.01	0.02	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.05	3.17	0.70	0.02	0.05	0.70	0.75	0.05	0.18	0.23	—	2,642	2,642	0.02	0.42	0.15	2,769
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.03	15.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.26	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	217	217	< 0.005	0.03	0.20	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.55	2.55	< 0.005	< 0.005	< 0.005	2.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.9	35.9	< 0.005	0.01	0.03	37.7

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622

Dust From Material Movement	—	—	—	—	—	—	3.60	3.60	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.44	2.33	0.01	0.10	—	0.10	0.09	—	0.09	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.81	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	176	176	0.01	0.01	0.02	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.05	3.17	0.70	0.02	0.05	0.70	0.75	0.05	0.18	0.23	—	2,642	2,642	0.02	0.42	0.15	2,769

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.03	15.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.26	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	217	217	< 0.005	0.03	0.20	228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.55	2.55	< 0.005	< 0.005	< 0.005	2.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.9	35.9	< 0.005	0.01	0.03	37.7

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.5	23.5	< 0.005	< 0.005	—	23.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.88	3.88	< 0.005	< 0.005	—	3.90
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.32	0.36	3.54	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	768	768	0.04	0.03	0.08	779
Vendor	0.02	0.01	0.42	0.19	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	350	350	< 0.005	0.05	0.02	364
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.03	8.03	< 0.005	< 0.005	0.01	8.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.42	3.42	< 0.005	< 0.005	< 0.005	3.57
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.35
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.59
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.5	23.5	< 0.005	< 0.005	—	23.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.88	3.88	< 0.005	< 0.005	—	3.90
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.32	0.36	3.54	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	768	768	0.04	0.03	0.08	779
Vendor	0.02	0.01	0.42	0.19	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	350	350	< 0.005	0.05	0.02	364
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.03	8.03	< 0.005	< 0.005	0.01	8.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.42	3.42	< 0.005	< 0.005	< 0.005	3.57
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.35
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.59
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.38	0.31	5.57	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	883	883	0.04	0.03	2.81	897
Vendor	0.02	0.01	0.38	0.17	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	343	343	< 0.005	0.05	0.89	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.31	0.33	3.28	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	753	753	0.02	0.03	0.07	763
Vendor	0.02	0.01	0.40	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	344	344	< 0.005	0.05	0.02	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.22	2.86	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	574	574	0.01	0.02	0.87	582
Vendor	0.01	0.01	0.28	0.13	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	245	245	< 0.005	0.03	0.27	256
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.14	96.3
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.6	40.6	< 0.005	0.01	0.05	42.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.38	0.31	5.57	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	883	883	0.04	0.03	2.81	897
Vendor	0.02	0.01	0.38	0.17	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	343	343	< 0.005	0.05	0.89	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.34	0.31	0.33	3.28	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	753	753	0.02	0.03	0.07	763
Vendor	0.02	0.01	0.40	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	344	344	< 0.005	0.05	0.02	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.22	2.86	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	574	574	0.01	0.02	0.87	582
Vendor	0.01	0.01	0.28	0.13	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	245	245	< 0.005	0.03	0.27	256
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.14	96.3
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.6	40.6	< 0.005	0.01	0.05	42.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	239	239	0.01	< 0.005	—	240
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.6	39.6	< 0.005	< 0.005	—	39.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.30	3.05	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	738	738	0.02	0.03	0.07	748
Vendor	0.02	0.01	0.39	0.17	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	336	336	< 0.005	0.04	0.02	350
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.7	78.7	< 0.005	< 0.005	0.11	79.7
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.5	33.5	< 0.005	< 0.005	0.04	34.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.02	13.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.55	5.55	< 0.005	< 0.005	0.01	5.78
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	239	239	0.01	< 0.005	—	240
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.6	39.6	< 0.005	< 0.005	—	39.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.30	3.05	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	738	738	0.02	0.03	0.07	748
Vendor	0.02	0.01	0.39	0.17	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	336	336	< 0.005	0.04	0.02	350
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.7	78.7	< 0.005	< 0.005	0.11	79.7
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.5	33.5	< 0.005	< 0.005	0.04	34.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.02	13.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.55	5.55	< 0.005	< 0.005	0.01	5.78
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516

Paving	—	1.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.52	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	126	126	< 0.005	0.01	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.40	7.40	< 0.005	< 0.005	0.01	7.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	1.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.52	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	126	126	< 0.005	0.01	0.01	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.40	7.40	< 0.005	< 0.005	0.01	7.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.04	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	173	173	< 0.005	0.01	0.51	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.01	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.01	8.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.04	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	173	173	< 0.005	0.01	0.51	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.01	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.01	8.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.11	3.75	3.98	41.4	0.10	0.07	8.64	8.71	0.07	2.19	2.26	—	10,479	10,479	0.34	0.45	29.2	10,650
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.41	3.05	4.34	27.7	0.09	0.07	8.64	8.71	0.07	2.19	2.26	—	9,312	9,312	0.36	0.46	0.76	9,459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.59	0.53	0.68	5.21	0.02	0.01	1.41	1.42	0.01	0.36	0.37	—	1,449	1,449	0.05	0.07	1.87	1,472

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	779	779	0.07	0.01	—	784
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59.2	59.2	0.01	< 0.005	—	59.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	839	839	0.08	0.01	—	843
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	779	779	0.07	0.01	—	784
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59.2	59.2	0.01	< 0.005	—	59.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	839	839	0.08	0.01	—	843
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	129	129	0.01	< 0.005	—	130
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.81	9.81	< 0.005	< 0.005	—	9.86
Total	—	—	—	—	—	—	—	—	—	—	—	—	139	139	0.01	< 0.005	—	140

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	752	752	0.07	0.01	—	756

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59.2	59.2	0.01	< 0.005	—	59.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	811	811	0.08	0.01	—	816
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	752	752	0.07	0.01	—	756
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59.2	59.2	0.01	< 0.005	—	59.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	811	811	0.08	0.01	—	816
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	124	124	0.01	< 0.005	—	125
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9.80	9.80	< 0.005	< 0.005	—	9.86
Total	—	—	—	—	—	—	—	—	—	—	—	—	134	134	0.01	< 0.005	—	135

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.06	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	653	653	0.06	< 0.005	—	654
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.7	31.7	< 0.005	< 0.005	—	31.7
Total	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.06	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	653	653	0.06	< 0.005	—	654
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.7	31.7	< 0.005	< 0.005	—	31.7
Total	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.01	0.01	0.09	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	0.01	< 0.005	—	108
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.24	5.24	< 0.005	< 0.005	—	5.25
Total	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	113	113	0.01	< 0.005	—	114

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.06	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	653	653	0.06	< 0.005	—	654
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.7	31.7	< 0.005	< 0.005	—	31.7
Total	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.06	0.03	0.51	0.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	653	653	0.06	< 0.005	—	654
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.7	31.7	< 0.005	< 0.005	—	31.7

Total	0.06	0.03	0.54	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.01	0.01	0.09	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	0.01	< 0.005	—	108
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.24	5.24	< 0.005	< 0.005	—	5.25
Total	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	113	113	0.01	< 0.005	—	114

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	34.8	31.3	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Consumer Products	—	2.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.62	0.07	6.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.9
Total	35.4	35.0	2.56	68.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,167	3,291	3.35	0.04	—	3,387

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	34.8	31.3	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Consumer Products	—	2.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	34.8	34.4	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.43	0.39	0.03	0.76	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	24.4	37.1	0.04	< 0.005	—	38.2
Consumer Products	—	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	0.01	0.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.54	1.54	< 0.005	< 0.005	—	1.54
Total	0.49	1.01	0.04	1.39	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	25.9	38.6	0.04	< 0.005	—	39.7

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	34.8	31.3	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368

Consumer	—	2.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.62	0.07	6.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.9
Total	35.4	35.0	2.56	68.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,167	3,291	3.35	0.04	—	3,387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	34.8	31.3	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Consumer Products	—	2.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	34.8	34.4	2.49	61.0	0.16	8.57	—	8.57	8.41	—	8.41	1,124	2,148	3,272	3.35	0.04	—	3,368
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.43	0.39	0.03	0.76	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	24.4	37.1	0.04	< 0.005	—	38.2
Consumer Products	—	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	0.01	0.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.54	1.54	< 0.005	< 0.005	—	1.54
Total	0.49	1.01	0.04	1.39	< 0.005	0.11	—	0.11	0.11	—	0.11	12.7	25.9	38.6	0.04	< 0.005	—	39.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	9.04	21.2	30.2	0.93	0.02	—	60.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	9.91	9.91	< 0.005	< 0.005	—	9.96
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.22	2.86	4.08	0.13	< 0.005	—	8.11
Total	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	9.04	21.2	30.2	0.93	0.02	—	60.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	9.91	9.91	< 0.005	< 0.005	—	9.96
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.22	2.86	4.08	0.13	< 0.005	—	8.11
Total	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	1.50	3.51	5.01	0.15	< 0.005	—	9.95
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.64	1.64	< 0.005	< 0.005	—	1.65
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.20	0.47	0.68	0.02	< 0.005	—	1.34
Total	—	—	—	—	—	—	—	—	—	—	—	1.70	5.62	7.32	0.17	< 0.005	—	12.9

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	9.04	21.2	30.2	0.93	0.02	—	60.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	9.91	9.91	< 0.005	< 0.005	—	9.96
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.22	2.86	4.08	0.13	< 0.005	—	8.11
Total	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	9.04	21.2	30.2	0.93	0.02	—	60.1

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	9.91	9.91	< 0.005	< 0.005	—	9.96
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.22	2.86	4.08	0.13	< 0.005	—	8.11
Total	—	—	—	—	—	—	—	—	—	—	—	10.3	34.0	44.2	1.06	0.03	—	78.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1.50	3.51	5.01	0.15	< 0.005	—	9.95
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	1.64	1.64	< 0.005	< 0.005	—	1.65
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.20	0.47	0.68	0.02	< 0.005	—	1.34
Total	—	—	—	—	—	—	—	—	—	—	—	1.70	5.62	7.32	0.17	< 0.005	—	12.9

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	95.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.79	0.00	1.79	0.18	0.00	—	6.28
Total	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	95.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.79	0.00	1.79	0.18	0.00	—	6.28
Total	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.49	0.00	4.49	0.45	0.00	—	15.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.30	0.00	0.30	0.03	0.00	—	1.04
Total	—	—	—	—	—	—	—	—	—	—	—	4.79	0.00	4.79	0.48	0.00	—	16.8

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	95.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.79	0.00	1.79	0.18	0.00	—	6.28
Total	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	95.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.79	0.00	1.79	0.18	0.00	—	6.28
Total	—	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.49	0.00	4.49	0.45	0.00	—	15.7
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.30	0.00	0.30	0.03	0.00	—	1.04

Total	—	—	—	—	—	—	—	—	—	—	—	4.79	0.00	4.79	0.48	0.00	—	16.8

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	10/29/2025	5.00	20.0	Asphalt Demolition
Site Preparation	Site Preparation	10/30/2025	11/13/2025	5.00	10.0	—
Grading	Grading	11/14/2025	12/26/2025	5.00	30.0	—
Building Construction	Building Construction	12/27/2025	2/20/2027	5.00	300	—
Paving	Paving	2/21/2027	3/21/2027	5.00	20.0	—
Architectural Coating	Architectural Coating	3/22/2027	4/19/2027	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	161	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	80.7	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	38.8	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—

Building Construction	Worker	87.5	12.8	LDA,LDT1,LDT2
Building Construction	Vendor	13.4	8.33	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.8	LDA,LDT1,LDT2
Paving	Vendor	—	8.33	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.5	12.8	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.33	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	161	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	80.7	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	38.8	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	87.5	12.8	LDA,LDT1,LDT2
Building Construction	Vendor	13.4	8.33	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.8	LDA,LDT1,LDT2
Paving	Vendor	—	8.33	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	17.5	12.8	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.33	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	257,580	85,860	5,370	1,790	21,168

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	12,906	—
Site Preparation	—	6,453	15.0	0.00	—
Grading	—	9,300	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	8.10

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%
Other Asphalt Surfaces	8.10	100%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005
2027	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	878	977	754	319,239	10,986	12,217	9,425	3,992,704
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	878	977	754	319,239	10,986	12,217	9,425	3,992,704
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	6
Gas Fireplaces	102
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	12
Conventional Wood Stoves	0
Catalytic Wood Stoves	6
Non-Catalytic Wood Stoves	6
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	6
Gas Fireplaces	102
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	12
Conventional Wood Stoves	0
Catalytic Wood Stoves	6
Non-Catalytic Wood Stoves	6
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
257580	85,860	5,370	1,790	21,168

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	821,615	346	0.0330	0.0040	2,036,427
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
General Office Building	62,447	346	0.0330	0.0040	98,760

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	792,675	346	0.0330	0.0040	2,036,427
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
General Office Building	62,415	346	0.0330	0.0040	98,760

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	4,718,158	0.00
Other Asphalt Surfaces	0.00	3,244,912
General Office Building	636,287	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	4,718,158	0.00
Other Asphalt Surfaces	0.00	3,244,912
General Office Building	636,287	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	50.4	—
Other Asphalt Surfaces	0.00	—
General Office Building	3.33	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	50.4	—
Other Asphalt Surfaces	0.00	—
General Office Building	3.33	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.4	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	6.45
AQ-DPM	10.4
Drinking Water	48.5
Lead Risk Housing	15.5

Pesticides	12.6
Toxic Releases	2.00
Traffic	71.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	8.76
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	22.9
Cardio-vascular	19.9
Low Birth Weights	45.9
Socioeconomic Factor Indicators	—
Education	38.1
Housing	60.9
Linguistic	24.8
Poverty	52.4
Unemployment	52.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	47.69665084
Employed	6.274862056
Median HI	34.1973566

Education	—
Bachelor's or higher	60.87514436
High school enrollment	100
Preschool enrollment	83.27986655
Transportation	—
Auto Access	58.83485179
Active commuting	32.27255229
Social	—
2-parent households	87.34761966
Voting	71.03811113
Neighborhood	—
Alcohol availability	85.0891826
Park access	27.34505325
Retail density	44.12934685
Supermarket access	31.64378288
Tree canopy	18.95290645
Housing	—
Homeownership	53.93301681
Housing habitability	71.28191967
Low-inc homeowner severe housing cost burden	68.00975234
Low-inc renter severe housing cost burden	44.18067496
Uncrowded housing	84.29359682
Health Outcomes	—
Insured adults	32.06723983
Arthritis	0.0
Asthma ER Admissions	85.4
High Blood Pressure	0.0

Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	42.3
Cognitively Disabled	48.3
Physically Disabled	38.4
Heart Attack ER Admissions	75.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	92.9
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	97.3
Elderly	1.5
English Speaking	79.2
Foreign-born	26.9
Outdoor Workers	71.4

Climate Change Adaptive Capacity	—
Impervious Surface Cover	51.4
Traffic Density	35.3
Traffic Access	23.0
Other Indices	—
Hardship	37.1
Other Decision Support	—
2016 Voting	89.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	47.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	The population total of 220 is based on the CADF May 2024 household size of 1.83 PPH for the City of Rancho Mirage. The asphalt surfaces include parking, hardscape, and landscaping. The general office building corresponds to the on-site clubhouse and administration facility and is included to calculate the construction, energy use, and architectural coatings. Residential lot acreage is adjusted to the approximate site footprint, while building area remains default. The total landscaping area of approximately 172,918 SF is factored as part of the parking, hardscape and landscaping calculations land use.
Construction: Construction Phases	Demolition will be limited to asphalt and hardscape removal from former uses.
Operations: Vehicle Data	Trip generation for clubhouse is nullified since it will be for on-site residents. The land use is included in CalEEMod to account for the construction, energy use, and architectural coating emissions.
Operations: Water and Waste Water	Outdoor water use is accounted for based on a total landscaped area of approximately 172,918 SF as a component of the parking lot and hardscape uses.

PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix B
Biology Report

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February 28, 2024

BLIEU COMPANIES LLC
Attention: *Mark Irving*
2000 East Fourth Street, Suite 205
Santa Ana, CA 92706

SUBJECT: **Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis (CVMSHCP) Report for the Proposed Crossings on Peterson Road Project located within Assessor Parcel Number (APN) 689-180-012 in the City of Rancho Mirage, Riverside County, California**

Introduction

This report contains the findings of ELMT Consulting's biological resources assessment for the proposed Crossings at Rancho Mirage project located within Assessor Parcel Number (APN) 689-180-012 in the city of Rancho Mirage, Riverside County, California. ELMT biologist Jacob H. Lloyd Davies conducted a field survey and evaluated the condition of the habitat within the proposed project site on February 14, 2024. The literature review and field investigation were conducted to characterize existing site conditions and assess the probability of occurrence of special-status[1] plant and wildlife species that could pose a constraint to implementation of the project. This report provides a detailed assessment of the suitability of the on-site habitat to support special-status plant and wildlife species that were identified by the California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring in the vicinity of the proposed project site. Special attention was given to the suitability of the on-site habitat to support species protected under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), and potential jurisdictional drainage features.

Project Location

The proposed project site is generally located north and east of State Route 111 and south and west of Interstate 10 in the City of Rancho Mirage, Riverside County, California. The site is depicted on the Cathedral City quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Section 2 of Township 5 South, Range 5 East. Specifically, the approximately 12.34-acre project site is located within APN 689-180-012. Refer to Exhibits 1-3 in Attachment A.

Project Description

The project proposes the development of a 116-unit residential complex with associated recreational facilities and spaces, office spaces, a pool, and associated amenities and infrastructure. In addition, a 300-foot setback from the Whitewater River will be included to avoid potential channel backup during extreme storm events. Refer to Attachment B, *Site Plan*.

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; CVMSHCP listed species; plant species that have been designated a CNPS Rare Plant Rank; and wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species.

Methodology

Literature Review

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW's CNDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

Literature detailing biological resources previously observed in the vicinity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- CDFW 2012 Staff Report on Burrowing Owl Mitigation;
- Coachella Valley Multiple Species Habitat Conservation Plan;
- Google Earth Pro historic aerial imagery (1985-2023);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey[2]; and
- USFWS Critical Habitat designations for Threatened and Endangered Species.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. Additional recorded occurrences of these species found on or near the project site were derived from database queries. The CNDDB ArcGIS database was used, in conjunction with ArcGIS software, to locate the nearest occurrence and determine the distance from the project site.

Field Investigation

ELMT biologist Jacob H. Lloyd Davies inventoried and evaluated the extent and conditions of the plant communities found within the boundaries of the project site and a 200-foot buffer, where possible, on February 14, 2024. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area. Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography,

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Soil Series Assessment

On-site and adjoining soils were researched prior to the field visit using the USDA NRCS Soil Survey for Riverside County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes the project site has undergone.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were delineated on an aerial photograph, classified in accordance with those described in the MSHCP, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

Plants

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

Jurisdictional Drainages and Wetlands

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Topography and Soils

On-site surface elevation ranges from approximately 246 to 260 feet above mean sea level. The project site slopes gently from northwest to southeast and is relatively flat with no natural areas of significant topographic relief. Based on the USDA NRCS Soil Survey, the site is underlain by Coachella fine sand (0 to 2 percent slopes), Fluvents, and Myoma fine sand (0 to 5 percent slopes). Soils underlying the project site have been mixed and compacted by land modifications associated with historic land uses. Refer to Exhibit 4, *Soils*, in Attachment A.

Existing Site Conditions

The project site is located in a primarily developed portion of the City of Rancho Mirage along the western edge of the Whitewater River. The site is bound to the north and south by residential developments, to the east by the Whitewater River, and to the west by Peterson Road with commercial developments beyond. Adjacent portions of the Whitewater River have been modified and converted into a golf course that slows and utilizes seasonal storm flows. The site itself supports developed and undeveloped land that formerly supported a mobile home park. According to historic aerials and local records, the site and adjacent areas have not supported natural plant communities since at least 1959 and the site itself has been vacant since 2009.

Vegetation

Due to historic land uses and ongoing disturbances associated with surrounding development, no natural plant communities are supported within or adjacent to the project site. The site supports two (2) land cover types that would be classified as disturbed and developed (refer to Exhibit 5, *Vegetation*, in Attachment A). Refer to Attachment C, *Site Photographs*, for representative site photographs.

Disturbed land supported on-site is generally associated with undeveloped areas that formerly supported recreation spaces or ornamental landscaping. In addition, the eastern limits of the site that occur along the Whitewater River support ornamental landscaping and overflow areas that are infrequently flooded and scoured during extreme storm events. Vegetative density in the disturbed portions of the site varies from barren to heavily vegetated and are dominated by weedy/early successional species or ornamental landscaping species. Common plants observed in the disturbed areas of the site include saharan mustard (*Brassica tournefortii*), small datura (*Datura discolor*), whispering bells (*Emmenanthe penduliflora*), brittlebush (*Encelia farinosa*), filaree (*Erodium cicutarum & E. texanum*), climbing milkweed (*Funastrum sp.*), narrow-leaved johnstonella (*Johnstonella angustifolia*), prickly lettuce (*Lactuca serriola*), lantana (*Lantana sp.*), cheese weed (*Malva parviflora*), desert needle (*Palafoxia arida*), fountain grass (*Pennisetum setaceum*), Mediterranean grass (*Schismus sp.*), tumble mustard (*Sisymbrium altissimum*), cape ricegrass (*Stipa capensis*), and puncture vine (*Tribulus terrestris*). Ornamental trees observed on-site include weeping fig (*Ficus benjamina*), olive (*Olea europaea*), African sumac (*Searsia lancea*), salt cedar (*Tamarix sp.*), and Mexican fan palm (*Washingtonia robusta*).

The majority of the site supports developed land associated with the former mobile home park. Developed portions of the site include concrete pads, paved roads, and miscellaneous associated infrastructure. These areas tend to be unvegetated except by monocultures of especially hardy weedy/early successional species or remnant landscaping.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the project site. The discussion is to be used a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site. Therefore, no fish are expected to occur and are presumed to be absent from the site.

Amphibians

No amphibians or hydrogeomorphic features that would provide suitable habitat for amphibian species were observed within the project site. Adjacent portions of the Whitewater River receive regular irrigation to maintain golf course fairways and ornamental landscaping, which have the potential to provide limited habitat for local amphibian species that are adapted to such conditions such as red-spotted toad (*Anaxyrus punctatus*) and Woodhouse's toad (*Anaxyrus woodhousii*). However, the site itself does not retain sufficient moisture to allow for the establishment of amphibian species and amphibians would only be expected to occur incidentally while foraging in adjacent areas.

Reptiles

The project site and surrounding area provide limited foraging and cover habitat for local reptilian species adapted to development and routine anthropogenic disturbance. The only reptile observed during the field investigation was desert spiny lizard (*Sceloporus magister*). Other common reptilian species that may occur on-site include Great Basin whiptail (*Aspidoscelis tigris tigris*), red racer (*Coluber flagellum piceus*), desert iguana (*Dipsosaurus dorsalis*), and San Diego gopher snake (*Pituophis catenifer annectens*).

Birds

The project site and surrounding area provide suitable foraging and nesting habitat for avian species adapted to development and routine anthropogenic disturbance. Avian species detected during the field investigation include verdin (*Auriparus flaviceps*), red-tailed hawk (*Buteo jamaicensis*), Costa's hummingbird (*Calypte costae*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), vermilion flycatcher (*Pyrocephalus rubinus*), Say's phoebe (*Sayornis saya*), western bluebird (*Sialia mexicana*), mourning dove (*Zenaida macroura*).

Mammals

The project site and surrounding area provide limited foraging and burrowing/denning habitat for local mammalian species adapted to development and routine anthropogenic disturbance. Mammals detected and/or sign observed during the field investigation include coyote (*Canis latrans*), California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), pocket gopher (*Thomomys bottae*). In addition, while no bat species were observed during the field investigation, which was conducted

during the day, the abundant fan palms throughout and surrounding the site provide suitable roosting opportunities for local bat species.

Nesting Birds and Raptors

No active nests were observed during the field investigation; however, multiple birds exhibiting nesting behaviors such as territorial displays and materials gathering were observed. The ornamental vegetation supported by and adjacent to the project site provides suitable nesting habitat for a variety of year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments. In addition, tall trees and snags are present that provide suitable nesting opportunities for local raptors.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

In accordance with the CVMSHCP, the project site is not identified as occurring within a recognized wildlife corridor or linkage. However, the Whitewater River, which occurs adjacent to the eastern boundary of the site, supports support golf course fairways and maintained landscaping that have the potential to support local wildlife movement. Since the existing plans for the proposed project include a 300-foot setback from the Whitewater River, no impacts to the golf course fairways or landscaping supported therein are expected to occur. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented on the project site. Based on this review, no blueline

stream or riverine resources have been documented on or adjacent to the project site, including within adjacent portions of the Whitewater River. The only mapped resources in proximity to the site are the artificial ponds that are maintained in the golf course to the east.

Based on the results of the field investigation, no ephemeral drainages or wetland features are supported within the limits of disturbance for the proposed project.

As indicated by the Coachella Valley Water District, the proposed project will require a 300-foot setback in the eastern portion of the site to prevent potential channel backup during extreme storm events that would result in debris clogging downstream culverts. Since current site plans accommodate this setback, no impacts to the Whitewater River or adjacent overflow areas will occur. Therefore, development of the project will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

Special-Status Biological Resources

The CNDDB was queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Cathedral City USGS 7.5-minute quadrangle. A search of published records of these species was conducted within this quadrangle using the CDFW's CNDDB Rarefind 5 online software and CNDDB Quickview Tool. The CNPS Inventory of Rare and Endangered Vascular Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The field investigation was used to assess the ability of the plant communities found on-site to provide suitable habitat for relevant special-status plant and wildlife species.

The literature search identified thirteen (13) special-status plant species, eighteen (18) special-status wildlife species, and one (1) special-status vegetation community as having potential to occur within the Cathedral City quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the project site are presented in Attachment D, *Potentially Occurring Special-Status Biological Resources*, and discussed below.

Special-Status Plants

According to the CNDDB and CNPS, thirteen (13) special-status plant species have been recorded in the Cathedral City quadrangle (refer to Attachment D). No special-status plants were observed on the project site during the field investigation. The project site supports developed and highly disturbed land that has not supported natural plant communities since at least 1959. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that that the project site does not have the potential to support any of the special-status plant species known to occur in the area.

Special-Status Wildlife

According to the CNDDB, eighteen (18) special-status wildlife species have been reported in the Cathedral City quadrangle (refer to Attachment D). No special-status species were observed onsite. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support California horned lark (*Eremophila alpestris actia*) and

western yellow bat (*Lasiurus xanthinus*). It was further determined that the site does not have potential to support the remaining special-status wildlife species known to occur and all are presumed to be absent.

None of the aforementioned special-status wildlife species are federally or State listed as endangered or threatened. To ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to these species will be less than significant and no mitigation will be required.

Special-Status Plant Communities

The CNDDB lists one (1) special-status plant community as being identified within the Cathedral City quadrangle: Desert Fan Palm Oasis Woodland (refer to Attachment D). Based on the results of the field investigation, no special-status plant communities were observed on-site. Therefore, no special-status plant communities will be impacted by project implementation.

Critical Habitat

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located with federally designated Critical Habitat (refer to Exhibit 6, *Critical Habitat*, in Attachment A). The nearest designated Critical Habitat to the site is located approximately 0.36 miles to the southwest for Peninsular bighorn sheep (*Ovis canadensis nelson*), beyond State Route 111 and existing residential tract developments. Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed project and consultation with the USFWS will not be required.

Coachella Valley MSHCP

The proposed project was reviewed to determine consistency with the CVMSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to the CVMSHCP including conservation areas, corridors and linkages, and sand transport areas. The CVMSHCP requires that local permittees, such as the City of Cathedral City, comply with various protective measures for covered species, communities, essential ecological processes, and biological corridors. In addition, certain projects may be subject to local development mitigation fees, a Joint Project Review Process, or other conservation or implementation measures.

The project site is located within the boundaries of the CVMSHCP Area, but is not located within any Conservation Areas, Preserves, Cores, or Linkages (refer to Exhibit 7, *CVMSHCP Conservation Areas* in Attachment A). The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. According to Section 7.1 of the CVMSHCP, take authorization will be provided for certain activities that take place outside of Conservation Areas including "*new projects approved pursuant to county and city general plans, transportation improvement plans for roads in addition to those addressed in Section 7.2, master drainage plans, capital improvement plans, water and waste management plans, the County's adopted Trails Master Plan, and other plans adopted by the Permittees*."

As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to be consistent with the applicable avoidance, minimization, and mitigation measures described in Section 4.4 of the CVMSHCP. Since the proposed project is considered a Covered Activity under Section 7.1 of the CVMSHCP, no further avoidance, minimization, and mitigation measures are required, and the project is in compliance with the CVMSHCP.

The CVMSHCP identifies modeled habitat for Palm Springs pocket mouse (*Perognathus longimembris bangsi*) and Coachella Valley round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*) as occurring within the eastern limits of the project site. Based on the results of the field investigation, the project site supports developed and disturbed land that is primarily vegetated by non-native weedy species and ornamental landscaping, with no natural plant communities present. These disturbances have reduced, if not eliminated, the ability of the project site to provide suitable habitat for Palm Springs pocket mouse and Coachella Valley round-tailed ground squirrel. Therefore, no impacts to these or any other CVMSHCP Covered Species are expected to occur from project implementation.

Conclusion

Based literature review and field survey, and existing site conditions discussed in this report, implementation of the project will have no significant impacts on federally or State listed species known to occur in the general vicinity of the project site. Additionally, the project will have no effect on designated Critical Habitat or regional wildlife corridors/linkage because none exists within the area. No jurisdictional drainage and/or wetland features were observed on the project site during the field investigation. No further surveys are recommended. With completion of the recommendations provided below, no impacts to year-round, seasonal, or special-status avian residents or special-status species will occur from implementation of the proposed project.

As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to implement the applicable regulatory complinace measures described in Section 4.4 of the CVMSHCP. With implementation of these measures, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP.

Recommendations

Migratory Bird Treaty Act and Fish and Game Code

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds,

their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions regarding this proposal.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

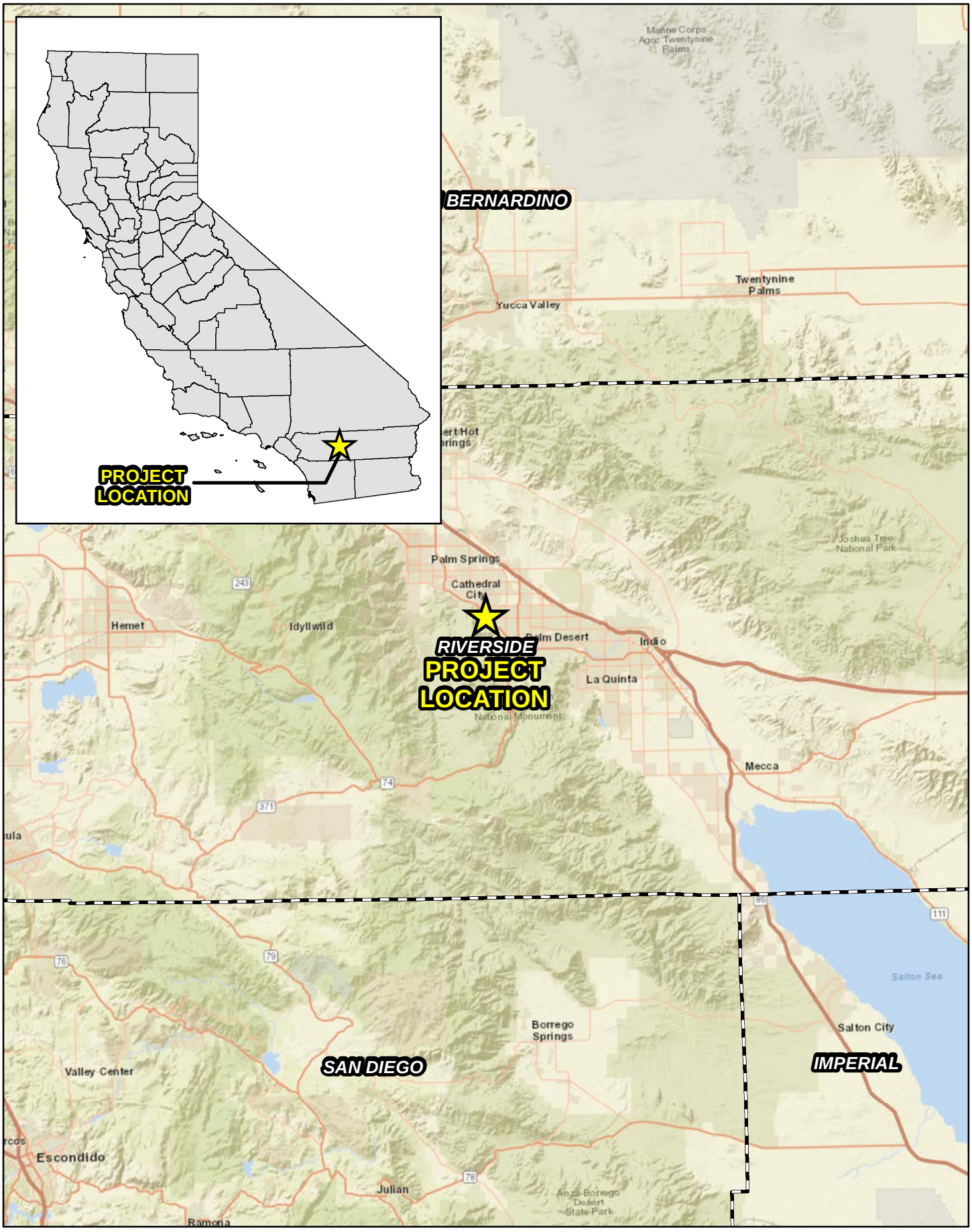
Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Site Plan*
C. *Site Photographs*
D. *Potentially Occurring Special-Status Biological Resources*
E. *Regulations*

Attachment A

Project Exhibits



ELMT CONSULTING

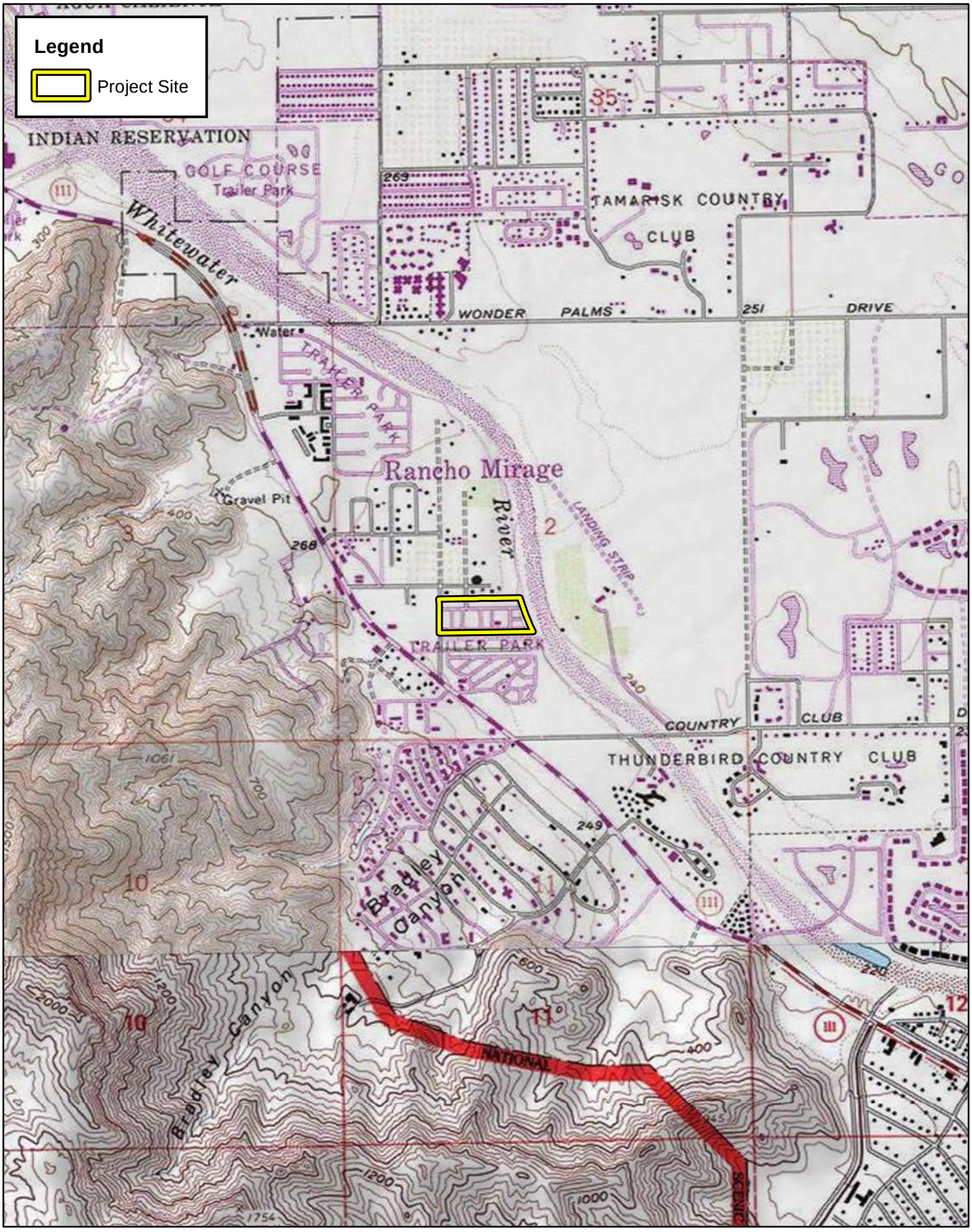
0 2.5 5 10 Miles

Source: World Street Map, Riverside County

CROSSINGS ON PETERSON

Regional Vicinity

Exhibit 1



ELMT CONSULTING

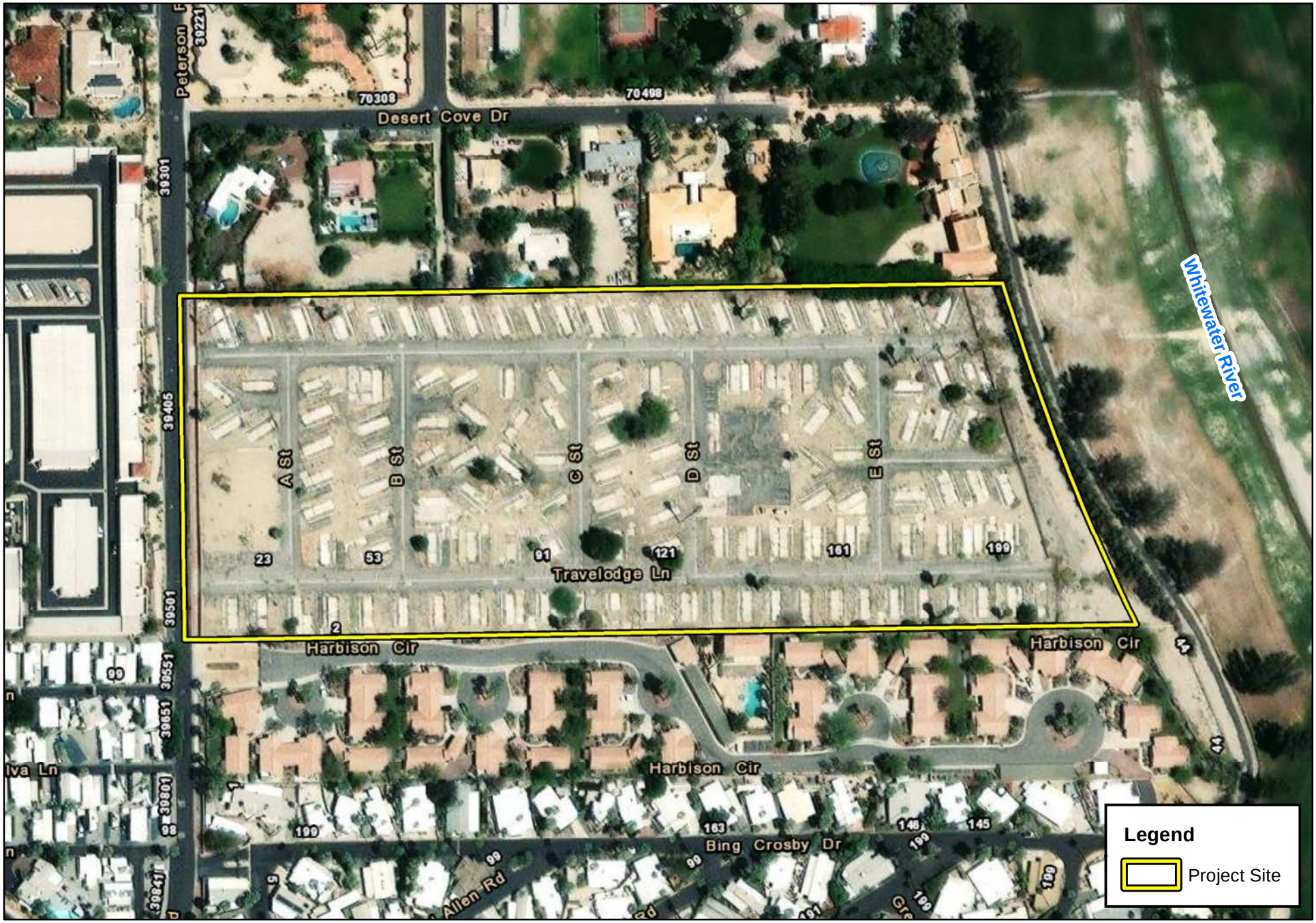
0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

CROSSINGS ON PETERSON

Site Vicinity

Exhibit 2



ELMT CONSULTING

0 62.5 125 250 Feet

Source: ESRI Aerial Imagery, Riverside County

CROSSINGS ON PETERSON

Project Site

Exhibit 3

ELMT CONSULTING

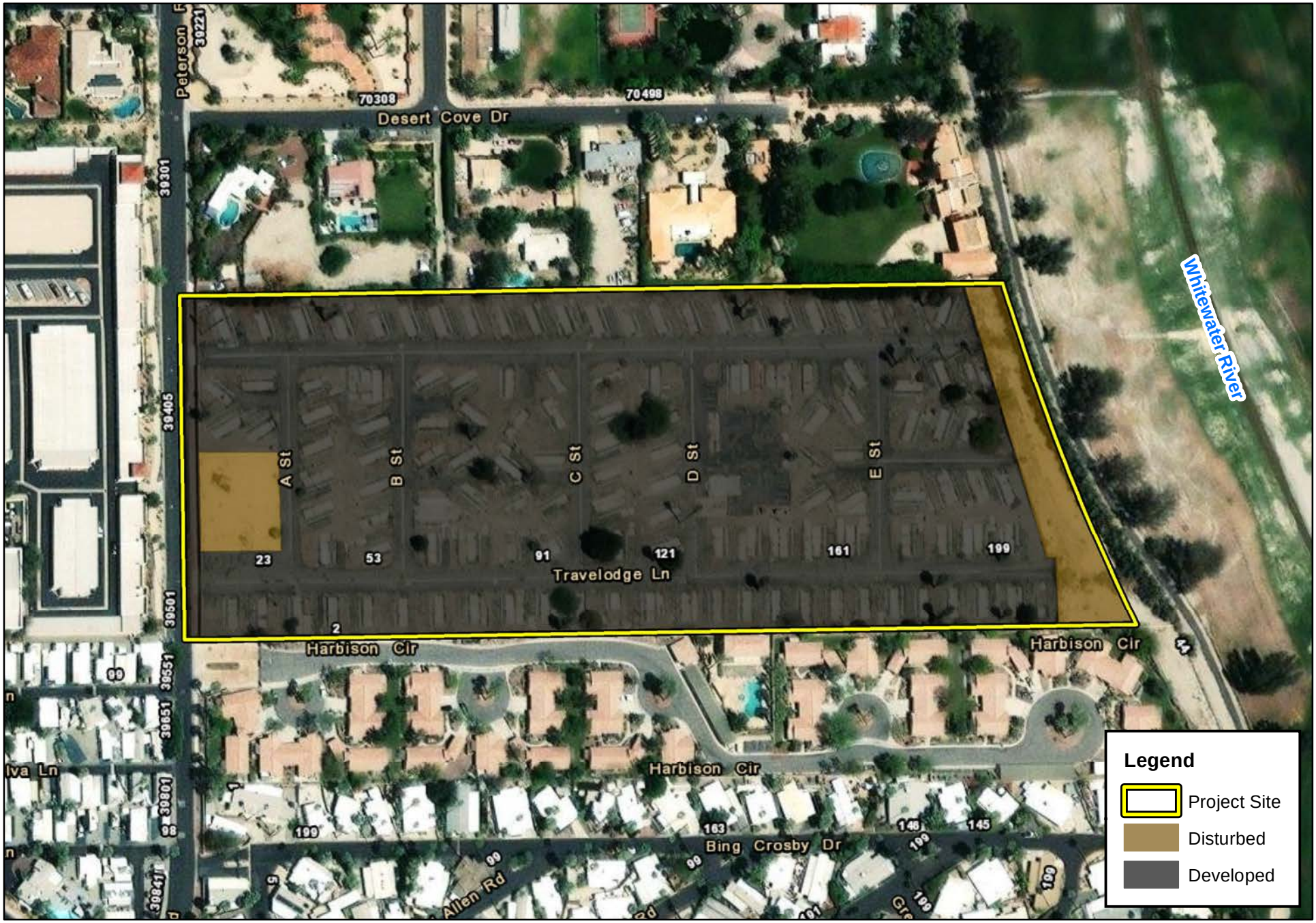
0 62.5 125 250 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

CROSSINGS ON PETERSON

Soils

Exhibit 4



ELMT CONSULTING

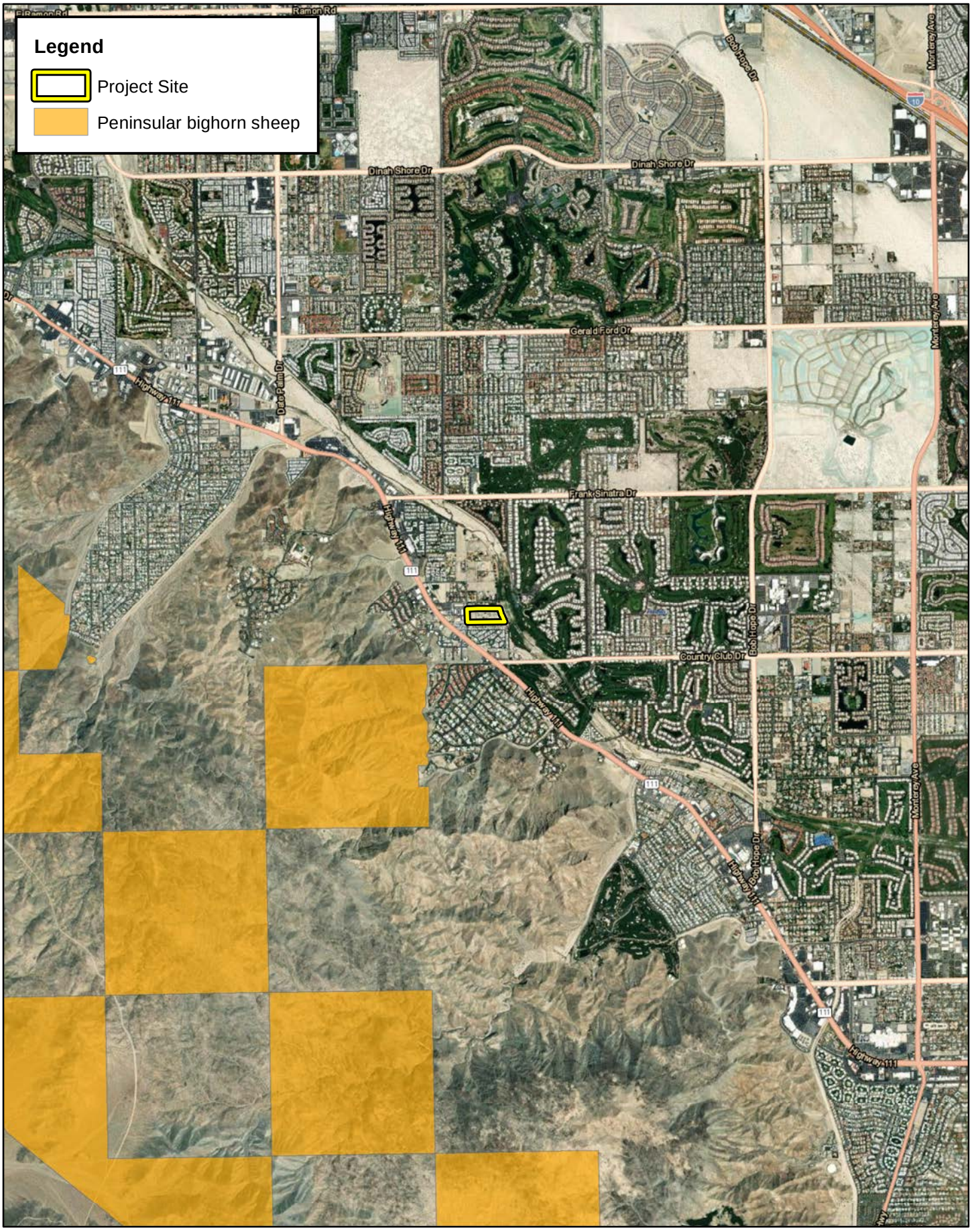
0 62.5 125 250 Feet

Source: ESRI Aerial Imagery, Riverside County

CROSSINGS ON PETERSON

Vegetation

Exhibit 5



ELMT CONSULTING

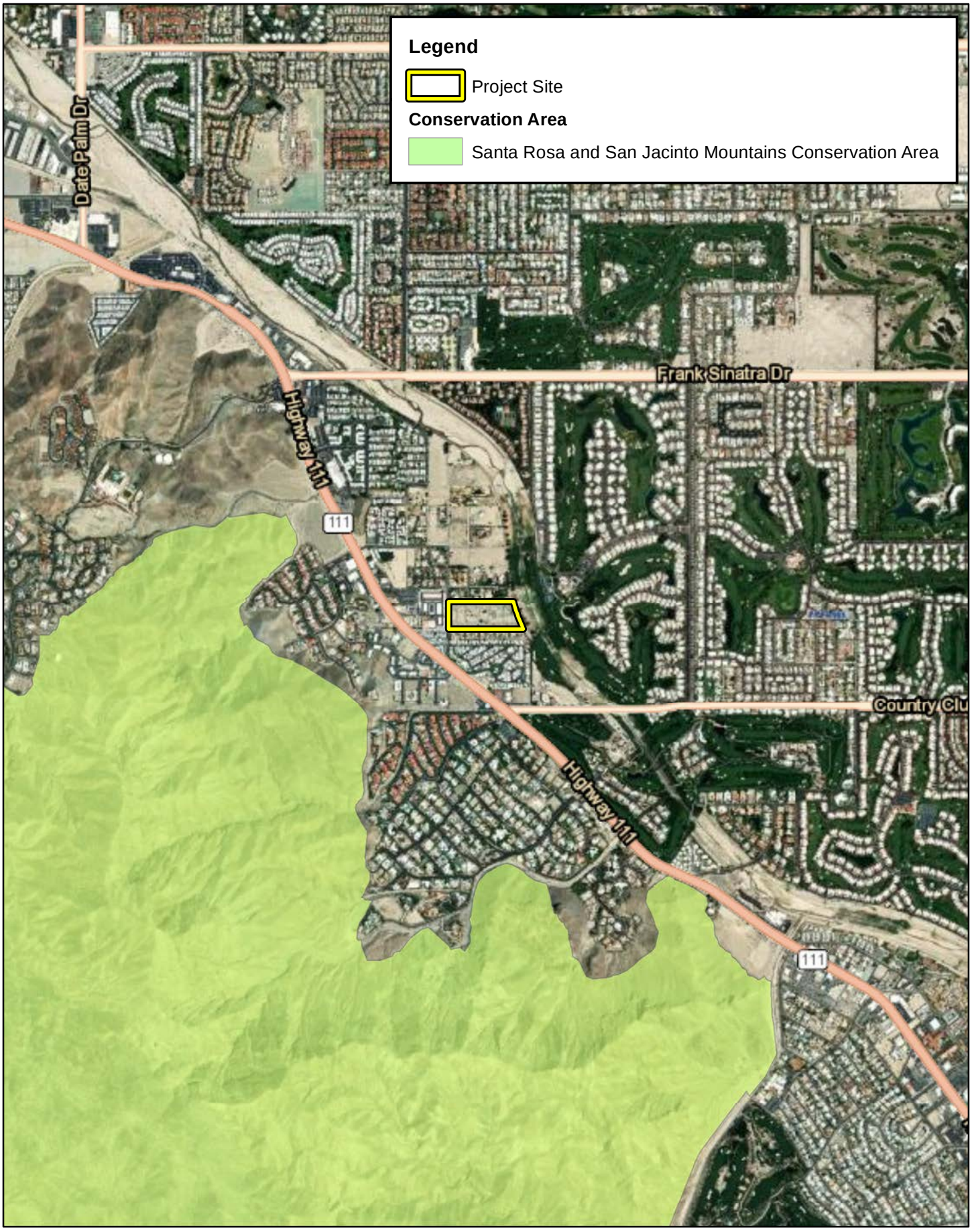
0 2,500 5,000 10,000 Feet

Source: ESRI Aerial Imagery, USFWS Critical Habitat, Riverside County

CROSSINGS ON PETERSON

Critical Habitat

Exhibit 6



ELMT CONSULTING

0 1,250 2,500 5,000 Feet

Source: ESRI Aerial Imagery, CVMSHCP, Riverside County

CROSSINGS ON PETERSON

CVMSHCP Conservation Areas

Exhibit 7

Attachment B

Site Plan

PARKING	
TYPE	NO.
Accessible: ACCESSIBLE EV STANDARD 9'-0" x 18'-0" 2	2
Accessible: ACCESSIBLE EV VAN 9'-0" x 18'-0" 2	2
Accessible: ACCESSIBLE STANDARD 9'-0" x 18'-0"	1
Accessible: ACCESSIBLE VAN 9'-0" x 18'-0"	1
Standard: EV STANDARD 18'-0"x 9'-0"	67
Standard: STANDARD 18'-0"x 9'-0"	105
	178

UNIT MIX	
TYPE	NO.
1BR	88
2BR	28
	116

PROJECT SUMMARY

ZONING: MHP
PARCEL: ≈ 12 acres
DENSITY: 10 du/ ac
SETBACK:

FRONT:	10'
SIDE:	5'
STREET SIDE:	15'
REAR:	10'

PARKING REQUIREMENTS

MUNICIPAL CODE 17.26.050 TABLE 3-6
SENIOR CONGREGATE CARE HOUSING FACILITIES:
1 COVERED SPACE FOR EACH UNIT, PLUS 1 OFF-STREET SPACE FOR EACH 2 UNITS.

EV PARKING REQUIREMENTS

2022 CGBC 4.106.4.2.2
EV CAPABLE: 10% OF THE TOTAL NUMBER OF PARKING SPACES
EV READY: 25% OF THE TOTAL NUMBER OF PARKING SPACES
EV CHARGERS: 5% OF THE TOTAL NUMBER OF PARKING SPACES

BICYCLE PARKING

LONG-TERM: 5% OF MORTORIZED VEHICLE PARKING
SHORT-TERM: 5% OF MORTORIZED VEHICLE PARKING

BLIEU
A SENSE OF PLACE

PETERSON RD

RANCHO MIRAGE

A1 SITE PLAN

SEPTEMBER 6, 2023 1" = 50'-0"

STUDIO T SQUARE 2

CONCEPT IMAGERY

BLIEU
A SENSE OF PLACE

PETERSON RD

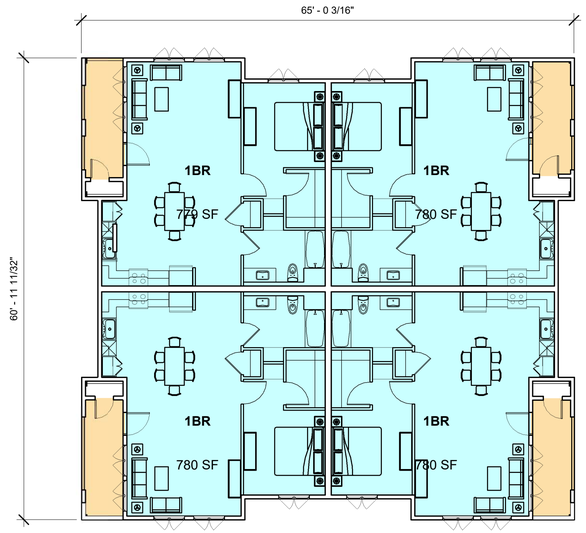
RANCHO MIRAGE

A 2.1 4 PLEX CONCEPT

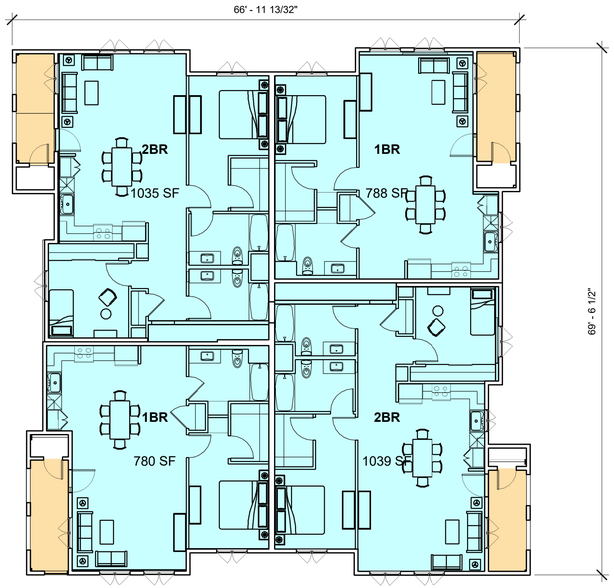
SEPTEMBER 6, 2023

STUDIO T SQUARE 2

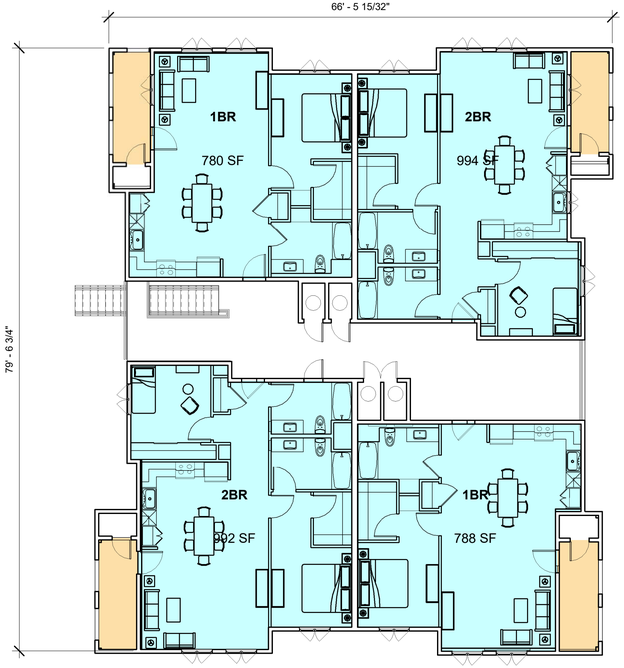
CONCEPT IMAGERY



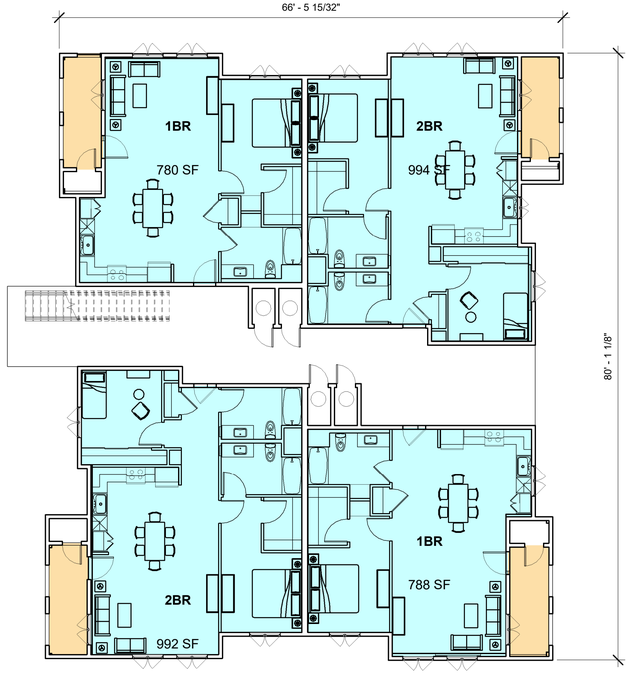
1 4 Plex TYPE 1
1" = 10'-0"



2 4 Plex TYPE 2
1" = 10'-0"



4 8 Plex Level 2
1" = 10'-0"



3 8 Plex Level 1
1" = 10'-0"

BLIEU
A SENSE OF PLACE

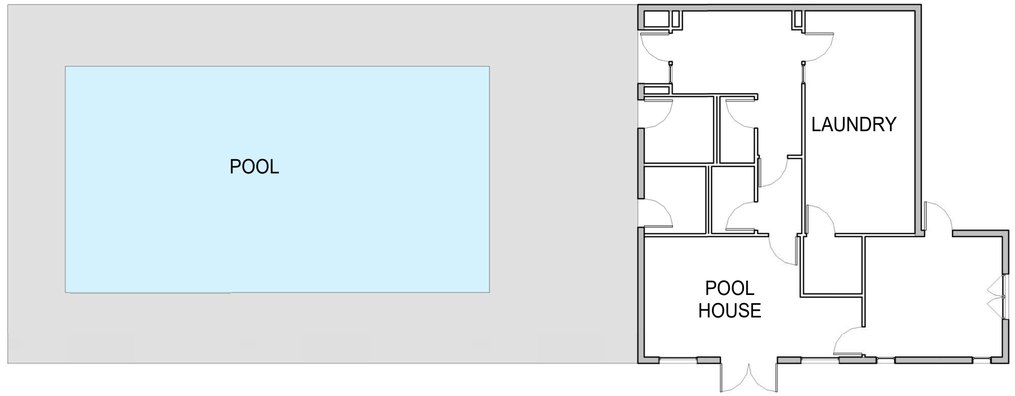
PETERSON RD

RANCHO MIRAGE

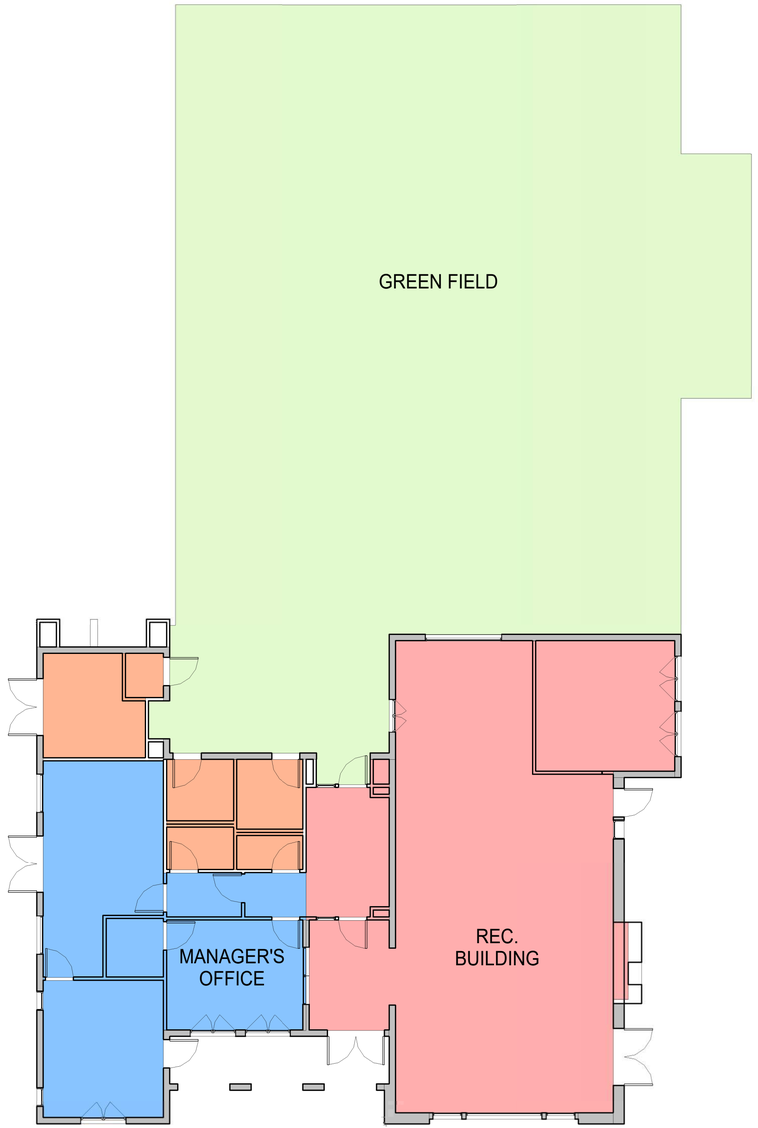
A 3.1 UNIT PLANS

SEPTEMBER 6, 2023 1" = 10'-0"

STUDIO T SQUARE 2



② POOLHOUSE
1/8" = 1'-0"



① CLUBHOUSE
1/8" = 1'-0"

N

BLIEU
A SENSE OF PLACE

PETERSON RD

RANCHO MIRAGE

A 3.2 AMENITY PLANS

SEPTEMBER 6, 2023 1/8" = 1'-0"

STUDIO
T SQUARE 2

Attachment C

Site Photographs

Photograph 1: From the northwest corner of the project site looking south along the eastern boundary.

Photograph 2: From the northwest corner of the project site looking east along the northern boundary.

Photograph 3: From the northeast corner of the project site looking west along the northern boundary.

Photograph 4: From the northeast corner of the project site looking south along the eastern boundary.

Photograph 5: From the southeast corner of the project site looking north along the eastern boundary.

Photograph 6: From the southeast corner of the project site looking west along the southern boundary.

Photograph 7: From the southwest corner of the project site looking east along the southern boundary.

Photograph 8: From the southwest corner of the project looking north along the western boundary.

Photograph 9: From the northern limits of the setback along the Whitewater River looking south.

Photograph 10: From the southern limits of the setback along the Whitewater River looking north.

Attachment D

Potentially Occurring Special-Status Biological Resources

Table D-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
SPECIAL-STATUS WILDLIFE SPECIES				
Athene cunicularia burrowing owl	Fed: None CA: SSC CVMSHCP: Covered	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** The project site provides line-of-sight opportunities favored by burrowing owls; however, no suitable burrows (>4 inches) were observed. No burrowing owls or sign were observed.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC CVMSHCP: Not Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Dinacoma caseyi Casey's June beetle	Fed: **END** CA: None CVMSHCP: Not Covered	All *Dinacoma* populations are associated with alluvial sediments occurring in or contiguous with bases of desert alluvial fans, and the broad, gently sloping, depositional surfaces at the base of the Santa Rosa mountain ranges in the dry Coachella valley region. Most commonly associated with the Carsitas series soil.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Eremophila alpestris actia California horned lark	Fed: None CA: WL CVMSHCP: Not Covered	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types. Flocks in groups.	No	**Low** Limited foraging habitat is present within and surrounding the project site. Suitable nesting habitat is present on-site and un nearby undeveloped areas.
Falco mexicanus prairie falcon	Fed: None CA: WL CVMSHCP: Not Covered	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Habropoda pallida white-faced bee	Fed: None CA: None CVMSHCP: Not Covered	Builds nests in clay-rich sandy slopes along water courses in the Mojave Desert. In California, it occurs from Into County south to Imperial County and east to the Nevada and Arizona borders. Prefers areas with a high density of creosote and dune-restricted endemic plants.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC CVMSHCP: Not Covered	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lasiurus xanthinus western yellow bat	Fed: None CA: SSC CVMSHCP: Not Covered	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	**Low** Suitable foraging and roosting habitat is present within and surrounding the project site.
Macrobaenetes valgum Coachella giant sand treader cricket	Fed: None CA: None CVMSHCP: Covered	Nocturnal and moisture sensitive insects. Emergence occurs with winter rains and appear at maximum densities in January-February. Can be detected via their characteristic delta-shaped burrow excavations.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
***Ovis canadensis nelsoni* pop. 2** Peninsular bighorn sheep DPS	Fed: **END** CA: **THR**; FP CVMSHCP: Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Perognathus longimembris bangsi Palm Springs pocket mouse	Fed: None CA: SSC CVMSHCP: Covered	Inhabits areas having flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils on slopes ranging from 0% to approximately 15%. Remaining habitat in the Coachella Valley and environs is about 142,000 acres.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Phrynosoma mcallii flat-tailed horned lizard	Fed: None CA: SSC CVMSHCP: Covered	Typical habitat is sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Most common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC CVMSHCP: Not Covered	Obligate resident of sage scrub habitats that are dominated by California sagebrush. This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. It prefers habitat with more low-growing vegetation.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Setophaga petechia yellow warbler	USFWS: CDFW: CVMSHCP:	None SSC Covered	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	Fed: CA: CVMSHCP:	None None Covered	Restricted to desert dunes.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	Fed: CA: CVMSHCP:	None SSC Covered	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Uma inornata Coachella Valley fringe-toed lizard	Fed: CA: CVMSHCP:	**THR** **END** Covered	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	Fed: CA: CVMSHCP:	None SSC Covered	Inhabits sandy arid regions of Lower Sonoran Life Zone. Its scrub and wash habitats include mesquite and creosote dominated sand dunes, creosote bush scrub, palo verde and saltbush/alkali scrub.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
SPECIAL-STATUS PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Grows within chaparral, coastal scrub, and desert dunes habitats in areas of full sun and sandy soils. Found at elevations ranging from 245 to 5,249 feet. Blooming period is from January to September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Astragalus hornii* var. *hornii Horn's milk-vetch	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Occurs in lake margins in playas, meadows and seeps. Found at elevations ranging from 197 to 2,789 feet. Blooming period is from May to October.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Astragalus lentiginosus* var. *borreganus Borrego milk-vetch	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Grows in sandy soils within Mojavean desert scrub and Sonoran desert scrub. Found at elevations ranging from 98 to 1,050 feet in elevation. Blooming period is from February to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Preferred habitat includes desert dunes and sandy Sonoran desert scrub. Found at elevations ranging from 130 to 2,150 feet in elevation. Blooming period is from February to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Cuscuta californica* var. *apiculata pointed dodder	Fed: None CA: None CNPS: 3 CVMSHCP: Not Covered	Occurs in Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 0 to 1640 feet. Blooming period is from February to August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Euphorbia arizonica Arizona spurge	Fed: None CA: None CNPS: 2B.3 CVMSHCP: Not Covered	Preferred habitat includes sandy, Sonoran desert scrub habitat. Found at elevations ranging from 164 to 984 feet. Blooming period is from March to April.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Euphorbia platysperma flat-seeded spurge	Fed: None CA: None CNPS: 1B.2 CVMSHCP: Not Covered	Occurs within desert scrub and sandy Sonoran desert scrub habitats. Found at elevations ranging from 213 to 328 feet. Blooming period is from February to September.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Johnstonella costata ribbed cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Preferred habitat includes desert dunes, Mojavean desert scrub, and Sonoran desert scrub habitats on sandy soil. Found at elevations ranging from 197 to 1,640 feet. Blooming period is from February to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Johnstonella holoptera winged cryptantha	Fed: None CA: None CNPS: 4.3 CVMSHCP: Not Covered	Found in Mojavean desert scrub and Sonoran desert scrub habitats. Found at elevations ranging from 328 to 5,545 feet. Blooming period is from March to April.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lycium torreyi Torrey's box-thorn	Fed: None CA: None CNPS: 4.2 CVMSHCP: Not Covered	Found in sandy, rocky, washes, streambanks and desert valleys in association with Mojavean and Sonoran Desert scrub habitats. Found at elevations ranging from 130 to 3,575 feet. Blooming period is from March to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Selaginella eremophila desert spike-moss	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The site occurs outside of the known elevation range for this species.
Stemodia durantifolia purple stemodia	Fed: None CA: None CNPS: 2B.1 CVMSHCP: Not Covered	Occurs in Sonoran desert scrub habitats. Found at elevations ranging from 591 to 984 feet. Blooming period is from January to December.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The site occurs outside of the known elevation range for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
CDFW SENSITIVE HABITATS				
Desert Fan Palm Oasis Woodland	CDFW Sensitive Habitat	Rare plant community that is one of the most unusual biological resources located within the Coachella Valley. Found within canyons and along the San Andreas Fault Zone, where water occurs naturally. Generally characterized by open to dense groves of native desert fan palms, which are the most massive native palm in North America, growing more than 66 feet.	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END – Federal Endangered
THR – Federal Threatened

California Department of Fish and Wildlife (CA) - California
END – California Endangered
THR – California Threatened
FP – California Fully Protected
SSC – California Species of Special Concern
WL – California Watch List

California Native Plant Society (CNPS)
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3 More Information Needed
4 Plants of Limited Distribution – A Watch List

Threat Ranks
0.1- Seriously threatened in California
0.2- Moderately threatened in California
0.3- Not very threatened in California

Attachment E

Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Coachella Valley MSHCP

A Multiple Species Habitat Conservation Plan (Plan) was prepared for the entire Coachella Valley and surrounding mountains to address current and potential future state and federal Endangered Species Act issues in the Plan Area. A Memorandum of Understanding ("Planning Agreement") was developed to govern the preparation of the Plan. In late 1995 and early 1996, under the auspices of CVAG, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; County of Riverside (County); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Game (CDFG); Bureau of Land Management (BLM); U.S. Forest Service (USFS); and National Park Service (NPS) signed the Planning Agreement to initiate the planning effort. Subsequently, Caltrans, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), California Department of Parks and Recreation (State Parks), and CVMC decided to participate in the Plan.

The Plan balances environmental protection and economic development objectives in the Plan Area and simplifies compliance with endangered species related laws. The Plan is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The Plan will, to the maximum extent practicable, minimize and mitigate the impacts of the Taking and provide for Conservation of the Covered Species.

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program, and Adaptive Management. The MSHCP Reserve System will be established from lands within

21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States" (March 20, 2023), "waters of the United Sates" are defined as follows:

> The ''waters of the United States'' are defined in paragraph (a) of this rule:
>
> (1) traditional navigable waters, the territorial seas, and interstate waters;
>
> (2) impoundments of ''waters of the United States'';
>
> (3) tributaries to traditional navigable waters, the territorial seas, interstate waters, or impoundments when the tributaries meet either the relatively permanent standard or the significant nexus standard (''jurisdictional tributaries'');
>
> (4) wetlands adjacent to traditional navigable waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph impoundments or to jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard (''jurisdictional adjacent wetlands''); and
>
> (5) intrastate lakes and ponds, streams, or wetlands not identified in (1) through (4) above that meet either the relatively permanent standard or the significant nexus standard.

The ''relatively permanent standard'' means relatively permanent, standing or continuously flowing waters connected to traditional navigable waters, and waters with a continuous surface connection to such relatively permanent waters or to traditional navigable waters. The ''significant nexus standard'' means waters that, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, the territorial seas, or interstate waters.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of

the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix C
Cultural Report

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April 2024

MATERIAL CULTURE
CONSULTING

Submitted to:

Blieu Companies, LLC
2000 E. 4th Street #205
Santa Ana, CA 92705

CULTURAL RESOURCES ASSESSMENT
PETERSON ROAD PROJECT
CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA

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PHASE I CULTURAL RESOURCES ASSESSMENT: PETERSON ROAD, CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA

Prepared for:
Blieu Companies, LLC
2000 E 4th St. #205
Santa Ana, CA 92705

Prepared by:
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Hannah Johnston, M.Sc.
Zachary White, B.A.

Principal Investigator:
Tria Belcourt, M.A., RPA, Riverside County Qualified Archaeologist

Material Culture Consulting, Inc
2701-B North Towne Avenue
Pomona, CA 91767
626-205-8279

April 2024

Type of Study: Cultural resources assessment
Cultural Resources within Area of Potential Impact: One (1); MCC-blieu-001
USGS 7.5-minute Quadrangle: Cathedral City, Section 02 of Township 5 S, Range 5 E
APN(s): 689-180-012
Survey Area: Approx. 12 acres
Date of Fieldwork: March 13, 2024
Key Words: Archaeology, CEQA, Phase I Survey, Positive, Riverside County

MANAGEMENT SUMMARY

The Peterson Road Project (hereafter referred to as Project or Project Area) proposes the redevelopment of a lot, that currently exists as a trailer park, into a 116 unit multi-family apartment housing complex. The proposed Project encompasses an approximately 12-acre site (APN 689-180-012). The Project is bound by residential housing to the north, near Desert Cove Ave. and the south, near Juniper Ln., with a golf course to the east, near Butler Adams Trail, and public storage to the west near Peterson Road. The Project lies within the City of Rancho Mirage in Riverside County, California. Material Culture Consulting, Inc. (MCC) was retained by Blieu Companies, LLC, to conduct a Phase I cultural resources investigation of the Project Area. This assessment was conducted in accordance with the California Environmental Quality Act (CEQA) and included a cultural records search and background research, a search of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC), outreach efforts with 23 Native American tribal representatives, and a pedestrian field survey.

A records search was conducted by MCC Archaeologist Bonnie Rush at the Eastern Information Center (EIC) located at the University of California, Riverside. The cultural resources records search identified 25 previously conducted cultural resources investigations within 1-mile of the Project Area, one of which is within the Project Area. No previously recorded cultural resources were identified within the Project Area. However, one previously recorded cultural resource of historic age lies within 1-mile of the Project Area.

A review of historical aerial photographs and topographic maps indicate the Project Area was undeveloped until 1972 when residential development occurred. Development activities included the titled Rancho Palms Mobile Home Park. Residential development south of the Project Area previously existed while the country club east of Project Area was developed in the 1980s and public storage west of the Project Area was not present until 2005.

The SLF search conducted by the NAHC did not identify the presence of Sacred Lands or Tribal Cultural Resources within the Project Area. The NAHC provided contact information for 23 Native American tribal representatives for outreach efforts, and MCC contacted each of the representatives for information about the Project Area. As a result, MCC received six responses from Native American Tribes or individuals. No specific cultural resources were identified within the Project Area. MCC did not conduct formal consultation with the Native American representatives.

On March 13, 2024, MCC Archaeologist Zachary White conducted a field survey of the Project Area. During the survey, visibility was fair (75%) due to some vegetation overgrowth and refuse in certain portions of the Project Area. The Project Area has been highly disturbed due to the previous development of a mobile home park. The mobile home park was constructed prior to 1972 and therefore, the existing foundations observed during the survey were recorded as a historic-age cultural resource (MCC-blieu-001). However, these concrete structure pads are not deemed significant as per CEQA.

Based on the above findings, the probability of encountering additional cultural resources within the Project Area is considered unknown to moderate. Due to the inability to visually inspect the ground during the survey from previous development and the existing historic-age resource, MCC recommends archaeological monitoring for the removal of the concrete foundations, vegetation clearing, trimming, and during ground disturbance occurring within the first 5 feet below surface during construction. Prior to the start of construction, a cultural resources management plan (CRMP) should be prepared and implemented during construction.

A copy of this report will be permanently filed with the EIC at University of California Riverside, Riverside. All notes, photographs, correspondence, and other materials related to this Project are located at MCC, Inc located in Pomona, California.

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INTRODUCTION

The Peterson Road Project (hereafter referred to as Project or Project Area) proposes the redevelopment of a lot that currently exists as a trailer park, into a 116 unit multi-family apartment housing complex. Material Culture Consulting, Inc. (MCC) was retained by Blieu Companies LLC, to conduct a Phase I cultural resources investigation of the Project in accordance with the California Environmental Quality Act (CEQA). This assessment was conducted pursuant to all applicable State of California regulations regarding cultural resources, as well as guidelines established by the County of Riverside. According to these regulations and guidelines, if development of a Project has the potential to result in significant impacts to cultural resources, a plan must be developed to mitigate those impacts to a level which is less than significant. This assessment documents the potential for encountering cultural resources during development of this Project and provides recommendations on how to mitigate impacts to those resources.

PROJECT LOCATION AND DESCRIPTION

The Project is located in the City of Rancho Mirage, in Riverside County (Figure 1). The Project consists of a previously developed lot totaling approximately 12 acres (APN 689-180-012) (Figures 2 and 3). The Project Area is situated east of San Jacinto Mountain and adjacent of California State Route 111 (Hwy 111). The Project Area is bound by private residential property to the north, near Desert Cove Ave. and private residential property to the south, near Juniper Ln., with a golf course to the east, near Butler Adams Trail, and a privately owned public storage units to the west near Peterson Road. Specifically, the proposed Project is located within Section 02, Township 05 South, Range 05 East on the Cathedral City USGS 7.5-minute quadrangle (San Bernardino Base Meridian) (Figure 2). The Project proposes the development of a multi-family apartment complex that would consists of 116 units on redeveloped parcels of land.

PROJECT PERSONNEL

Tria Belcourt, M.A., RPA, President of Material Culture Consulting Inc., served as the Project Manager and Principal Archaeologist for the study. Ms. Belcourt coordinated the records searches and performed editorial review of this report. Belcourt is a Registered Professional Archaeologist (RPA) with a M.A. in Anthropology from the University of Florida, a B.A. in Anthropology from the University of California at Los Angeles with over 17 years of experience in California archaeology (See Appendix A). Ms. Belcourt is also a Riverside County Qualified Archaeologist. MCC Project Manager Erika McMullin, B.A., provided co-authorship of the report and GIS support. MCC Archaeologist Hannah Johnston, M.Sc., provided co-authorship of this report and GIS support. MCC Archaeologist and Cross-Trained Paleontologist Zachary White, B.A conducted the pedestrian survey.

Figure 1. Peterson Road Project Vicinity (1:500,000)

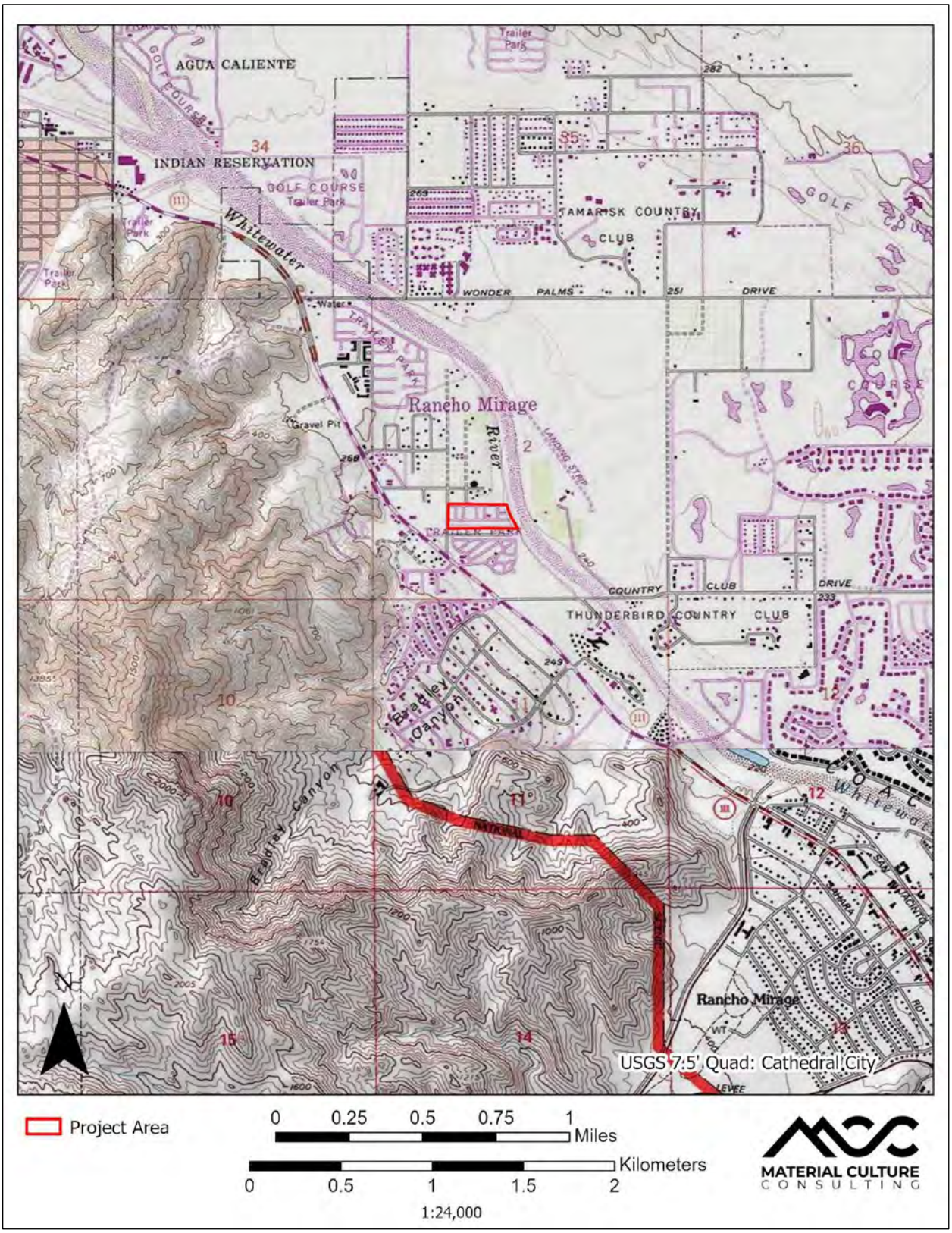


Figure 2. Peterson Road Project Location (as depicted on Cathedral City USGS 7.5-minute Quadrangle, 1:24,000)

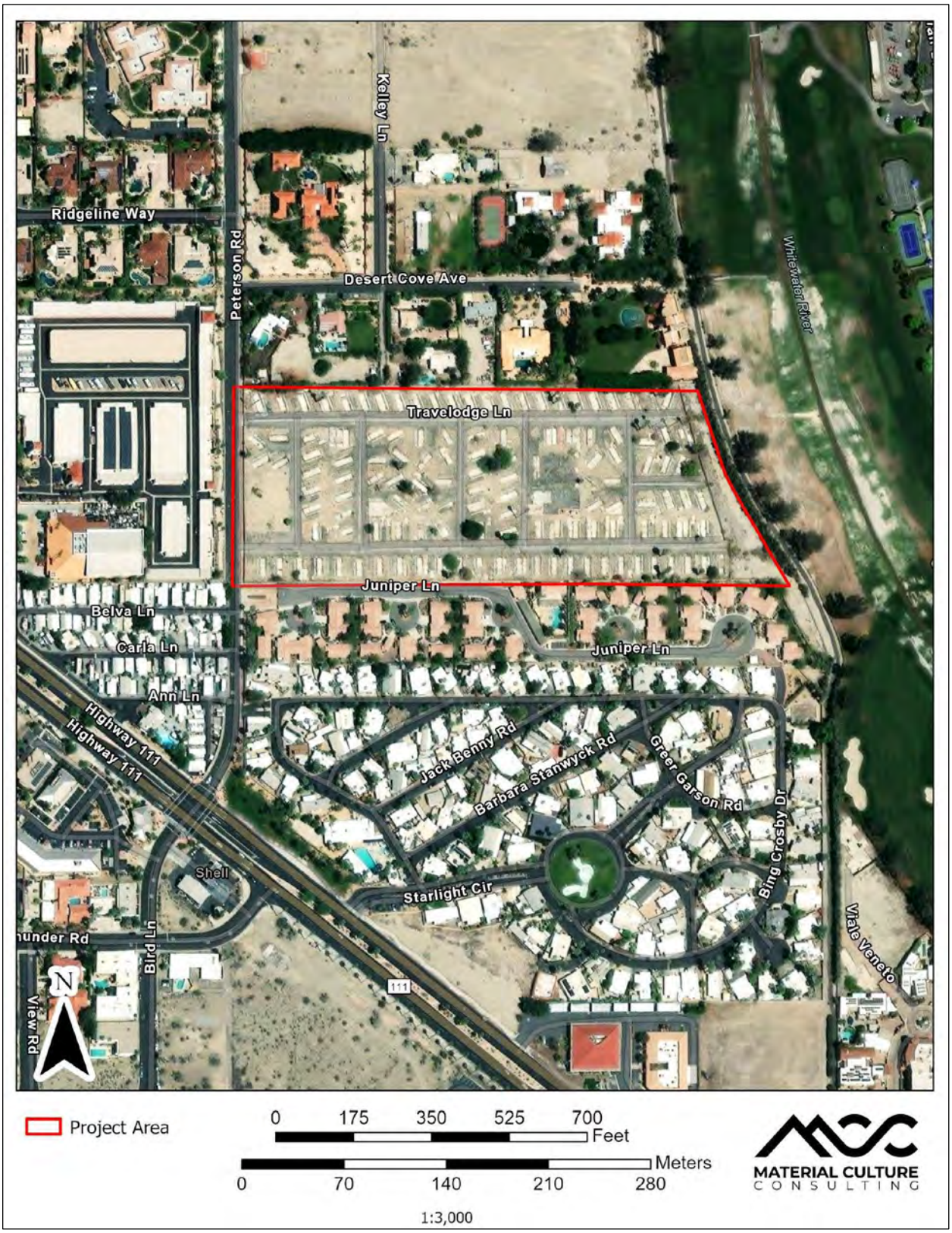


Figure 3. Peterson Road Project Area (as depicted on aerial photograph, 1:3,000)

ENVIRONMENTAL SETTING

The Project Area is located within the City of Rancho Mirage, in Riverside County, approximately 0.09 miles northeast of California State Route 111 (Hwy 111). Bounded by the Santa Rosa Mountains to the west and south, and a medium density residential area to the east, the Project Area is found within a geographical region known as the Colorado Desert and sits on an alluvial fan near the hillsides of the Santa Rosa Mountains. The Project Area is on a relatively flat valley floor that is surrounded by mixed residential and developed land parcels, with elevations approximately 85 meters (m) (280 ft) above mean sea level (AMSL) throughout the Project Area. Vegetation observed within the Project Area includes a mix of imported trees, invasive grasses, and native desert species. Palm trees and Indian Laurel Fig trees were observed as well as fountain grass, prickly pear cactus and desert dandelion. The climate in the region is characterized as hot desert, and the area acts as a transitional zone from the Mediterranean climates in the west and Desert climates to the east.

PRECONTACT CONTEXT

There is no specific model of early human occupation offered within the Riverside County region. The earliest sites known in the area are attributed to the San Dieguito culture, which consists of a hunting culture with a flaked stone tool industry (Warren 1967). The material culture related to this time include scrapers, hammer stones, large, flaked cores, drills, and choppers, which were used to process food and raw materials. These types of early sites are more likely to be found along ancient lake terraces. Most evidence of this early occupation is located further south-southwest and currently there is no evidence of human occupation within the Riverside County region prior to about 2,300 years ago.

Around 8,000 years ago, subsistence patterns changed, resulting in a material complex consisting of an abundance of milling stones (for grinding food items) with a decrease in the number of flaked stone tools. The material culture from this time period includes large, bifacially worked dart points and grinding stones, handstones and metates. Archaeologists initially designated this period as the “Millingstone Horizon” (Wallace 1955). Later, the Millingstone Horizon was redefined as a cultural tradition named the Encinitas Tradition (Warren 1967) with various regional expressions including Topanga and La Jolla. Use of this classification system by archaeologists has varied as some adopted a generalized Encinitas Tradition without regional variations, while others continued to use Millingstone Horizon, and still others used Middle Holocene (the geologic time period) to indicate this observed pattern (Sutton and Gardner 2010:1-2). Recently, this generalized terminology was criticized by Sutton and Gardner (2010) as suppressing the identification of cultural, spatial, and temporal variation, as well as the movement of peoples throughout space and time. It is these factors that are believed to be critical to an understanding of precontact cultural adaptation and change in this portion of southern California (Sutton and Gardner 2010:1-2).

The Encinitas Tradition characteristics include abundant metates and manos, crudely-made core and flake tools, bone tools, shell ornaments, and very few projectile points, indicating a subsistence pattern focused on hunting and gathering a variety of floral resources. Faunal remains vary by location but include marine mammals, fish, and shellfish, as well as terrestrial animals, reptiles, and birds (Sutton and Gardner 2010:7). The Encinitas Tradition has been redefined to have four patterns (Sutton and Gardner 2010: 8-25). These include the Topanga Pattern in coastal Los Angeles and Orange counties, the La Jolla Pattern in coastal San Diego County, and the Sayles or Pauma cultures in inland San Diego County extending into western Riverside County, where the Project is located. At approximately 3,500 years ago, Pauma groups in the general Project vicinity adopted new cultural traits which transformed the archaeological site characteristics - including mortar and pestle technology. This indicated the development of food storage, largely acorns, which could be processed and saved for the leaner, cooler months of the year.

At approximately 1,500 years before present, bow and arrow technology started to emerge in the archaeological record, which also indicates new settlement patterns and subsistence systems. The local population retained the subsistence methods of the past but incorporated new materials into their day to day existence, as evidenced by the archaeological record. The Palomar Tradition is attributed to this time, and is comprised of larger two patterns: the Peninsular Pattern in the inland areas of the northern Peninsular Ranges (e.g., San Jacinto and Santa Rosa mountains) and the northern Coachella Valley (Sutton 2010), and the San Luis Rey pattern of the western Riverside region. Archaeological sites from this time period are characterized by soapstone bowls, arrowhead projectile points, pottery vessels, rock paintings, and evidence of cremation sites. The shift in material culture assemblages is largely attributed to the emergence of Shoshonean (Takic-speaking) people who entered California from the east. Investigations at the Eastside Reservoir Project refined the chronology for the past 1500 years into four stages: Saratoga Springs (1500-750 BP), Late Precontact (750-410 BP), Protohistoric (410-180 BP), and Historic (post-180 BP). This research shows a large number of semi-residential sites during the Medieval Climatic Anomaly at the end of the Saratoga Springs period which ended by the Late Precontact period (Applied Earthworks 2001). The increased use of the area suggests that the area may have had a more favorable environment than in surrounding regions.

ETHNOGRAPHIC CONTEXT

The Project Area has historically been the territory of the Cahuilla people. Migration of Shoshone peoples from the Great Basin into the desert and coastal Southern California regions occurred approximately 1000 to 600 years B.P (Hopkins 1965). The Cahuilla ethnographic group derives from this migration (Hopkins 1965).

Cahuilla

The Cahuilla's traditional territory was bounded by the San Bernardino Mountains to the north, the Orocopia Mountains to the east, the Santa Ana River/the San Jacinto Plain and the eastern portion of Palomar Mountains to the west, and Borrego Springs and the Chocolate Mountains to the south (Bean 1978). The Cahuilla existed within the most geographically diverse region, having exploited more than 500 native and non-native plants (Bean and Saubel 1972). The Cahuilla spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family, a language family that includes the Shoshonean groups of the Great Basin (Bean and Shipek 1978).

The precontact Cahuilla occupation is characterized by structures within permanent villages that ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at man-made walk-in wells (Bean 1972). There appears to be slight difference in subsistence tools between the Desert, Pass, or Mountain Cahuilla groups. The Desert Cahuilla used deep, wooden mortars with a long pestle whereas San Gorgonio Pass Cahuilla utilized shallower mortars with basketry rims (Kroeber 1908: 40, 43). Cahuilla granaries were usually raised on pole platforms two to four feet high, which resembled birds' nests, and were used to store mesquite (Kroeber 1908: 42).

In comparison with other Southern California tribes, the Cahuilla appear to have had a lower population density and a less rigid social structure. The Cahuilla are patrilineal, with closely related patrilineages that share an assumed common ancestor which is important socially and ceremonially (Hudlow 2007). The office of lineage leader, also known as a *nét*, directed subsistence activities, settled conflicts, represented the clan regionally and was responsible for correct performances of ceremonies, with the official role of the chief passed from father to eldest son (Bean 1978; Hudlow 2007).

Initial contact with European explorers with the Cahuilla most likely occurred during the expedition of Juan Bautista de Anza in 1777 (Napton and Greathouse 1982). The presence of the San Gabriel Mission in the early

1800s led to more contact via baptisms (Napton and Greathouse 1982). It also led to the Native Americans moving away from traditional habitation sites to separate themselves from the influence of the Mission (Brumgardt 1977). The Cahuilla traditions may have been relatively stable until mission secularization in 1834, due to the policy of the Catholic Mission fathers, or padres, to maintain imported European traditional style settlement and economic patterns (Bean and Shipek 1978). After 1877, when the United States government established Indian reservations in the region and religious missionaries began conversion of the Native American populations in the region, traditional cultural practices were prohibited. Presently, the Cahuilla reside in nine separate reservations in Southern California, located in Imperial, Riverside and San Diego counties (Bean 1978).

Luiseño

The Spanish name Luiseño was used to identify Native Americans who were associated with the Mission San Luis Rey, with the Luiseño most likely had no known native term for their own nationality (Bean and Shipek 1978). Extensive research has been accumulated that gives detailed accounts of the Luiseño (DuBois 1908, Sparkman 1908, Kroeber 1976, White 1963, and Bean and Shipek 1978). At the time of these ethnographies, the Luiseño maintained a sophisticated political organization structure, and their lands extended from western San Jacinto to the Pacific Ocean along several major waterways, including Temecula, Santa Margarita, and San Luis Rey Rivers (Bean and Shipek 1978). Neighboring tribes included the Cahuilla to the east, the Serrano to the north, and the Gabrielino to the west. Each of these groups are part of the same Uto-Aztecan linguistic group and are Takic-speakers. The boundaries for territories fluctuate as new information evolves in ethnographic research, so there is a likelihood that there was quite a bit of overlap between groups over time as well.

The Luiseño organized themselves according to family groups or lineages, rather than forming exogamous moieties. Each lineage occupied land that they held in common, and they lived socially and politically separately from others (Bean and Shipek 1978). They typically resided in villages near reliable water sources and maintained special purpose camps close to the main villages. In the springtime, families would replenish food supplies by gathering local fruit, seeds, bulbs and roots. In the fall, families would move into the upland areas to gather acorns, prickly pear, toyon berries, and yucca. The Luiseño territory contained several species of oak that produced edible acorns. Acorns were stored and processed as needed by breaking the shell, grinding the meat into a powder, and leaching the tannic acid from the nut by using water. A porridge was made from the leached nuts and cooked with water using hot stones in baskets. The Luiseño used a wide variety of tools, including manos and metates, bone and shell fish hooks, stone and shell ornaments, bone awls, wooden throwing sticks, hammer stones, handstones, pestles, mortars, and drills, which are evident in late Precontact archaeological sites. Presently, there are six federally recognized Luiseño tribes with associated reservations within Southern California.

Serrano

The Serrano have been defined as a Northern Uto-Aztecan language sub-family which resided in the mountains and deserts of interior southern California, known as the Mountain Serrano and the Desert Serrano (Sutton and Earle 2017). The Serrano's traditional use area is believed to be located from the Cajon Pass of the San Gabriel/San Bernardino Mountains, as far east as Twentynine Palms, as far south as Yucaipa, and as far north as Barstow (Bean and Smith 1978). Gifford (1918) categorizes the Serrano as a clan and moiety-oriented, or local lineage-oriented, group tied to traditional territories or use areas. Typically, a "village" consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching. Considered hunter-gatherers, the Serrano exhibited sophisticated technologies devoted to hunting small animals and gathering roots, tubers, and seeds of various kinds. Principal game animals included deer, mountain sheep, antelope, rabbits, small rodents, and various birds (Bean and Smith 1978). The Serrano spoke a language that belongs to the Takic subfamily of the Uto-Aztecan language family, with some evidence of similarity with the Gabrielino (of the Los Angeles Basin) (Miller 1984).

European influence on the Serrano was limited until 1819, with the establishment of an asistencia near present-day Redlands (Bean and Smith 1978). By 1834, most of the western Serrano population had been displaced, with those located northeast of San Gorgonio Pass continuing to thrive. Today, Serrano descendants are found on the Morongo and San Manuel reservations, which are a modern-day culmination of Serrano, Cahuilla, and Cupeno lineages.

HISTORIC CONTEXT

In 1769, Spanish settlers began to enter and colonize Alta California. Once the first European exploration of California occurred, the region underwent immense change. As early as 1827, Anglo-Americans were migrating into Southern California. In the decades to come, California would be taken by the United States with the close of the Mexican-American War and subsequent events such as the Civil War and California Gold Rush would continue to shape the history of California.

Spanish Period (1769 to 1821) to Mexican Period (1821 to 1848)

The Spanish period began in 1769 with Captain Gaspar de Portolá's land expedition and ended in 1821 with Mexican Independence. During the Spanish Period, the influence of San Luis Rey Mission and San Gabriel Mission was apparent throughout the surrounding regions, with much of the area used for cattle grazing. At their peak, the San Luis Rey Mission controlled multiple ranches and claimed control over what is now Lake Elsinore, Temecula, and Murrieta in addition to areas in northern San Diego County, while the San Gabriel Mission claimed lands in present-day Jurupa, Riverside, San Jacinto, and the San Gorgonio Pass (American Local History Network 2004). However, after control of the area shifted to Mexico, secularization began throughout the area and the missions and their associated ranches began to decline. By 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization (Engelhardt 1921). The Mexican government proceeded to push settlements of Mexican populations from the south by deeding large grants, or ranchos, to individuals who promised to employ settlers. Although Riverside County had several large ranchos, none of them were located near City of Rancho Mirage (Engelhardt 1921; BLM GLO 2008). Small villages were established on some ranchos, while small towns appeared in areas between ranchos. In 1848, the Treaty of Guadalupe Hidalgo was signed, and Alta California was given to the United States, thus beginning the American period (Engelhardt 1921).

American Period (1848 to present)

The Gold Rush of 1849 would see tremendous influx of Americans and Europeans flooding into Southern California. The passing of the Homestead Act of 1862 increased the influx of settlers within the region. Eventually, Riverside County was settled by homesteaders and farmers, and quickly became a diversified agricultural area with citrus, grain, grapes, poultry, and swine being the leading commodities. This influx of settlers led to population pressures and increased conflicts with the local indigenous groups. The passage of the Act for the Governance and Protection of Indians in 1850 further degraded the position of the Cahuilla. By 1877, The Cahuilla were moved to reservations in a checkerboard pattern throughout the Palm Springs and Coachella Valleys in Riverside County (Napton and Greathouse 1982) which broke up reservation land into discontinuous patchwork pieces, restricting access by the tribe to sacred lands and traditional gathering places.

The completion of the transcontinental railroad in 1869 encouraged people to move and settle in southern California. Jurupa Valley was the first established community in present-day Riverside County (American Local History Network 2004). Citrus farming quickly became the dominate agricultural staple. Conflicts arose stemming from differing political, economy, and spiritual beliefs. Tensions peaked after the City of San Bernardino was accused of using tax money to only benefit their own city, and not the rest of the neighboring areas. The outcome was establishing a new county, Riverside County in 1893. Voters of Jurupa Valley, San Diego County residents in

Temecula and San Jacinto Valleys, and the desert regions of San Bernardino County voted to establish the new county in hopes of creating a community that reflected their own ideals (American Local History Network 2004). While citrus farming was the dominate economic staple, commerce, construction, manufacturing, transportation, and tourism also aided in boosting the economy (American Local History Network 2004).

Historical Context of the Project Region

The Project is located in the City of Rancho Mirage, one of the nine cities of Coachella Valley (Bohannan, 2015). Rancho Mirage was established in 1924 and later incorporated into Riverside County in 1973. In the 1920s, Rancho Mirage consisted primarily of agricultural grape and date ranches (Mallette, 2011). In 1924, R.P. "Bert" Davie and E. E. McIntyre purchased hundreds of acres from the Southern Pacific Railroad to promote the area as a destination desert community (Rancho Mirage General Plan, 2017). When development by Davie began, it consisted of a ranch house on Clancy Lane, and with that, a road that connected his residence to the Bradshaw Highway (present-day Highway 111) (Mallette, 2011). He named this road Rio del Sol (River of the Sun), and it was later renamed to today's Bob Hope Drive (Mallette, 2011).

In 1928, Southland Land and Realty Company purchased 160 acres but the 1929 Depression put an end to any plans of development. Later, a Los Angeles realtor, Lawrence Macomber, along with Don Cameron purchased hundreds of acres in Rancho Mirage and began advertising the property as "fifteen minutes from Palm Springs, CA." They were able to attract actors such as Frank Morgan to the area, but the start of World War II stalled developmental progress again (Riche and Riche, 2018).

The name "Rancho Mirage" was thought to have caught on in 1934, when Louis Blankenhorn and Laurence Macomber used the name in a new real estate promotion for property along Highway 111, Bob Hope Drive, and Indian Trail Drive (General Plan, 2017). In 1946, White Sun Guest Ranch opened (converted from Eleven Mile Ranch) as well as the Thunderbird Ranch Guest Ranch in 1947 which was designed by Pasadena architect Gordon Kaufman. With these developments, "Visitors enjoyed vacations in rustic cabins, with chuckwagon breakfasts, swimming and horseback riding." (Preservation Mirage, 2024).

After World War II, residential golf course development thrived and Thunderbird Country Club opened in 1951, which was the first 18-hole golf course (General Plan, 2017). However, it was an extremely selective club that required high status and financial standing and did not allow people of color (City History, 2024). The following year, 1952, the Tamarisk Country Club opened, with Frank Sinatra's endorsement since it was more inclusive and allowed him to play with fellow musicians who were not allowed entry at Thunderbird (City History, 2024). Both of these country clubs were the first planned developments in the community and promoted Rancho Mirage as a world class resort residential community (General Plan, 2017).

This led to a surplus of famous and influential people visiting and buying vacation homes in the area. The Annenberg Estate known as the 'Sunnylands' was popular with the wealthy and powerful, including Frank Sinatra, Bob Hope, Fred Astaire, Zeppo Martin and even many presidents including Richard Nixon, Ronald Reagan, and General Ford.

Following its incorporation into Riverside in 1973, an increase in development occurred with approximately 5,000 dwelling units built in 1974 alone. While many of these buildings are unlikely to attain 'historic architecture' status, the architectural style and prominent architects who have worked on homes in the city, have an important impact on the 'character' of the city (Preservation Mirage, 2024).

The economy of Rancho Mirage has expanded from its resort-based industry of rentals and golf courses, to include other smaller industries, primarily near the I-10 and commerce consisting of retail centers like The River shopping complex. (City History, 2024). Most recently, in March 2021, it was announced that Rancho Mirage would be the site of "the first US neighborhood composed completely of 3D-printed, zero net energy homes" (Guardian 2021) as a joint effort from companies Palari and Mighty Buildings (Archinet, 2021) which are expected to be completed in 2024 (Forbes, 2023).

RESEARCH DESIGN

The objectives of an archaeological assessment are to locate, interpret, and evaluate the indications of past human activities within the study area. The indicators of such activities are represented by cultural resources and can consist of many different types of materials – stone tools, historic neighborhoods, historic-era can scatters, village sites, food waste, tool manufacturing waste, trails, stone alignments, petroglyphs, hearths, or human skeletal remains. All of these types of resources are known to exist within the general Project region. The scope of this study is to identify and evaluate the significance of observable cultural resources, should they exist within the Project Area.

LEGAL COMPLIANCE BASIS

This Project is subject to both state and local regulations, including CEQA and Riverside County's General Plan. CEQA declares that it is state policy to "take all action necessary to provide the people of this state with ... historic environmental qualities." It further states that public or private Projects financed or approved by the state are subject to environmental review by the state. All such Projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed Project. In the event that a Project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered. CEQA includes historic and archaeological resources as integral features of the environment. The level of consideration may vary with the importance of the resource.

RESEARCH THEMES WITHIN THE PROJECT AREA

Riverside County has a rich precontact and historic cultural heritage. However, based on previous research, minimal precontact cultural resources are known to exist within the Project Area and or within 1-mile (see Results section). Of the known resources in the region, precontact sites appear occur along intermittent drainages, and are often associated with boulder outcrops. Food processing sites, consisting of bedrock grinding and milling features, and ground stone implement fragments are found within the region. The closest known sites of this type are located along the foothills and canyons to the north and south, indicating that some areas may have been used more frequently or for longer periods. Petroglyph sites are known to exist in the general region but have not been encountered in the vicinity of the Project Area.

Future archaeological research within the general Project Area has the potential to address research questions regarding settlement patterns, site structure, subsistence strategies, trade and distribution networks and tool technologies. Questions for the Project have been selected to contribute to the context and understanding of the precontact and history of California. Based on the literature review, research questions fall into several precontact and historic domains. The precontact research domains are Chronology and Cultural Affiliation, Subsistence and Site Function, and Toolstone Procurement and Use. Historic research domains focus primarily on the topics of Community Development. Defining research questions also helps focus the documentation of resources during survey so that artifacts, features and other remains that can contribute to an understanding of regional history and precontact are carefully noted.

CHRONOLOGY AND CULTURAL AFFILIATION

At precontact sites throughout Central Riverside County, chronometric data generally derive from time-sensitive artifacts (e.g., projectile points, beads, and ceramics), physically dateable artifacts (e.g., obsidian), and organic remains (dateable through chronometric assay). Time-sensitive and dateable artifacts can occur in surface and subsurface contexts, the former sometimes being less reliable than the latter in terms of dating archaeological components. Dateable organic remains (e.g., bone, shell, fiber, loose charcoal) can be acquired from midden

deposits or, in the best examples, from buried features like hearths. In any case, sites that have dateable items or remains can be placed at least tentatively within an existing temporal framework, be it local or regional, and used to compare and contrast temporal adaptive patterns in human behavior. For the most part, sites that can be dated have greater overall data potential than undated sites because they can be placed in time and can help refine our understanding of long-and short-term changes in precontact human adaptation.

Given the importance of chronological data to all archaeological interpretation, it will be critical to document the presence of any time-sensitive artifacts within the Project Area. Sites that can contribute valuable chronological data may be recommended eligible for listing on CRHR under Criterion (4), research potential.

SUBSISTENCE-SETTLEMENT PATTERNS

Subsistence is one of the most basic of human needs having a direct effect on human behavior. Precontact subsistence procurement activities consist of any number of variables including: site location in relation to land form, water supply, and raw materials; site size; site function; and duration of occupation. Material culture, such as lithic and ground stone tools, ceramics, and faunal and botanical remains, provide data representative of subsistence-related activities and strategies.

The Project Area is within a larger settlement area used by the Cahuilla, the Luiseño, and the Serrano. Information on the nature and intensity of precontact use of the Project area, including the types of sites present, their density, and environmental context, will contribute to a more complete picture of settlement and subsistence patterns in this part of California. Combined with chronological information (above), this information can also assist in determining adaptive changes over time. Sites that can offer valuable data concerning precontact subsistence-settlement patterns may be recommended eligible for listing on CRHR under Criterion (4), research potential.

TOOL-STONE PROCUREMENT AND USE

Basic patterns in lithic materials use can be useful for reconstructing the approximate geographic extent of past settlement and trade systems. Sites that can offer valuable information concerning patterns of precontact toolstone procurement and use may be recommended eligible for listing on CRHR under Criterion (4), research potential, particularly if they are accompanied by chronological data that can be used to place stone-working behaviors in time.

HISTORIC RESEARCH DOMAINS

Historic archaeological sites can offer important data concerning any number of historic themes and may be recommended eligible for listing on California Register of Historical Resources (CRHR) under Criterion (4), research potential. They might also be eligible under Criterion (1) if they can be linked to certain historical events that were important in California's past, Criterion (2) if they are found associated with persons important in history, or under Criterion (3) if they contain structural features that are distinctive of a particular historic period or demonstrate an exceptional aesthetic quality. For the purposes of this Project, we plan to focus historic period research on the theme of community development and built environments. The historic research domains will specifically address the historic-era built environment within the City of Rancho Mirage, as it is felt that this topic is important to our understanding of the history in Central Riverside County.

SIGNIFICANCE EVALUATIONS

The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the National Register of Historic Places, and require similar protection to what National Historic Preservation Act Section 106 mandates for historic properties. According to Public Resources Code (PRC) Section 5024.1(c) (1-4), a resource is considered historically significant if it meets at least one of the following criteria:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2. Associated with the lives of persons important to local, California or national history;
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important to the precontact or history of the local area, California or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance impacts. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Note that California Historical Landmarks with numbers 770 or higher are automatically included in the CRHR and will still be regarded as potentially significant if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

Sites with the potential to yield artifacts and other data that can address research questions may be evaluated as eligible for CRHR listing per Criterion (4). Some precontact sites may be evaluated as CRHR-eligible under Criterion (1) if they relate to culturally significant events or (mythological) persons (Criterion 2), or represent high artistic forms (e.g., rock art), per Criterion (3).

Under CEQA, if an archaeological site is not a significant "historical resource" but meets the definition of a "unique archaeological resource" as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined in PRC Section 21083.2(g) as follows: An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important precontact or historic event or person.

Resources that neither meet any of these criteria for listing on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be

given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" [PRC Section 21083.2(h)].

Impacts to historical resources that alter the characteristics that qualify the historical resource for listing on the CRHR are considered to be a significant effect (under CEQA). The impacts to a historical resource are considered significant, if the Project activities physically destroy or damage all or part of a resource, change the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance, or introduce visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. If it can be demonstrated that a Project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to require any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)).

TRIBAL CULTURAL RESOURCES

Assembly Bill (AB) 52 (Gatto; Stats. 2014, ch. 532), enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources as defined in Public Resources Code (PRC) Section 21074, and consultation with California Native American tribes. Tribal cultural resources include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a tribe. A tribal cultural resource is one that is either: (1) listed on, or eligible for listing on the CRHR or local register of historical resources (see section below); or (2) a resource that the CEQA lead agency, at its discretion and supported by substantial evidence, determines is significant pursuant to the criteria in PRC Section 5024.1, subdivision (c) (see PRC Section 21074). Further, because tribes traditionally and culturally affiliated with a geographic area may have specific expertise concerning their tribal cultural resources, AB 52 sets forth requirements for notification and invitation to government to government consultation between the CEQA lead agency and geographically affiliated tribes (PRC Section 21080.3.1[a]). Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required.

Tribal cultural resources per PRC 21074 (A)–(B) are defined as either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

    b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

    a) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

CITY OF RANCHO MIRAGE GENERAL PLAN

The Conservation and Open Space Element of the *City of Rancho Mirage General Plan* provides the following requirements for culturally sensitive areas within the County:

- POLICY COS 8.1 The City shall exercise its responsibility to preserve archaeological, historical, and cultural sites.
    - PROGRAM COS 8.1A Establish and maintain an archaeological and historical resources database.

  - PROGRAM COS 8.1B Maintain a preservation ordinance to provide for the designation and protection of historic resources.
  - PROGRAM COS 8.1C Continue to promote historic preservation incentives, such as enabling the use of Mills Act contracts to lower property taxes on designated resources.
  - PROGRAM COS 8.1D Develop an education program to familiarize residents and visitors alike with the city's architectural and historical heritage.
- POLICY COS 8.2 Development or land use proposals that have the potential to disturb or destroy sensitive cultural resources shall be evaluated by a qualified professional and appropriate mitigation measures shall be incorporated into project approvals, if necessary.
  - PROGRAM COS 8.2A Encourage in-place preservation or the recovery and preservation of materials for later study and display when reviewing development proposals and cultural surveys that identify sensitive resources.
  - PROGRAM COS 8.2B Perform an annual records search in the Native American Heritage Commission and California Historic Resources Information System databases to determine the presence of potential cultural resources in the boundaries of the city and the SOI.
  - PROGRAM COS 8.2C Continue to adhere to the requirements of SB 18 of 2004 and AB 52 of 2014, as applicable, by consulting with local Native American tribes on potential disturbance, recovery, and preservation of tribal cultural resources.
- POLICY COS 8.3 The City shall ensure the protection of sensitive archaeological and historic resources from vandalism and illegal collection.
  - PROGRAM COS 8.3A Maintain mapping information and similar location oriented resources in a confidential manner and assure that only those with appropriate professional and organizational ties are provided access to these sensitive records.
- POLICY COS 8.4 The City shall support the listing of eligible properties, structures, or sites as potential historic landmarks and their inclusion in the National Register of Historic Places.
  - PROGRAM COS 8.4A Periodically review the historical and archaeological resources of the area in cooperation with local historical associations for possible application for status as a historical landmark or inclusion in the National Register of Historic Places.
  - PROGRAM COS 8.4B Conduct meetings with City staff and elected officials to prioritize and propose action on the preservation and registration of important archaeological and historical resources in the community and vicinity.

METHODS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH

MCC staff conducted a records search of the California Historical Resources Information System (CHRIS) at the Eastern Information Center (EIC) located at University of California, Riverside in January 2024. The search covered any previously recorded cultural resources and investigations within 1-mile of the Project Area. The records search also included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Inventory of Historic Resources. MCC also reviewed the California State Historic Resources Inventory (HRI) and Built Environment Resources Directory (BERD) for Riverside County to determine if any local historical properties which have been previously evaluated for historic significance are located in the records search buffer. In addition, archival maps were inspected for indications of historical structures in the area.

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH

MCC requested a Sacred Lands File search from the NAHC on January 30, 2024. The NAHC responded on February 26, 2024 stating that there are no known sacred lands within a 1-mile radius of the Project Area. The NAHC requested that 23 Native American tribes or individuals be contacted for further information regarding the Project Area and vicinity. MCC subsequently sent letters on February 27, 2024, to the 23 Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the Project Area. Additional attempts at contact by email and phone were made on March 22 and March 29, 2024, respectively.

CULTURAL RESOURCES SURVEY METHODS

The survey stage is important in a Project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. MCC Archaeologist Zachary White B.A., conducted the survey of the Project Area on March 13, 2024. The survey consisted of walking in parallel transects spaced at approximately 5-meter intervals over the Project Area, while closely inspecting the ground surface. All undeveloped ground surface areas within the ground disturbance portion of the Project Area were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). Existing ground disturbances (e.g. cutbanks, ditches, animal burrows, etc.), if visible, were visually inspected for any potential presence of the above mentioned indicators of cultural resources. Representative photographs were taken of the entire Project Area.

RESULTS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH

The CHRIS records search identified a total of 25 previously conducted cultural resource investigations within a 1-mile radius of the Project Area (see Table 1). One of the investigations is located within the Project Area. A brief summary of the study located within the Project Area can be found below. The 25 studies conducted within 1-mile of the Project Area date between 1972 and 2017 and includes 18 cultural reports, four (4) historical property reports, one (1) record search, one (1) field reconnaissance for a telecommunications site, and one (1) report for a cell tower.

RI-10406

Archaeological Sensitivity Model for The Whitewater River Stormwater Channel, Riverside County, California was conducted in 2012 by Applied Earthworks, Inc. The study was performed on behalf of Coachella Valley Water District and spanned over Riverside and San Bernardino County (Applied Earthworks, Inc, 2012).

Table 1. Previously Conducted Cultural Resources Studies within 1-mile of the Project Area

CHRIS Report Number	Year	Authors	Affiliation	*Title Of Study*	Distance from Project Area
RI-00072	1972	Wilke, P.J.	Archaeological Research Unit, U.C. Riverside	*Sunrise Country Club: Expected Impact on Archaeological Resources*	Within 1 mile
RI-00115	1973	Wilke, P.J.	Archaeological Research Unit, U.C. Riverside	*The Sprinfs Country Club: Expected Impact on Archaeological Resources*	Within 1 mile
RI-00181	1978	Taschek-Ball, J.	Department of Anthropology, San Diego State University	*An Archaeological Survey of Some Discontinuous Parcels of Land on the Agua Caliente Indian Reservation, Riverside County, California*	Within 1 mile
RI-00032	1979	Archaeological Associates	Archaeological Associates, Ltd., Costa Mesa, CA	*Archaeological Survey Report: The Rancho Mirage Property Near Palm Springs, CA.*	Within 1 mile
RI-01783	1984	Swenson, J. D.	Author	*An Archaeological Assessment of Two Small Parcels on The Agua Caliente Indian Reservation, Rancho Mirage, Riverside County, California*	Within 1 mile
RI-03861	1995	Love, B.	CRM Tech	*Identification & Evaluation of Historic Properties: Frank Sinatra Drive Street Widening Project, Rancho Mirage, Riverside County, California*	Within 1 mile
RI-03862	1995	Love, B.	CRM Tech	*Negative Archaeological Survey Report: Frank Sinatra Drive Improvements, Between Morningside Dr/Thompson Rd And Bob Hope Dr, City of Rancho Mirage, Riverside County, California*	Within 1 mile
RI-05327	2002	Michael Brandman Associates.	Michael Brandman Associates	*Records Search Results for Sprint Pcs Facility R35xc095j (Trojan Properties), City of Rancho Mirage, Riverside County, Ca*	Within ½-mile
RI-06630	2006	Tang, B.T. and M. Hogan	CRM Tech	*Letter Report: Historical and Archaeological Resources Investigation, The Lodge at Rancho Mirage, Approximately 39 Acres, City of Rancho Mirage, Riverside County, California*	Within 1 mile

CHRIS Report Number	**Year**	**Authors**	**Affiliation**	***Title Of Study***	**Distance from Project Area**
RI-07441	2007	Denniston, E.	Applied EarthWorks, Inc.	*Phase I Archaeological Assessment of Approximately 1.42 Acres for the Repair of the Paxton Drop Structure in Rancho Mirage, Riverside County, California*	Within 1 mile
RI-08198	2009	Wlodarski, R.J.	Cellular Archaeological Resource Evaluations, West Hills, CA	*Field Reconnaissance Phase for the Proposed Bechtel Wireless Telecommunications Site Bechtel Wireless Telecommunications Site RS0160*	Within ½-mile
RI-08284	2009	Allred, C.	Earth Touch, Layton, UT	*Letter Report: Proposed Cellular Tower Project(s) in Los Angeles County, California, Site Number(s)/Names(s): LA-3628A/ Lord Fletcher TCNS# 56936*	Within ½- mile
RI-08506	2010	Sander, J.K.	Chambers Group, Inc.	*A Phase I Cultural Resources Inventory for APN 689-090-003, 689-130-004, 689-130-005, 689-130-013, 689-130-014, 689-130-017, 689-130-018, & 689-140-022 Compromising Approx. 20 Acres Rancho Mirage, Riverside County, California*	Within ½-mile
RI-08653	2011	Bonner, W.H., Leaver, G and S.A. Williams	Michael Brandman Associates	*Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE24259-B (Northern Trust Plaza), 69730 Highway 111, Rancho Mirage, Riverside County*	Within 1 mile
RI-08825	2012	Tang, B.T. and M. Hogan	CRM Tech	*Historic Property Survey Report: Frank Sinatra Drive/Highway 111 Intersection Improvement Project, City of Rancho Mirage, Riverside County, California, Federal Project No. HSPIL-5412(010)*	Within 1 mile
RI-09181	2013	Puckett, H.	Tetra Tech	*Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property at the Boothill Site, 70801 Highway 111, Cathedral City, Riverside County, California 92270*	Within 1 mile
RI-09497	2015	Tang, B.T. and M. Hogan	CRM Tech	*Historical Property/Archaeological Survey Report Highway 111 Street Lighting Project City of Rancho Mirage, Riverside County, California*	Within ½-mile
RI-09749	2014	Way, K.R. and R. Ramirez	Rincon Consultants	RSMW, LLC Thunderbird Resort and Spa Development Project Cultural Resource Study	Within 1 mile
RI-09833	2015	Offermann, J. and L. Bridges	URS Corporation	*Historic Property Survey Report for Frank Sinatra Drive Bridge at Whitewater River Project Location: Frank Sinatra Drive, Rancho Mirage, Riverside County, California*	Within 1 mile
RI-09835	2015	Offermann, J. and L. Bridges	URS Corporation	*Archaeological Survey Report for Frank Sinatra Drive Bridge at Whitewater River Project Location: Frank Sinatra Drive, Rancho Mirage, Riverside County, California*	Within 1 mile
RI-09850	2017	George, J., Mcougall, D. and V. Mirro	Applied EarthWorks, Inc	*Cultural Resource Assessment for the Coachella Valley Water District's Whitewater River Stormwater Channel Bureau of Indian Affairs Easement Renewal Project, City of Cathedral City, Riverside County, California*	Within 1 mile
RI-10248	2017	Duke, C.	Duke CRM	*Historic Property Survey Report Rancho Mirage Resignalization Project Highway 111/Bob Hope Drive/Country Club Drive*	Adjacent to Project Area

CHRIS Report Number	Year	Authors	Affiliation	*Title Of Study*	Distance from Project Area
RI-10249	2017	Hearth, N.F.	Duke CRM	*Archaeological Survey Report Rancho Mirage Resignalization Project Highway 111/Bob Hope Drive/ Country Club Drive*	Adjacent to Project Area
RI-10374	2013	George, J. and V. Mirro	Applied EarthWorks, Inc.	*Phase 1 Cultural Resources Assessment for the Coachella Valley Water District's Whitewater River-Coachella Valley Stormwater Channel Project, Riverside County, California*	Within 1 mile
RI-10406	2012	Mirro, M.	Applied EarthWorks, Inc.	*Archaeological Sensitivity Model for the Whitewater River Stormwater Channel, Riverside County, California*	Within Project Area

Although there are no previously recorded resources located within the Project Area boundaries, the records search identified one (1) previously recorded cultural resource within a 1-mile radius of the Project Area (see Table 2). The historic-age site consisting of an historic building, P-33-005513, is located within ¼-mile of the Project Area.

Table 2. Previous Recorded Resources within 1-mile of the Project Area

Primary Number	Trinomial	Type	Age	Attributes	NRHP/CRHR	Distance from Project Area
P-33-005513	None	Building	Historic	HP02	Evaluated, Status code 5S	Within 1-mile

Key: 5S1 Individual property that is listed or designated locally.

The full results of the CHRIS record search can be found in Confidential Appendix B.

Several additional sources were consulted to supplement the CHRIS records search (Table 3). A review of the Bureau of Land Management General Land Office Records (BLM GLO) identified three land grants issued within the Project Area: Patent Number 556233 was issued to Norman S. Dayton under the authority of the Homestead Act of 1862 for 165.92-acres was granted on November 27, 1916. Patent Number 536993 was issued to Oscar T. Hayhurst under the authority of the Homestead Act of 1862 for 80.48-acres was granted on July 6, 1916. The Homestead Act of 1862 was signed under President Abraham Lincoln and gave citizens up to 160-acres of public land provided they live on it, improve it, and pay a small registration fee (Potter and Schamel 1997). By 1934, over 270 million acres of land had been granted. Additionally, Patent Number 1141616 was issued to Anthony Gilbert Salazar under the authority of the Indian Trust Patent of 1880 for 49.83-acres was granted on November 27, 1953, however, this was later cancelled. The BERD identified one historic-era structure located approximately 0.15-mile north-northeast of the Project. The structure, located at 39060 Peterson Rd in the city of Rancho Mirage, was evaluated and given the Status code 5S2; the individual property is eligible for local listing or designation. The structure is not eligible for the NRHP, CR, or Local listing, but is recognized as historically significant by local government. No additional information was identified relating to the residence.

Table 3. Additional Sources Consulted for the Project

Source	Results
National Register of Historic Places (1979-2002 & supplements)	Negative; Structure located at 39060 Peterson Road is outside Project Area. Structure is eligible for Local Listing.
Historical United States Geological Survey topographic maps (USGS 2012)	Negative; Project Area is undeveloped.
Historical United States Department of Agriculture aerial photos	Negative; Project Area is undeveloped.
California Register of Historical Resources (1992-2010)	Negative
California Inventory of Historic Resources (1976-2010)	Negative
California Historical Landmarks (1995 & supplements to 2010)	Negative
California Points of Historical Interest (1992 to 2010)	Negative
Local Historical Register Listings	Negative
Bureau of Land Management General Land Office Records (BLM GO 2008)	Positive; Three patents were found to be within the Project Area. 556233 Serial Patent issued to Norman S. Dayton under the Homestead Act of 1862 for 160-acres of land on November 27, 1916. 536993 Serial Patent issued to Oscar T. Hayhurst under the Homestead Act of 1862 for 80.48-acres of land on July 6, 1916. 1141615 Serial Patent issued to Anthony Gilbert Salazar under Indian Trust Patent of 1880 for 49.83-acres of land November 27, 1953 but was later cancelled.

A review of historical aerial photographs and topographic maps indicated that prior to 1972, the Project Area was relatively undisturbed from modern development and has existed as a vacant lot since 1944 (Figure 4). Residential development to the south of the Project Area and what is now Peterson Road has been present since 1959 (Figure 5). The now defunct trailer park within the Project Area has been present since at least 1972 (Figure 6) and development remained relatively unchanged between then and 1984 (Figure 7). This development is considered historic with the remaining foundations observed during the survey dating prior to 1972. By 2005, residential development to the west of the Project Area and redevelopment of what is now Juniper Lane, to the south of the Project Area had occurred (Figure 8) and remains unchanged from today.

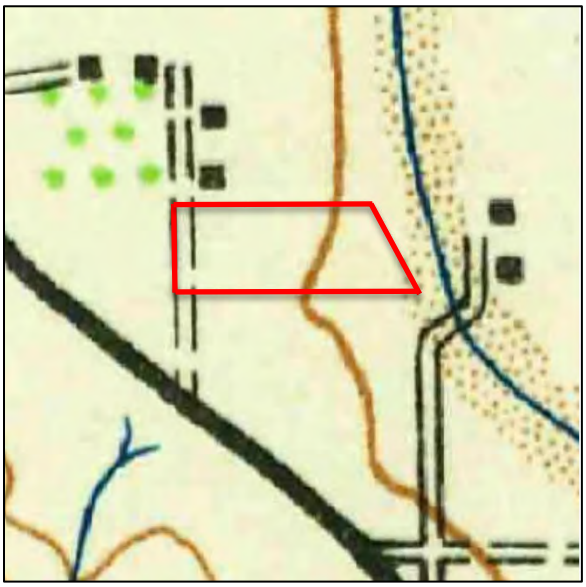


Figure 4. Project Area as a vacant area with historic-age roads (as depicted on 1944 topographic map)

Figure 5. Project Area with surrounding residential development (as depicted on 1959 aerial photograph)

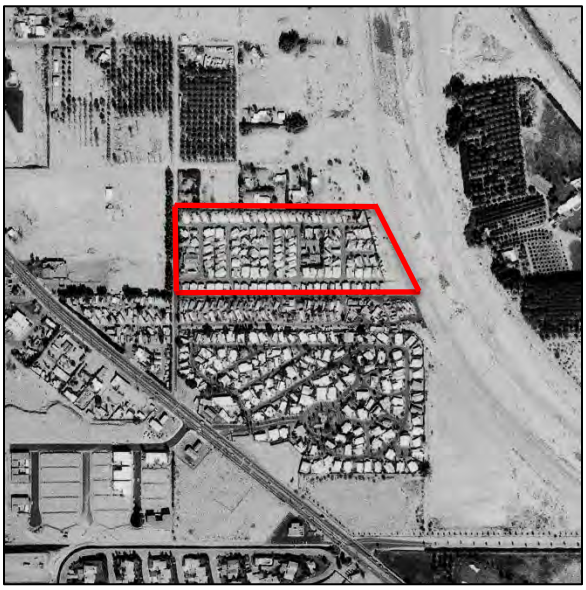


Figure 6. Project Area with residential development occurring directly east of Project Area (as depicted on 1972 aerial photograph)

Figure 7. Project Area with increased development in surrounding area (as depicted on 1984 aerial photograph)

Figure 8. Project Area with mowing activities observed (as depicted on 2005 historic aerial)

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH

As a result of outreach efforts, MCC received six responses from Native American Tribes and representatives. The responses came in the form of an email or phone call. A summary of the responses is included below:

On March 4, 2024 MCC received an email from Xitlaly Madrigal, cultural resources analyst from the tribal historic preservation office for Agua Caliente Band of Cahuilla Indians, responded stating that the Project Area is not located within the boundaries of the ACBCI Reservation, but it is within the Tribes Traditional Use Area. The ACBCI THPO requested a number of policies be conducted.

On March 7, 2024 MCC received an and email from Ana Rios, an administrative assistant for the Augustine Band of Cahuilla Indians, with an attached letter from Jacobia Kirksey, a tribal operation specialist, stating that at this time, they are unaware of specific cultural resources that may be affected by the proposed Project, however, in the event, any cultural resources are discovered during the development of this Project to inform them immediately for further evaluation.

On March 7, 2024 MCC received an email from Lorrie Gregory, cultural resource coordinator for the Cahuilla Band of Indians, stating that they are unaware of any cultural resources at or near the Project Area, but the Project is within their traditional land use and requested to review any cultural materials associated with the Project.

On March 28, 2024, MCC spoke with Ray Chapparosa, Chairperson Los Coyotes Band of Cahuilla and Cupeño Indians. Mr. Chapparosa stated the tribe does not wish to comment and defers to local tribes.

On March 28, 2024, MCC spoke with Manfred Scott, Acting Chairman for the Quechan Tribe of the Fort Yuma Reservation. Mr. Scott stated the tribe does not wish to comment and defers to local tribes.

On March 28, 2024, MCC spoke with Jessica Valdez, Cultural Resource Specialist Soboba Band of Luiseno Indians. Ms. Valdez stated the tribe does not wish to comment and defers to local tribes.

As of April 1, 2024, MCC has not received any additional responses from the remaining NAHC-listed groups or individuals contacted for information. Should MCC receive additional responses once the final report is submitted, the information will be passed on to the Client and/or Leady Agency to be added to the report as an addendum. The outreach was conducted for informational purposes only and formal consultation will be conducted by the Lead Agency. Additionally, all requests were acknowledged and will be provided to the Lead Agency. All written NAHC and Native American correspondence materials and our communication log are provided as Appendix C.

CULTURAL RESOURCES SURVEY RESULTS

On March 13, 2024, an intensive level pedestrian survey was conducted of the Project Area. During the course of fieldwork, survey conditions were good. During the survey, visibility was fair (75%) due to some vegetation overgrowth and refuse in certain portions of the Project Area. The Project Area has been highly disturbed due to the previous development of a mobile home park. Areas with poorer visibility were surveyed in 5-meter transects instead of 10-meter transects. Presently, the Project Area exists as an empty mobile home community with a gradual west-facing slope of less than 5-degrees. Furthermore, the entire area shows heavy disturbance from the previous development.

Overall, the Project Area is highly disturbed. The remnants of the previous 126 individual mobile home lots and 3 parking lots were observed throughout the Project Area. Each mobile home lot consists of a paved structure pad, sidewalk, driveway, and underground utilities. These existing foundations of the defunct trailer park are considered historic-age and were recorded as a resource (MCC-blieu-001). The driveways are in poor condition while the sidewalks and pads remain in good condition. Heavy grading and excavation would have taken place to build the lots, utilities, and the roads (Travelodge Lane) that connect them. Vegetation includes palm trees, fountain grass, prickly pear cactus, desert dandelion, and indian laurel fig trees, from previous landscaping. Sediments are highly disturbed from development and consisted of brown fine to medium coarse-grained silty sand with imported quartz and volcanic pebble sized inclusions. Piles of modern refuse and landscaping material were observed throughout the Project Area. Evidence of imported landscaping material was observed with the presence of white quartz gravel, red lava rock and decorative shells. Other decorative material present included red tile, red brick edging, cinder blocks and red brick with cement mortar. Modern refuse observed included rubber tires, wood furniture, brick fragments, clothing, a chandelier, green and colorless glass fragments. Representative photographs of the Project Area are found in Figures 9-22.

One (1) cultural resource was observed during the field survey (MCC-blieu-001). The recorded concrete foundations do not meet any criteria for the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) nor qualify as a “unique archaeological resource” under CEQA PRC Section 21083.2, but were recorded as a formality (Appendix D).

Figure 9. Overview of Project Area, including access gate along Peterson Rd., facing south

Figure 10. Representative photo of sediments including red brick tile, plan view

Figure 11. Representative photograph of imported white quartz gravel, plan view

Figure 12. Overview of Project Area, facing southwest

Figure 13. Representative photograph of red brick and cement mortar landscaping, plan view

Figure 14. Representative photograph of imported volcanic gravel, plan view

Figure 15. Overview of Project Area, including Travelodge Ln, facing west

Figure 16. Overview of modern refuse, facing northeast

Figure 17. Representative photo of vegetation density, facing south

Figure 18. Overview of parking lot on east end of Project Area, facing northeast

Figure 19. Representative photo of sediments, plan view

Figure 20. Overview of single mobile home lot, facing west

Figure 21. Representative photo of utility connections for mobile home lots, plan view

Figure 22. Overview of Project Area, facing west

CONCLUSIONS AND RECOMMENDATIONS

The Phase I cultural resource assessment of the Project Area included a CHRIS records search and background research, NAHC SLF review and tribal outreach, and a field pedestrian survey.

The records search results identified a total of one (1) previously recorded cultural resource within 1-mile of the Project Area, none of which are located within the Project Area. In addition, 25 cultural resource investigations have been conducted within 1-mile of the Project Area, one of which intersects the Project Area (RI-10406). During the field survey, conditions were good and ground visibility was fair. The Project Area is also heavily disturbed by previous development. Survey results included the recording of existing concrete foundations that are deemed ineligible under the NRHP and CRHR and do not qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2.

While not observed at the surface, due to heavy disturbance from previous development, vegetation overgrowth, and modern refuse, archaeological features and resources may have subsurface components that could be revealed during construction of the proposed Project. The proposed Project Area is considered to have unknown to moderate sensitivity for presence of precontact or historical archaeological deposits or features. Due to the inability to visually inspect the ground during the survey from previous development and the existing historic-age resource, MCC recommends archaeological monitoring for the removal of the concrete foundations, vegetation clearing, trimming, and removal, and during ground disturbance occurring within the first 5 feet below surface during construction. Prior to the start of construction, a cultural resources management plan (CRMP) should be prepared and implemented. It is recommended the Project's CRMP implement the following procedures:

- Archaeological monitoring during all ground-disturbance activities, such as site preparation, demolition of historic structures, and grading up to 5 feet below surface, in order to quickly identify and assess any discoveries of cultural resources during Project implementation.
- Development of an inadvertent discovery plan in place to expediently address archaeological and / or tribal cultural resource discoveries should these be encountered during any phase of development associated with the Project. In the event that these resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).
- Procedures of conduct following the discovery of human remains on non-federal lands have been mandated by California Health and Safety Code §7050.5, PRC §5097.98 and the California Code of Regulations (CCR) §15064.5(e). According to the provisions in CEQA, should human remains be encountered, all work in the immediate vicinity of the burial must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The San Bernardino County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: April 4, 2024

Signed: 

Printed Name: **Tria Belcourt, M.A., RPA, Qualified Riverside County Archaeologist**
Principal Investigator and Owner, Material Culture Consulting

REFERENCES

American Local History Network
2004 American Local History Network's Page for Riverside County, California. US Genealogy Network. Available online at: http://www.usgennet.org/usa/ca/county/riverside/. Last accessed on: August 5, 2021.

Applied Earthworks, Inc.
2001 *Eastside Reservoir Project Final Report of Archaeological Investigations, Volumes I-V.* Prepared for Metropolitan Water District of Southern California. On file at Eastern Information Center, University of California, Riverside.

Bean, L.J.
1972 Mukat's People: The Cahuilla Indians of Southern California. University of California Press, Berkeley.
1978 "Cahuilla." In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 575-587 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

Bean, L.J., and Katherine Siva Saubel
1972 *Temalpakh: Cahuilla Indian Knowledge and Use of Plants*. Malki Museum, Banning, California.

Bean, L.J. and F.C. Shipek
1978 "Luiseño." In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 538-549 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

Bean, L.J. and C.R. Smith
1978 "Serrano." In *Handbook of North American Indians, Volume 8. California*. Volume edited by Robert F. Heizer, pp. 570-574 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

BLM GLO (Bureau of Land Management Government Land Office)
2008 Land Grant Records Search Tool. Available online at http://www.glorecords.blm.gov/PatentSearch/Default.asp. Last accessed February 22, 2021.

Brian F. Smith and Associates
2008 Phase I Archaeological Survey for the Cabazon Carmen Meadows Project, County of Riverside, California. Prepared for Diversified Product, Ind., Ltd. On-file at Eastern Information Center, University of California, Riverside.

Brumgardt, Dr. John R.
1977 Site Record P-33-001701, Supplemental Material (The Gilman Ranch). On file at the Eastern Information Center, Riverside, California.

California Native American Heritage Commission
2024 http://nahc.ca.gov/ accessed February 2024

City of Rancho Mirage
2017 City of Rancho Mirage General Plan (RMGP) https://ranchomirageca.gov/wp-content/uploads/2019/01/rm-general-plan-17.pdf

County of Riverside
2015 County of Riverside Environmental Impact Report No. 521, Cultural and Paleontological Resources (Section 4.9)

Applied Earthworks, Inc.
2001 *Eastside Reservoir Project Final Report of Archaeological Investigations, Volumes I-V.* Prepared for Metropolitan Water District of Southern California. On file at Eastern Information Center, University of California, Riverside.

Bean, L.J.
1972 Mukat's People: The Cahuilla Indians of Southern California. University of California Press, Berkeley.
1978 "Cahuilla." In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 575-587 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

Bean, L.J., and Katherine Siva Saubel
1972 *Temalpakh: Cahuilla Indian Knowledge and Use of Plants*. Malki Museum, Banning, California.

Bean, L.J. and F.C. Shipek
1978 "Luiseño." In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 538-549 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

Bohannan, L.
2015 Palm Springs Golf: A History of Coachella Valley Legends & Fairways. Arcadia Publishing. ISBN 978-1-62619-963-7.

BLM GLO (Bureau of Land Management Government Land Office)
2008 Land Grant Records Search Tool. Available online at http://www.glorecords.blm.gov/PatentSearch/Default.asp. Last accessed February 05, 2024.

Brian F. Smith and Associates
2008 Phase I Archaeological Survey for the Cabazon Carmen Meadows Project, County of Riverside, California. Prepared for Diversified Product, Ind., Ltd. On-file at Eastern Information Center, University of California, Riverside.

Brumgardt, Dr. John R.
1977 Site Record P-33-001701, Supplemental Material (The Gilman Ranch). On file at the Eastern Information Center, Riverside, California.

California Native American Heritage Commission
2024 http://nahc.ca.gov/ accessed February 2024

City of Rancho Mirage
2017 City of Rancho Mirage General Plan (RMGP) https://ranchomirageca.gov/wp-content/uploads/2019/01/rm-general-plan-17.pdf

County of Riverside
2015 County of Riverside Environmental Impact Report No. 521, Cultural and Paleontological Resources (Section 4.9)

DuBois, C.
1908 "The Religion of the Luiseño and Diegueno Indians of Southern California." In University of California Publications in American Archaeology and Ethnology 8(3):69-186, Berkeley, California

Engelhardt, Zephyrn
1921 *San Diego Mission*. James M. Barry Company, San Francisco.

Gifford, Edward W
1918 Clans and Moieties in Southern California. University of California Publications in American Archaeology and Ethnology Vol.14, No. 2. University of California Press, Berkeley

Gold, Scott
2000 *Living with an Ill-Timed Choice to Recall City Hall*. The Los Angeles Times. Originally published August 16, 2021. Available at: https://www.latimes.com/archives/la-xpm-2000-aug-16-mn-5133-story.html. Last

accessed on August 6, 2021.

Greenwood and Associates
1980 *Cultural Resource Overview for The Devers Substation to Serrano Substation Transmission Route Alternative Corridor Right-of-way.* Prepared for Southern California Edison. Wlodarksi, R.J., J.M. Foster, and R. Greenwood: Greenwood and Associates. On-file at Eastern Information Center, University of California, Riverside.

Hopkins, N. A.
1965 Great Basin Precontact and Uto-Aztecan. *American Antiquity*, *31*(1), 48–60. https://doi.org/10.2307/2694021

Hudlow, Scott M.
2007 *A Phase I Cultural Resource Survey for Global Premiere, APN 541-10-024 and -025, Williams and Alessandro Streets City of Banning, California.* Prepared for National Affordable Communities, Inc.

Kroeber, A.L.
1908 Ethnography of the Cahuilla Indians. In American Archaeology and Ethnology. University of California Publications, Vol 8, No 2. pp. 29-68.
1976 Handbook of Indians of California. Reprint of 1925 original edition, Dover Publications, New York.

Mallette, Leo A.
2011 Rancho Mirage. Arcadia Publishing. ISBN 978-1-4396-3932-0.

Miller, W.R.
1984 The Classification of the Uto-Aztecan Language Based on Lexical Evidence. The University of Chicago Press. International Journal of American Linguistics.

Napton, L. Kyle and E. A. Greathouse
1982 *Cultural Resources Investigations Morongo Indian Reservation, California.* Prepared for United States D Department of the Interior National Park Service.

Potter, L.A. and W. Schamel.
1977 The Homestead Act of 1862; Social Education 61, 6: 359-364.

Rancho Mirage Historic Preservation Commission
2024 https://ranchomirageca.gov/our-city/city-boards-commissions/historic-preservation-commission/

Riche, M. and Riche, J.
2018 Mod Mirage: The Midcentury Architecture of Rancho Mirage. Gibbs Smith

Sparkman, P.
1908 Fading Images Indian Pictographs of Western Riverside County. Riverside Museum Press, Riverside, California.

Sutton, M.
2010 The Del Rey Tradition and its Place in the Precontact of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54

Sutton, M. and D.D. Earle
2017 "The Desert Serrano of the Mojave River," *Pacific Coast Archaeological Society Quarterly*. 53(2 & 3): pp. 1-61.

Sutton, M. and J. Gardner

2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4):1-64

US Government Legislation and Statues
1853 March 3 - 10 Stat. 244, Act to Extend Preemption Rights to Public Land" (2016). *US Government Legislation and Statutes*. 10. Available at: https://digitalcommons.csumb.edu/hornbeck_usa_2_d/10

Wallace, W. J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.

Warren, C. N.
1967 "Cultural Tradition and Ecological Adaptation on the Southern California Coast". In Archaic Precontact in the Western United States, edited by C. Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology 1(3).

White, R.
1963 "Luiseño Social Organization" University of California Publications in American Archaeology and Ethnology"48(2):91-194, Berkeley, California.

Appendix A:
Staff
Qualifications

TRIA BELCOURT, M.A.

PRINCIPAL ARCHAEOLOGIST

PROFILE

For the past 18 years, Tria Belcourt has led and managed several complex cultural resources compliance projects throughout California and Nevada. As the owner, CEO, and Principal Archaeologist at MCC, she is responsible for quality control, client services, corporate operations, and assuring that MCC's deliverables are completed within regulatory compliance and MCC's quality standards. Tria is responsible for applying a broad range of professional knowledge and understanding of archaeological facts, principles, theories, methods, techniques, and procedures necessary for the management of a large variety of archaeological, cultural, and historic resources in diverse ecosystems. She specializes in archaeological, cultural, and historic resources for compliance with the National Environmental Policy Act, Antiquities Act, National Historic Preservation Act, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, and the California Environmental Quality Act. Tria meets the Secretary of Interior's Professional Qualifications for Archaeology and holds a Cultural Resources Use Permit with the Bureau of Land Management and a Permit for Archaeological Investigations with the US Department of the Interior.

EXPERIENCE

18 years

EDUCATION

M.A. Anthropology, University of Florida, 2009

B.A. Anthropology, University of California, Los Angeles 2006

CERTIFICATIONS

- Environmental Management of Military Lands, Colorado State University, 2014
- Bureau of Land Management Cultural Resources Use Permit – Principal Investigator, CA
- Qualified Riverside County Archaeologist

PROFESSIONAL MEMBERSHIPS

- Society of Historical Archaeology
- Society for California Archaeology

PROJECT EXPERIENCE

Regional Connector
Los Angeles County Metropolitan Transportation Authority :: Los Angeles County, CA
Project Manager and Principal Investigator. Oversaw and provided final review and submittal of all technical reports for three large design/build projects. Task orders included archaeological and paleontological monitoring, preparation of Mitigation Plans, Evaluation Reports, and Mitigation Reports for infrastructure improvements. Metro is constructing a new rail line and associated stations to connect future and existing rail lines in the downtown area into an integrated system. The Regional Connector Transit Corridor Project will directly link the 7th Street/Metro Center Station (the Metro Blue Line terminus and Metro Expo Line terminus) located at 7th and Figueroa Streets, to the Metro Gold Line near Little Tokyo/Arts District Station at 1st and Alameda Streets. The project will involve construction and operation of a 1.9-mile Light Rail Transit (LRT) connector that would link the Metro Blue Line, Metro Gold Line, and Metro Expo Line into a single consolidated system. The Regional Connector will begin underground at the existing Metro Blue Line and Metro Expo Line

platform at 7th Street/Metro Center Station and extend in a northeastern direction to a new junction with the Metro Gold Line near Alameda Street.

Crenshaw/LAX Mass-Transit Light Rail Line
Los Angeles County Metropolitan Transportation Authority :: Los Angeles, CA
Project Manager and Principal Investigator. Oversaw and provided final review and submittal of all technical reports for three large design/build projects. Task orders included archaeological and paleontological monitoring, preparation of Mitigation Plans, Evaluation Reports, and Mitigation Reports for infrastructure improvements. The project involves the construction of Metro's 8.5-mile mass-transit light rail line through southwest Los Angeles. Once all construction is complete, the Crenshaw/LAX Transit Project will extend light rail transit access from the existing Metro E Line (Expo) at Crenshaw and Exposition Boulevards in Los Angeles to the Metro C Line (Green) at the Aviation/LAX Station on Aviation Boulevard and Interstate 105 in the City of El Segundo. The K Line includes a total of nine stations.

Division 13 Project
Los Angeles County Metropolitan Transportation Authority :: Los Angeles County
Project Manager and Principal Investigator. Oversaw and provided final review and submittal of all technical reports for three large design/build projects. Task orders included archaeological and paleontological monitoring, preparation of Mitigation Plans, Evaluation Reports, and Mitigation Reports for infrastructure improvements. The Los Angeles Metro's new Division 13 Bus Maintenance and Operations Facility constructed a maintenance facility with 19 service bays for the metro's growing fleet and employee parking for 382 vehicles.

Construction Package 2-3
California High-Speed Rail Authority :: Fresno, Tulare, and Kern Counties
Project Manager and Principal Investigator. Oversees archaeological construction support services to ensure compliance with the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and federal and state permits. She is responsible for ensuring collaboration with Native American monitors and providing archaeological monitors during earth-moving activities, including grubbing, clearing, grading, and trenching involving native soils in areas identified as sensitive for prehistoric archaeological remains. Additionally, she has overseen the completion of several supplemental archaeological surveys. She has scheduled several mandatory trainings, including worker's environmental awareness training, Pacific Gas & Electric line safety training, and BNSF railroad safety training. The CP 2-3 Project is a 60-mile route located within the counties of Fresno, Tulare, and Kings and includes the construction of at-grade, aerial, and possible below-grade sections of the high-speed train, relocation and possible crossing of BNSF railroad tracks, roadway constructions, and the construction of waterway and wildlife crossings. The joint lead agencies are the Federal Railroad Administration and the California High-Speed Rail Authority (CAHSR) for the National Environmental Policy Act and CASHR for the California Environmental Quality Act.

US Multimodal Corridor Enhancement and Rehabilitation Project
Caltrans District 3 :: Sacramento County
Project Manager. Responsible for the review of a Paleontological Resources Monitoring Plan, contract administration, and monitoring oversight for full-time paleontological monitoring for portions of the project that have the potential to affect significant paleontological resources during ground-disturbing activities that affect native or potentially native substrate materials of Pleistocene age or older, including vegetation removal, site preparation, and construction grading and excavation. Paleontological monitoring consists of observing operations and periodically inspecting disturbed, graded, and excavated services. Coordination with the Caltrans Resources Specialist and Construction Resident Engineer is conducted to ensure that monitoring is thorough but does not result in unnecessary delays. The project consists of constructing approximately 7.5 miles of High Occupancy Vehicle (HOV) lanes in both directions on US 50 from US 50/I-5 Interchange to the US 50/Watt Avenue Interchange.

Castle Fire Restoration Emergency Work
Southern California Edison :: Sequoia National Forest
Project Manager. Provided project management support for archaeological field surveys and monitoring for emergency fire restoration activities, including line clearing and tree work, along SCE's right-of-way (ROW) due to recent fires in Sequoia National Forest (SQNF). The Castle Fire, a part of the Sequoia Complex Fire, burned approximately 171,336 acres in 2020

and 2021, including 131,087 acres within Sequoia National Forest (SQNF) and Giant Sequoia National Monument, 12,508 acres within Inyo National Forest (INF), 18,984 acres within Sequoia National Park (SEKI), 736 acres on lands managed by the Bureau of Land Management (BLM), 4,017 acres on state and county managed lands, and 4,004 acres on private lands. SCE identified extensive damage to electrical distribution circuits within the fire boundary and conducted emergency repairs that included distribution line repairs and vegetation management, including the removal of hazardous trees that posed an imminent threat to facilities, crews, and the public.

Wholesale Lumber and Building Material Facility
84 Lumber Company :: Los Angeles County
Project Manager and Principal Investigator. Conducted cultural and paleontological background research and NAHC outreach, performed cultural resources survey, and prepared a technical report and GIS geospatial data management. The cultural resources assessment was completed in compliance with CEQA and the City of Lancaster environmental guidelines. 84 Lumber Company is proposing the construction of a new wholesale lumber and building material facility constructed on a 12.74-acre site and consists of an 11,000 square foot main building, a 6,000 square foot shed, and a retention basin and landscaped setbacks.

Transmission Line Rating and Remediation Project (TLRR) – Kern River 66kV
Southern California Edison :: Kern and Los Angeles Counties
Principal Investigator. Provided oversight and quality control and assurance of a cultural resources inventory report that included an intensive pedestrian survey and a report of findings. A supplemental records search was completed prior to the start of fieldwork at the request of SCE. The inventory was completed in accordance with the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, the California Environmental Quality Act (CEQA), and other applicable legislation. The proposed project will mitigate multiple discrepancies through the subtransmission system. The project traverses approximately 80 miles in central Kern County and northwestern Los Angeles County. The project is located on private property, lands administered by the Sequoia National Forest, Los Padres National Forest, Fort Tejon State Park, and the California Department of Corrections and Rehabilitation.

Tehachapi Renewable Transmission Project: Segments 1-3 and Segments 6-11
Southern California Edison :: Kern, Los Angeles and Orange Counties
Principal Investigator. Ms. Belcourt provided service to this project over seven years in multiple roles – archaeological field monitor, project coordinator, in-house consultant at SCE, and principal investigator. She provided regulatory oversight and project management regarding cultural and paleontological resource management for all segments of TRTP. Developed and implemented internal cultural resource management programs based on the mitigation measures in the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for TRTP, and for the existing Special Use Permits and Record of Decision for TRTP, issued by the Angeles National Forest (ANF). Oversaw preparation of the Historic Properties Treatment Plans, fieldwork, and technical report preparation for two large-scale Phase III Data Recovery excavations on Angeles National Forest. Coordinated with ANF archaeologists on discovery and management of previously unknown cultural resources identified during construction. Provided cultural resources analyses and clearance documentation, including technical reports, for over 100 project modifications during construction without delay to project. Finally, Tria was responsible for maintaining the geospatial data for the project within the SCE cultural resources geodatabase TRTP and coordinated with the project GIS team.

ERIKA MCMULLIN, B.A.

SENIOR ARCHAEOLOGIST

PROFILE

Erika McMullin is an archaeologist with over seven years of archaeological experience, and over four years of cultural resource management (CRM) experience. Ms. McMullin has worked on projects subject to Federal, State, and local government regulations within California. She has served as a field director for monitoring, survey, site recording, and excavation throughout California and internationally. Ms. McMullin specializes in bioarchaeological techniques, including identifying and exhuming human burials. She has served as a bioarchaeology supervisor at the Blackfriary Archaeology Field School in Co. Meath, Ireland. In addition to field work, she has performed laboratory analysis of human remains on a Maya population in Belize and conducted biological profiles for previously undetermined individuals with varying ancestries. Ms. McMullin earned her GIS Certificate in 2019 and serves as MCC's GIS Specialist where she is responsible for map creation, spatial data analysis and management, and other GIS support services. Recently, Ms. McMullin has been responsible for managing several on-call contracts for Southern California Edison as a subconsultant, including performing project management, authoring various archaeological reports, and managing field staff. She has also completed hundreds of California State Department of Parks and Recreation (DPR) 523 Forms for recording and evaluating sites and individual resources. She has written and provided technical peer review of monitoring and survey reports for various agencies. In addition, she serves as Project Manager for MCC's CEQA projects where she is responsible for conducting California Historical Resources Information System (CHRIS) record searches, Native American correspondence and outreach, background research, managing surveys, writing Phase I Reports, and recommending mitigation measures.

PROJECT EXPERIENCE

Veterans Affairs West Los Angeles Hospital Bldg. 220 Parking Lot Expansion Project
Dept. of Veterans Affairs Greater Los Angeles Healthcare System :: Los Angeles, CA
Project Manager. Ms. McMullin provides project management support for all archaeological resource monitoring services. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing monitoring compliance report, analyzing data and creating maps through GIS, and submitting all deliverables to the client.
Duration**:** September 2023-Present

Windy Fire Restoration Emergency Work
Southern California Edison :: Sequoia National Forest
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. Post-fire restoration work includes line clearing and tree trimming/removal, maintaining and repairing roads, and replacing damaged SCE infrastructure. The work area includes areas in the southern portion of Sequoia National Forest.
Duration: August 2023-Present

French Fire Restoration Emergency Work
Southern California Edison :: Sequoia National Forest
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. Post-fire restoration work includes line clearing and tree trimming/removal, maintaining and repairing roads, and replacing damaged SCE infrastructure. The work area includes areas in the southern portion of Sequoia National Forest.
Duration: August 2023-Present

EXPERIENCE

7 years

EDUCATION

M.A. in Biological Anthropology, emphasis in Bioarchaeology, University of California, Los Angeles, *In Progress (Jan. 2024)*

B.A. Anthropology
University of California, Los Angeles, 2014

CERTIFICATIONS

- GIS Professional Certificate, California State University, Los Angeles 2019

San Jacinto Deteriorated Pole Program
Southern California Edison :: Santa Barbara, Riverside, and San Bernardino County, CA
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. The work areas include Santa Barbara, Riverside, and San Bernardino Counties. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing DPRs and reports, analyzing data and creating maps through GIS, and submitting all deliverables to the client.
Duration: May 2023-Present

1149 N. Las Palmas Phase I Cultural and Paleontological Assessment Project
Kimley-Horn :: Hollywood, Los Angeles County
Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, co-authored the cultural and tribal sensitivity report, and provided peer review of the paleontological report.
November 2022-May 2023

Veterans Affairs West Los Angeles Hospital Lot 38 Project
Dept. of Veterans Affairs Greater Los Angeles Healthcare System :: Los Angeles, CA
Staff Archaeologist and Co-Project Manager. Ms. McMullin provides archaeological resource monitoring services during ground disturbing phases of the project. This project is relocating utilities to replace abandoned utilities at MacArthur Field on the Veterans Affairs Hospital property. Erika's responsibilities includes maintaining communication with all involved parties, completing and submitting paperwork and photographic records, writing the monitoring report, and evaluating cultural resources.
Duration**:** September 2022 – April 2023

Deteriorated Pole Replace Program MSUP
Southern California Edison :: Inyo, Sierra, Sequoia, Angeles, and San Bernardino National Forest, CA
Project Manager. Ms. McMullin provides project management to support all pedestrian surveys and monitoring assignments for this program. The work areas include Inyo, Sierra, Sequoia, Angeles, and San Bernardino National Forest. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing DPRs and reports, analyzing data and creating maps through GIS, provided peer review of deliverables, and submitting all deliverables to the client.
Duration: April 2022 – Present

Ivanpah-Control Site Testing and Laboratory Support
Southern California Edison :: Inyo and Kern Counties, CA
Staff Archaeologist. Ms. McMullin participated in cultural surveying, excavation, and laboratory sorting and cataloging for the demolition and replacement of Southern California Edison's existing 115 kV transmission lines in Lone Pine, Inyo County and Inyokern, Kern County.
Duration: March 1, 2022 – April 12, 2022 (350 hrs.)

Palomino Business Park
Caprocks Partners :: Riverside County, CA
Staff Archaeologist. Ms. McMullin provided cultural and paleontological resource monitoring services during the ground-disturbing phases of the project. The Palomino Business Park Project is redeveloping approximately 110 acres of land within the City of Norco for a new business park that will include industrial, commercial, and office uses. The project includes the construction of approximately 2,050,000 square feet of new building space and related onsite and offsite improvements.
Duration: January 2022 – April 2022

Heavy Tree Removal Program
Southern California Edison :: Sequoia, Sierra, Inyo, San Bernardino, and Los Padres National Forests
Staff Archaeologist. Ms. McMullin performs cultural resources monitoring and survey while coordinating with tree crews, biologists, and SCE lead representatives. This program is a result of the CPUC's mandate that utilities eliminate public hazards associated with dead, dying, and diseased trees within utility corridors, of which the USDA Forest Service found that up to 30% of native and non-native trees within SCE's service territory has been adversely affected by drought conditions and beetle infestations.
Duration: 2021 – Present

Fountain Valley Residential Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Fountain Valley, Orange County
Project Manager and GIS Specialist: Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological report.
Duration: January 2021 – July 2021

Line Clearing and Vegetation Management
Southern California Edison :: National Park Service (NPS) SUP along the Salt Creek 12 kV Transmission Line, Sequoia and Kings (SEKI) National Park, Tulare County.
Field Director. Ms. McMullin managed a crew and conducted archaeological field survey for SCE vegetation management activities located on lands administered by the NPS. Duties include surveying, identifying, and recording historic and prehistoric resources along multiple landscapes and contexts, and completing and submitting paperwork and photographic records daily.
Duration: January 2021, January 2022

Gonzalez Solar Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Reedley, Fresno County
Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological report.
Duration: January 2021 – July 2021

Seaton and Cajalco Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated area near City of Perris, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – October 2021

4200 W Valley Blvd Phase I Cultural and Paleontological Assessment
EPD Solutions :: Pomona, Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – July 2021

Redlands Mall Redevelopment I Cultural and Paleontological Assessment
EPD Solutions :: Redlands, San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS

record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – May 2021

Florence Avenue Townhomes Phase I Cultural and Paleontological Assessment
EPD Solutions :: Santa Fe Springs, Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – June 2021

Rolling Greens Way Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: May 2021-August 2021

Pacifica Cottonwood Phase I Cultural and Paleontological Assessment
EPD Solutions :: Moreno Valley, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: May 2021-June 2022

Slover and Adler Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: June 2021-October 2021

5770 Industrial Parkway Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: July 2021-October 2021

Slover and Adler Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: June 2021-October 2021

Santa Ana and Calabash Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Fontana, San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: July 2021-October 2021

Kings CSG 3 Solar LLCPhase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Kings County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: October 2021- January 2022

Belago Park I Cultural and Paleontological Assessment
EPD Solutions :: Moreno Valley, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: December 2020-December 2022

Cabazon Residential Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: November 2020-October 2021

Redlands Transit Village Specific Plan
City of Redlands :: Redlands, CA, San Bernardino County.
Assistant Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the Specific Plan report.
Duration: November 2020 – February 2021

Creek Fire Restoration Emergency Work
Southern California Edison :: Sierra National Forest, CA
Staff Archaeologist. Ms. McMullin provided archaeological support including field surveys, monitoring support for emergency fire restoration activities, including line clearing and tree work along SCE's right-of-way (ROW) due to recent fires in the Sierra National Forest (SNF). Her duties included maintaining communication with prime consultant and construction crews, performing testing alongside Forest Archaeologists, attendance of project meetings, and completing and submitting paperwork, photographic records, and Survey123 to the client in a timely matter.
Duration: October 2020 – December 2020

CWA L0030 Transmission Line Rating and Remediation (TLRR)/Ivanpah-Coolwater-Kramer-Inyokern Project
Southern California Edison :: BLM and Private Lands, Inyo, LA, and San Bernardino Counties
Staff Archaeologist. Ms. McMullin provided archaeological support to prime contractor's Field Directors for this project. She was lead field archaeologist on her survey crew. Duties included surveying, identifying, and recording historic and prehistoric resources along multiple landscapes and contexts. She used tablets to create in field Series 523 forms and

collect spatial data using Collector and sub meter geodes. Ms. McMullin was responsible for maintaining cultural data for both new and previously recorded resources.
Duration: June 2019 – February 2020

Deteriorated Pole Replace Program
Southern California Edison :: Sequoia, Sierra, Inyo, Kern, and San Bernardino County, Private land, BLM Land
Field Technician. Ms. McMullin provides field support to complete archaeological field surveys, monitoring, and testing for the program. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records. In addition, Ms. McMullin assisted with preparation of California State Department of Parks and Recreation (DPR) forms for the Project.
Duration: 2019 – Present

Blackfriary Archaeological Field School, Trim, County Meath, Ireland.
Bioarchaeology Supervisor. Ms. McMullin supervised and instructed students on methods and techniques during this excavation. Her duties included identifying human remains, identifying faunal remains, identifying grave cuts and grave fill, excavating human burials, mapping burials using Nikon total station, planning burials, and filling out all paperwork including grave fill, grave cut, and burial sheets. Ms. McMullin also assisted in post-excavation efforts of burials, including washing, bagging, and properly storing burials.
Duration: 2021 (200 hrs), 2022 (200 hrs)

Mesoamerican Archaeology Lab, California State University, Los Angeles.
Lab Manager and Graduate Student. Ms. McMullin manages the Lab under the supervision of Dr. James Brady. Her duties include cataloguing, organizing, and identifying bone and bone fragments from the skeletal collection of Midnight Terror Cave excavation. The collection includes over 10,000 bones of disarticulated and commingled remains. Ms. McMullin's thesis research centers around using various long bone measurements to determine probable sex. Ms. McMullin was also in charge of supervising and teaching students the methods and techniques for identification and cataloging of skeletal remains.
Duration: 2018 – Present (300 hrs)

Blackfriary Archaeological Field School, Trim, County Meath, Ireland.
Student Internship. Ms. McMullin was part of a team performing bioarchaeological and landscape archaeological excavations in Ireland. One of her duties involved supervising students and assisting supervisors during these excavations. Ms. McMullin also participated in zooarchaeology and community archaeology workshops. Her duties for the workshops included site planning, artifact cataloging, identify human remains, identify faunal remains, survey, record data, record coordinates, site plans, elevation drawings, total station, post-excavation, clean artifacts, assist students, and community outreach.
Duration: 2018 (240 hrs)

Bioarchaeology Lab, California State University, Los Angeles.
Research Assistant. Ms. McMullin worked under the supervision of Dr. Christine Lee in the Bioarchaeology Lab. Her duties involved determining biological profiles of skeletal remains including age, sex, race, and paleopathologies.
Duration: 2017 (50 hrs)

HANNAH JOHNSTON, MSc

STAFF ARCHAEOLOGIST II

PROFILE

Hannah Johnston is an archaeologist with over four years of academic research and field experience and a year of professional experience in cultural resource management. Ms. Johnston has worked on projects subject to Federal, State, and local government regulations within California. She has participated in monitoring, survey, and excavation efforts as a crew member in California. Ms. Johnston is experienced in field work and osteology. In addition, she has conducted laboratory analysis of artifacts and faunal remains from California's coastal region.

PROJECT EXPERIENCE

Operations and Maintenance Program
Southern California Edison :: Sequoia National Forest, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program. Ms. Johnston's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: August 2023

Operations and Maintenance Program
Southern California Edison :: Inyo National Forest, Bishop, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program for the TROW CEMA Silverpeak-Wyman Canyon Circuit. Ms. Johnston's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: August 2023

Environmental Clearance Program
Southern California Edison :: Angeles National Forrest, CA
Staff Archaeologist. Ms. Johnston was part of a team that surveyed 30 poles within the Angeles National Forest for the SCE Environmental Clearance Program. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: July 2023

MEP040-4 Bishop Survey
Southern California Edison :: Inyo County, CA
Staff Archaeologist. Under the direction of a permitted Field Director, Ms. Johnston was part of a team that conducted two (2) 10-day cultural resources survey across multiple land designations including BLM, CDFW, and Private Lands within the Bishop area. Ms. Johnston's duties included operating GIS applications to record spatial data, complete paperwork and photos, and assist with uploading daily data.
Duration: June – July 2023

EXPERIENCE

2 years CRM
2 years Academia

EDUCATION

M.Sc. Professional Human Osteoarcheology
University of Reading United Kingdom, 2022

B.A. Anthropology
California State University Los Angeles
2020

CERTIFICATIONS

- First Aid and CPR certified
- GIS Basics Training (Esri)
- ArcGIS Online Basics (Esri)
- ArcGIS Pro Basics (Esri)

PROFESSIONAL MEMBERSHIPS

- Association of American Physical Anthropologists (AAPA)
- American Anthropological Association (AAA)
- British Association for Biological Anthropology and Osteoarchaeology (BABAO)
- Western Social Science Association (WSSA)

Operations and Maintenance Program
Southern California Edison :: Ventura and Kern County
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: June 2023 – Present

San Jacinto CCP Program
Southern California Edison :: San Jacinto, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for pole installation and trenching. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: September 2022 – Present

I-15 Logistics Center
City of Fontana :: Fontana, CA
Staff Archaeologist. Ms. Johnston is performing archaeological monitoring during ground-disturbing activities. Ms. Johnstons' responsibilities include maintaining communication with all involved parties and completing and submitting paperwork and photographic records. The Project includes the development and operation of a 1,175,720-square foot logistics facility on approximately 76 acres (Logistics Site); the realignment of a segment of Lytle Creek Road from the western Project boundary eastward to a new intersection with Sierra Avenue; and the annexation of 152 acres (Annexation Area or Project Area), inclusive of the 76-acre Logistics Site.
Duration: May 2023 – Present

Grid Resiliency Project and Plant Betterment Project
Southern California Edison :: Bureau of Land Management, Bishop Field Office and Private Property, CA
Staff Archaeologist. Under the direction of a permitted Field Director, Ms. Johnston was part of a team that conducted cultural resources survey of 17.25 acres and performed site recording for SCE's Grid Resiliency Project and Plant Betterment Project on lands administered by BLM Bishop and Private Property. Ms. Johnston's duties included operating GIS applications to record spatial data, complete paperwork and photos, and assist with uploading daily data.
Duration: October 2022 – November 2022

Rincon Athos Solar Project
Desert City, Riverside County, CA
Staff Archaeologist. Ms. Johnston provided cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities included maintaining communication with all involved parties along with completing and submitting paperwork and photographic records for the client daily.
Duration: 2021

Deteriorated Pole Replace Program
Southern California Edison :: Sequoia, San Bernardino, Angeles, and Los Padres National Forest, CA
Staff Archaeologist. Ms. Johnston provides cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities include maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: 2021 – 2022

Poles and Wires Survey Program
Southern California Edison :: Inyo National Forest, CA
Staff Archaeologist. Ms. Johnston provided survey, monitoring, and site testing support. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: April 2021

San Marcos Bridge Removal Project
City of San Marcos :: San Marcos, CA
Staff Archaeologist. Ms. Johnston provided cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: 2021

4200 Valley Blvd.
Pomona, CA
Staff Archaeologist. Ms. Johnston surveyed 13.84 arches for the future development of a new Class-A speculation industrial building. Her duties included survey activities, completing all associated field paperwork, recording new resources, photography, and post-processing of forms.
Duration: July 2021

Cabazon Residential
Core5 Industrial Partners :: City of Cabazon, CA
Staff Archaeologist. Ms. Johnston surveyed 22 acres for a future housing development of 121 homes on a mostly undeveloped parcel. Her duties included survey activities, completing all associated field paperwork, recording new resources, photography, and post-processing of forms.
Duration: May 2021

Santa Monica Mountain Range Excavation
California State University :: Los Angeles, CA
Field Archaeologist. Ms. Johnston's studies and tasks included coastal archaeology, Native American studies, zooarchaeology, landscape archaeology, excavation, analyzing soil composition, site planning, cataloging, survey, total station, recording data and GIS coordinates, sieving, and cleaning artifacts.
Duration: 2018

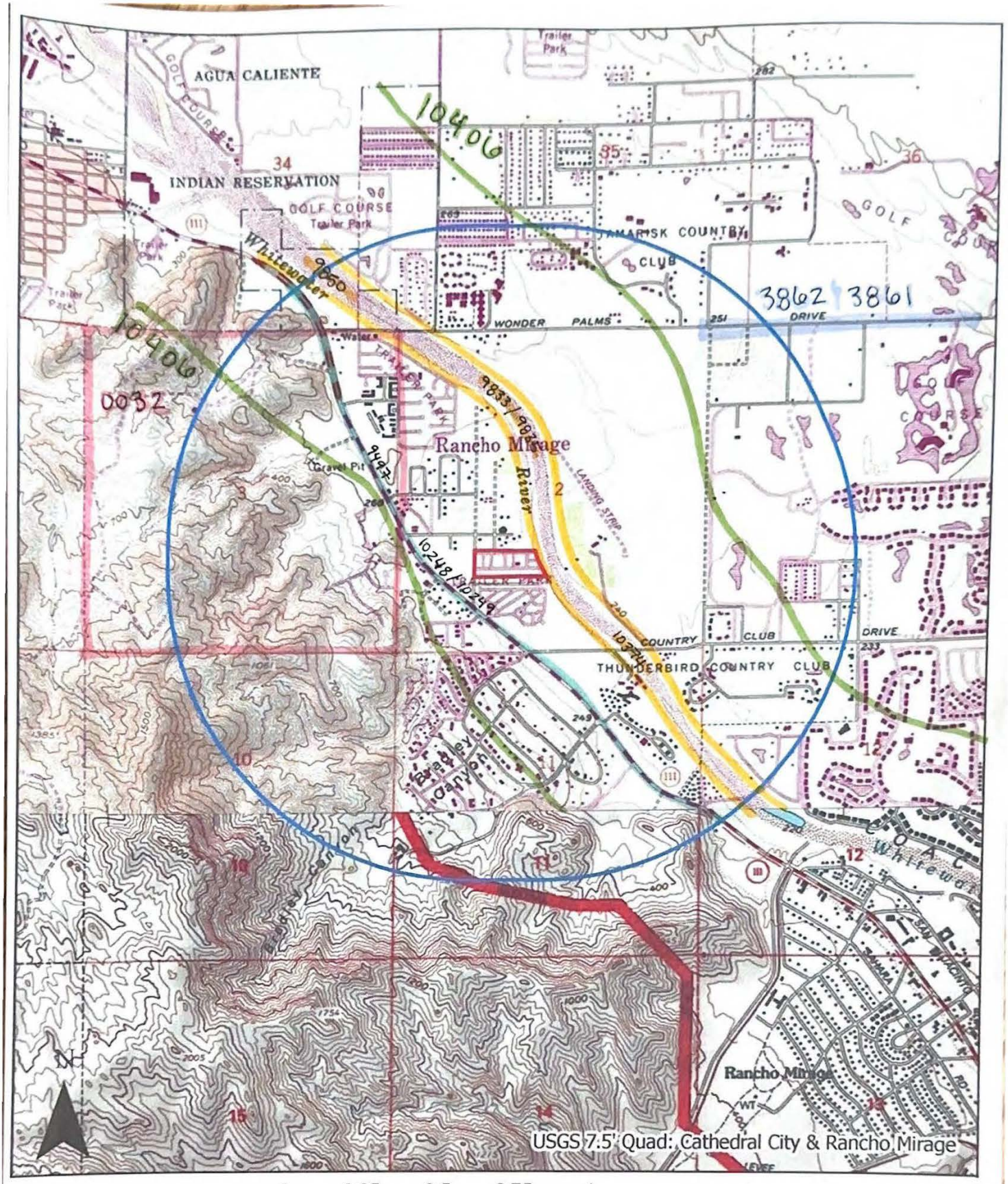
Spike Island Excavation
Institute of Field Research :: Spike Island off County Cork, Ireland
Field Bioarchaeologist. Ms. Johnston's studies and tasks included bioarchaeology, excavation, site planning, cataloging, recording data, site plans, photogrammetry, point mapping, total station, cleaning bones and artifacts, identifying human remains, and paleopathology.
Duration: 2018

Coastal Archaeology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included sieving, measuring, cataloging, and sorting faunal remains and organic material.
Duration: 2018 - 2020

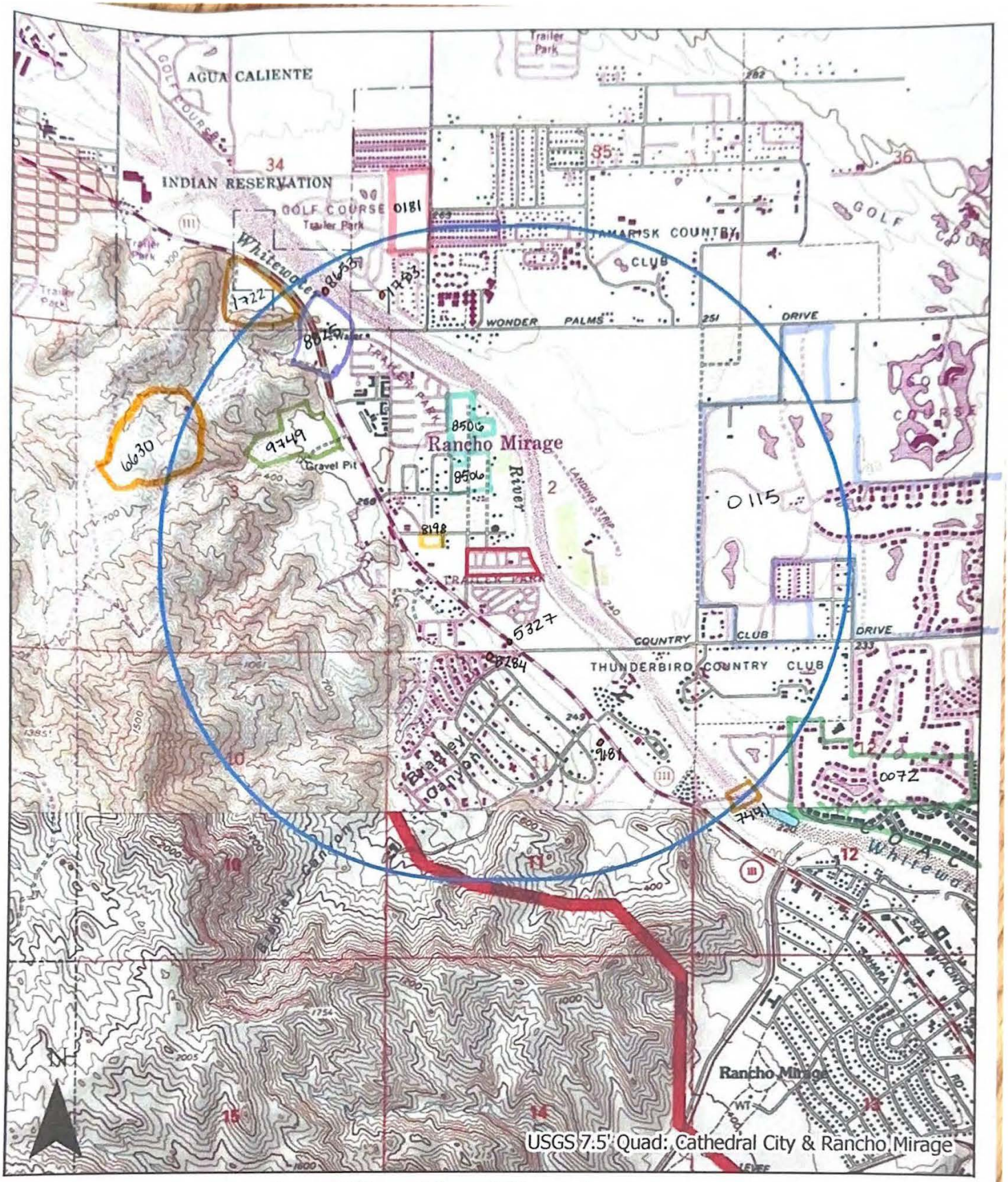
Forensic Anthropology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included organizing the bone collection, practicing compiling biological profiles, and identification of trauma and disease.
Duration: 2019 - 2020

Mesoamerican Archaeology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included research of subadult remains from Midnight Terror Cave site to compare to other Mesoamerican sites for an honors thesis on human child sacrifice.
Duration: 2019 – 2020

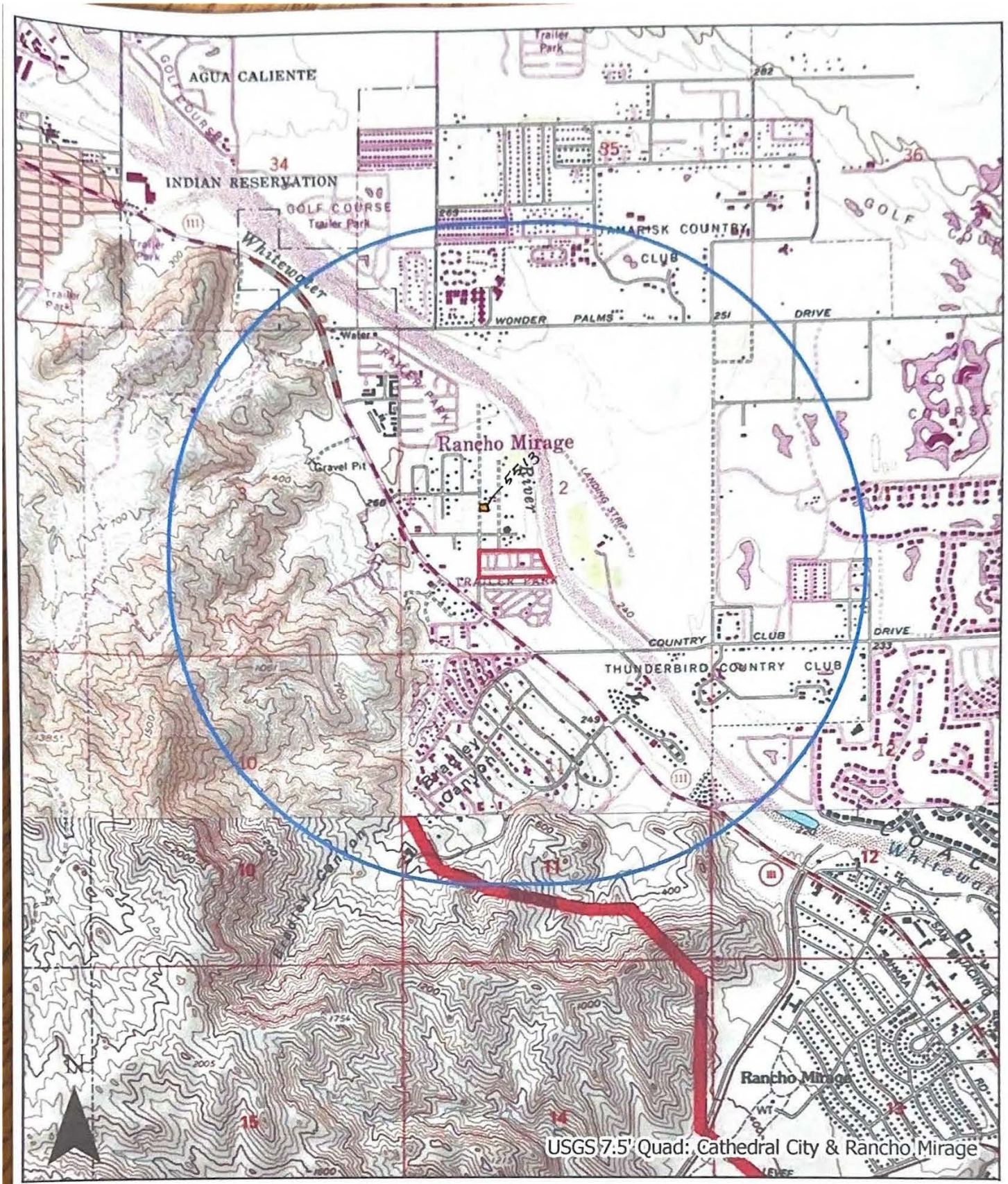
Appendix B
(CONFIDENTIAL):
CHRIS Record Search
Results



p.1 11 Reports; 1 in APE



p.2 15 Reports, Ø in APE



Project Area

1-mi. buffer

0 0.25 0.5 0.75 1 Miles

0 0.5 1 1.5 2 Kilometers

1:24,000

MATERIAL CULTURE CONSULTING

p.3 | Resource, Ø in APE

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-00032	NADB-R - 1085359; Voided - MF-0039	1979		Archaeological Survey Report: The Rancho Mirage Property Near Palm Springs, CA.	Archaeological Associates, Ltd., Costa Mesa, CA	33-000628
RI-00072	NADB-R - 1083969; Submitter - 0060; Voided - MF-0062	1972	Phillip J. Wilke	Sunrise Country Club: Expected Impact On Archaeological Resources	Archaeological Research Unit, U.C. Riveside	
RI-00115	NADB-R - 1080132; Voided - MF-0102	1973	Philip J. Wilke	The Sprinfs Country Club: Expected Impact on Archaeological Resources	Archaeological Research Unit, U.C. Riverside	
RI-00181	NADB-R - 1080231; Voided - MF-0168	1978	Jennifer Taschek-Ball	An Archaeological Survey of Some Discontinuous Parcels of Land on the Agua Caliente Indian Reservation, Riverside County, California	Department of Antropology, San Diego State University	33-000045, 33-000516, 33-001169
RI-01783	NADB-R - 1082131; Voided - MF-1926	1984	SWENSON, JAMES D.	AN ARCHAEOLOGICAL ASSESSMENT OF TWO SMALL PARCELS ON THE AGUA CALIENTE INDIAN RESERVATION, RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR(S)	
RI-03861	NADB-R - 1084744; Submitter - 189; Voided - MF-4208	1995	LOVE, BRUCE	IDENTIFICATION & EVALUATION OF HISTORIC PROPERTIES: FRANK SINATRA DRIVE STREET WIDENING PROJECT, RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	
RI-03862	NADB-R - 1084830; Voided - MF-4208	1995	LOVE, BRUCE	NEGATIVE ARCHAEOLOGICAL SURVEY REPORT: FRANK SINATRA DRIVE IMPROVEMENTS, BETWEEN MORNINGSIDE DR/THOMPSON RD AND BOB HOPE DR, CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	
RI-05327	NADB-R - 1086690	2002	MICHAEL BRANDMAN ASSOCIATES	RECORDS SEARCH RESULTS FOR SPRINT PCS FACILITY R35XC095J (TROJAN PROPERTIES), CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CA	MICHAEL BRANDMAN ASSOCIATES	
RI-06630	NADB-R - 1087997; Submitter - CRM TECH CONTRACT #1729	2006	HOGAN, MICHAEL and BAI "TOM" TANG	LETTER REPORT: HISTORICAL AND ARCHAEOLOGICAL RESOURCES INVESTIGATION, THE LODGE AT RANCHO MIRAGE, APPROXIMATELY 39 ACRES, CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-07441		2007	Denniston, L. Elizabeth	Phase I Archaeological Assessment of Approximately 1.42 Acres for the Repair of the Paxton Drop Structure in Rancho Mirage, Riverside County, California	Applied EarthWorks, Inc.	
RI-08198		2009	Robert J. Wlodarski	Field Reconnaissance Phase for the Proposed Bechtel Wireless Telecommunications Site Bechtel Wireless Telecommunications Site RS0160	Cellular Archaeological Resource Evaluations, West Hills, CA	
RI-08284		2009	Carla Allred	Letter Report: Proposed Cellular Tower Project(s) in Los Angeles County, California, Site Number(s)/Names(s): LA-3628A/ Lord Fletcher TCNS# 56936	Earth Touch, Layton, UT	
RI-08506		2010	Jay K. Sander, M.A.	A Phase I Cultural Resources Inventory for APN 689-090-003, 689-130-004, 689-130-005, 689-130-013, 689-130-014, 689-130-017, 689-130-018, & 689-140-022 Compromising Approx. 20 Acres Rancho Mirage, Riverside County, California	Chambers Group, Inc.	
RI-08653	Submitter - IE24259-B	2011	Wayne H. Bonner, Gavin Leaver, and Sarah A. Williams	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE24259-B (Northern Trust Plaza), 69730 Highway 111, Rancho Mirage, Riverside County	Michael Brandman Associates	
RI-08825	Voided - 8848	2012	Bai "Tom" Tang and Michael Hogan	Historic Property Survey Report: Frank Sinatra Drive/Highway 111 Intersection Improvement Project, City of Rancho Mirage, Riverside County, California, Federal Project No. HSPIL-5412(010)	CRM TECH	
RI-09181		2013	Heather Puckett	Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property at the Boothill Site, 70801 Highway 111, Cathedral City, Riverside County, California 92270	Tetra Tech	
RI-09497		2015	Bai "Tom" Tang and Michael Hogan	Historical Property/Archaeological Survey Report Highway 111 Street Lighting Project City of Rancho Mirage, Riverside County, California	CRM TECH	
RI-09749	Other - Project No. 14-00928	2014	K. Ross Way and Robert Ramirez	RSMW, LLC Thunderbird Resort and Spa Development Project Cultural Resource Study	Rincon Consultants	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-09833		2015	Janis Offermann and Lauren Bridges	Historic Property Survey Report for Frank Sinatra Drive Bridge at Whitewater River Project Location: Frank Sinatra Drive, Rancho Mirage, Riverside County, California	URS Corporation	
RI-09835		2015	Jannis Offermann and Lauren Bridges	Archaeological Survey Report for Frank Sinatra Drive Bridge at Whitewater River Project Location: Frank Sinatra Drive, Rancho Mirage, Riverside County, California	URS Corporation	33-000628
RI-09850		2017	Joan George, Dennis Mcougall, and Vanesa Mirro	Cultural Resource Assessment for the Coachella Valley Water District's Whitewater River Stormwater Channel Bureau of Indian Affairs Easement Renewal Project, City of Cathedral City, Riverside County, California	Applied EarthWorks, Inc	33-017259
RI-10248	Other - HSIPL-5412(014)	2017	Curt Duke	Historic Property Survey Report Rancho Mirage Resignalization Project Highway 111/Bob Hope Drive/Country Club Drive	Duke CRM	
RI-10249	Other - HSIPL-5412 (014)	2017	Nicholas F. Hearth	Archaeological Survey Report Rancho Mirage Resignalization Project Highway 111/Bob Hope Drive/ Country Club Drive	DUKE CRM	
RI-10374	Other - Stormwater Channel Project	2013	Joan George and Venessa Mirro	Phase 1 Cultural Resources Assessment for the Coachella Valley Water District's Whitewater River- Coachella Valley Stormwater Channel Project, Riverside County, California	Applied EarthWorks, Inc.	33-000064, 33-001178, 33-001530, 33-001770, 33-002200, 33-003005, 33-003683, 33-006045, 33-007924, 33-008741, 33-009018, 33-009019, 33-009021, 33-009022, 33-009461, 33-009498, 33-016786, 33-017259
RI-10406		2012	Michael Mirro	Archaeological Sensitivity Model for the Whitewater River Stormwater Channel, Riverside County, California	Applied EarthWorks, Inc.	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-33-005513		Other - Peterson Ranch; Other - Ser. No. 33-2270-3	Building	Historic	HP02	1982 (Jim Warner, Riverside County Historical Commission)	

RI-10406

ARCHAEOLOGICAL SENSITIVITY MODEL FOR THE WHITEWATER RIVER STORMWATER CHANNEL, RIVERSIDE COUNTY, CALIFORNIA

USGS Cathedral City, Desert Hot Springs, Indio, La Quinta, Mecca, Myoma, Oasis, Palm Springs, Rancho Mirage, Thermal Canyon, Valerie, West Berdoo Canyon, and Whitewater, 7.5' Quadrangles

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1
INTRODUCTION

Coachella Valley Water District (CVWD) has requested that Applied EarthWorks, Inc., (Æ) generate an archaeological sensitivity model for an area consisting of a quarter-mile radius around the Whitewater River and certain tributaries (Study Area). The sensitivity model will show areas that are highly sensitivity for archaeological resources and provide recommendations for cultural resources management during maintenance operations on the channel. The sensitivity study was requested by CVWD to support applications for permits under the Clean Water Act to perform maintenance activities.

Archaeological sensitivity models are a means of predicting, in a given area, where it is likely that archaeological cultural resources might exist and be identified during a cultural resources survey or earth-moving activities. These models are based on past cultural resource studies in the area; review of historical maps, geologic maps, soils maps, and hydrological data; an understanding of how prehistoric and historic-period populations used the land; and a study of an area's history. This model predicts the locations within the Study Area that are most sensitive for prehistoric and historical archaeological resources (Figure 1).

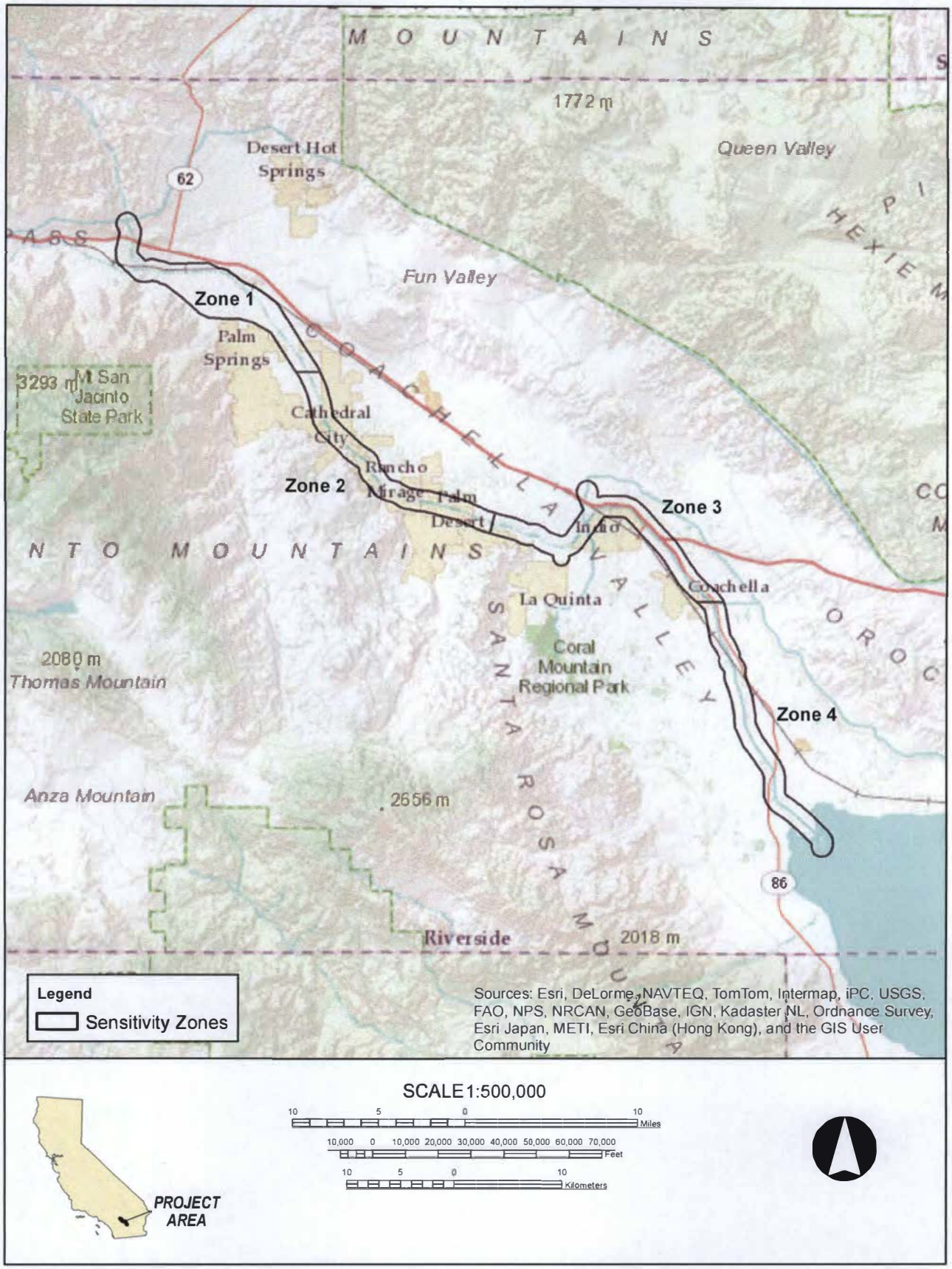

Figure 1 Project vicinity map showing the location of the Sensitivity Zones.

2
PROJECT DESCRIPTION

The project Study Area is in the eastern portion of the Banning Pass and upper Coachella Valley. Physiographically, this area is within the Colorado Desert Region. The Study Area encompasses the White Water River, from where it emerges from Whitewater Canyon in the San Bernardino Mountains through the upper Coachella Valley to where it enters the Salton Sea and forms a small delta. It is approximately 52.4 miles (mi) long and encompasses 58.5 square miles.

The system is divided into two main segments—the northern portion, which is named the Whitewater River Stormwater Channel (WWRSC), extends between the mouth of Whitewater Canyon and Washington Street in Indian Wells, and the Coachella Valley Stormwater Channel (CVSC), which continues south from Washington Street to the Salton Sea. The WWRSC is divided into Reach I and Reach II with the split at Chino Vista Road in Palm Springs. The CVSC is divided into Reach III and Reach IV, with the split at Avenue 50 near Coachella. Tributaries to the system include La Quinta Evacuation Channel, a 1-mi northeast-bearing segment between Avenues 46 and 48 that is part of Reach III; the Thousand Palms Channel, a 1-mi north-south oriented alignment near Madison Street and Avenue 42 in Indio that is part of Reach III; Deep Creek Channel, a 500-foot (ft) segment merging with Reach II in Indian Wells; and Mission Creek, a roughly 1,800-ft segment merging with Reach I between the railroad sidings of Salvia and Garnet Hill, north of Palm Springs.

ICF International (ICF) conducted a routine-level delineation of jurisdictional waters and wetlands of the WWRSC and the CVSC, as well as multiple tributaries, for CVWD. The purpose of this delineation was to identify the extent of jurisdictional waters within and adjacent to the Whitewater River as part of the federal and state regulatory permitting process under Sections 401 and 404 of the Clean Water Act (CWA) and Section 1602 of the California Fish and Game Code. Relevant jurisdictions include federal jurisdiction regulated by the U.S. Army Corps of Engineers (USACE) as waters of the United States (WoUS) or USACE wetlands; state waters regulated by the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB), the U.S. Environmental Protection Agency (EPA), and tribal agencies; and aquatic features regulated by the California Department of Fish and Game (CDFG).

Once the appropriate permits have been procured, CVWD will implement required maintenance activities to restore the WWRSC and CVSC to its "as-built" condition.

Because the restoration projects will require federal approvals and permits and may affect historic properties (i.e., any prehistoric or historical resource included in or eligible for inclusion in the National Register of Historic Places [NRHP]), they are considered undertakings (per 36 Code of Federal Regulations [CFR] 800.16[y]) subject to compliance with Section 106 of the National Historic Preservation Act of 1966 and 36 CFR 800.4 (b) (as amended). The implications of the sensitivity model for Section 106 compliance activities are addressed in the final section of this report.

3
CULTURAL SETTING

This section describes the prehistoric, ethnographic, and historical setting of the Study Area to provide a context for understanding the nature and significance of cultural resources identified within the Coachella Valley region. Both prehistorically and ethnographically, the nature and distribution of human activities in the region have been affected by such factors as topography and the availability of water and biological resources. Therefore, prior to a discussion of the cultural setting, the environmental setting of the area is summarized below.

3.1 ENVIRONMENTAL SETTING

The Study Area is situated east of the Peninsular Ranges in the northern portion of the Coachella Valley (see Figure 1). The Coachella Valley is bordered to the southwest by the San Jacinto and Santa Rosa mountains (part of the Peninsular Ranges) and to the northeast by the low, rolling Indio Hills and Mecca Hills. From the steep slopes of the San Jacinto Mountains surmounted by San Jacinto Peak (3,274 meters [m] [10,804 ft] amsl), the desert floor descends sharply in less than 3 kilometers (km) (2 mi) eastward to sea level at the City of Indio.

To the south, elevations gradually drop to 90 m (300 ft) below mean sea level (bmsl) at the Salton Sea Basin. This basin has filled periodically throughout the Pleistocene and Holocene when the Colorado River shifted its course near its mouth at the Gulf of California, flowing north into the basin, forming a large freshwater lake commonly known as Lake Cahuilla (see below). A major water source flowing through the central valley is the Whitewater River, which drains the southern slope of the San Bernardino Mountains for thousands of years (Laflin 2001), flowing in a generally south-southeast direction 80.5 km (50 mi) toward the Salton Sea. The Whitewater River was likely the largest perennial stream that entered the Salton Basin during prehistoric time, replenishing the underground aquifer during non-lacustrine intervals. A few small streams, such as Snow, Chino, Tahquitz, and Andreas creeks, form high on the San Jacinto and Santa Rosa mountains, descending into the northern end of the Coachella Valley. Several minor drainages of ephemeral streams coming off the Mecca Hills are also evidenced across the landscape east of the Study Area. Additionally, numerous springs are located along the San Andreas Fault zone at the southwestern base of the Indio Hills. These are usually marked by native fan palm oases.

Prior to the mid-1900s, the climate of the Study Area region was characterized by low relative humidity, very low rainfall, high summer temperatures of up to 52° C (125° F), and mild winters. Since the mid-1900s, the relative humidity in the area has risen gradually as more and more golf courses have been built and maintained in the Coachella Valley. During the spring and late fall, high winds are common and are accompanied by blowing sand and dust. Precipitation occurs primarily during the winter months and varies radically from one area to another. Within the desert areas, the average annual rainfall is as sparse as 6 centimeters (cm) (2.5 inch [in.]) per year; however, at the higher elevations in the San Jacinto Mountains the average annual precipitation may range from 25 cm (10 in.) to as much as 76 cm (30 in.) per year.

As the climate of the region is largely determined by topographic features, climate, in turn, largely dictates the character of the biotic environment exploited by native populations. Bean

and Saubel (1972) described three primary life zones that were exploited by the Cahuilla, known ethnographically to have occupied the Coachella Valley: Lower Sonoran, Upper Sonoran, and Transitional. Characteristic plants and animals found in these life zones are listed below.

The Lower Sonoran life zone, which extends from the desert floor to approximately 1,067 m (3,500 ft) amsl, is characterized by low rainfall (about 10 cm [4 in.] per year), fine-textured alluvial to sandy soils, and xerophytic plant communities. Creosote bush (*Larrea tridentata*) and bur-sage (*Ambrosia dumosa*) are the dominant plants, replaced by saltbush (*Atriplex* spp.) in areas of more saline or alkaline soils. Adjacent to washes and ephemeral streams, desert willow (*Chilopsis linearis*), smoke tree (*Dalea spinosa*), palo verde (*Cercidium floridum*), desert ironwood (*Olneya tesota*), and catclaw (*Acacia greggii*) are found; California fan palm (*Washingtonia filifera*), mesquite (*Prosopis juliflora*), screwbean (*Prosopis pubescens*), and arrowweed (*Pluchea sericea*) occur adjacent to more permanent water sources and in areas with a very shallow groundwater table. Frost-sensitive plants such as ocotillo (*Fouquieria splendens*), barrel cactus (*Ferocactus splendens*), cholla (*Opuntia* spp.), century plant (*Agave deserti*), creosote bush, and Mojave yucca (*Yucca schidigera*) exist on the well-drained slopes adjacent to the desert floor. Approximately 40 percent of the plant species exploited by the Cahuilla are found in this biotic region; the fruits of the fan palm and the flowers and pods of mesquite and screw bean were highly favored (Bean and Saubel 1972:13). Economically important animals found in this life zone include kangaroo rats (*Dipodomys*), ground squirrels (*Citellus*), wood rats (*Neotoma*), desert cottontail (*Sylvilagus audubonii*), and black-tailed jackrabbit (*Lepus californicus*); desert bighorn sheep (*Ovis canadensis*) is found at the upper reaches of this life zone.

The Upper Sonoran life zone, extending from 1,067 to 1,524 m (3,500 to 5,000 ft) amsl, is characterized by warm summers and cold winters with rainfall averaging 38 cm (15 in.) annually. Pinyon pine (*Pinus monophylla, P. quadrofolia*) and California juniper (*Juniperus californica*) are the dominant plant species of this zone. Other species include red shank or ribbon wood (*Adenostoma sparsifolium*), chamise (*A. fasciculatum*), ironwood, antelope bush (*Purshia glandulosa*), scrub oak (*Quercus dumosa*), ocotillo (*Fouquieria splendens*), manzanita (*Arctostaphylos* spp.), buckthorn (*Rhamnus* spp.), and barrel cactus. Approximately 45 percent of the food plant species used by the Cahuilla are found in this life zone, with pinyon pine nuts, manzanita, and elderberry highly favored. Important animal resources found in this life zone include wood rat, kangaroo rat, black-tailed jackrabbit, ground squirrel, desert bighorn sheep, and mule deer (*Odocoileus hemionus*).

The Transitional life zone, ranging from 1,524 to 2,134 m (5,000 to 7,000 ft) amsl, is characterized by relatively cool summers and cold winters with an annual precipitation of 50–76 cm (20–30 in.). This zone is composed primarily of coniferous forests containing scattered oak (*Quercus* spp.) groves; willows (*Salix* spp.) and cottonwood (*Populus* spp.) occur along stream courses. Common species include ponderosa pine (*Pinus ponderosa*), Jeffery pine (*P. jeffreyi*), incense cedar (*Calocedrus decurrens*), bigcone spruce (*Pseudotsuga macrocarpa*), manzanita, mountain mahogany (*Cercocarpus* spp.), and elderberry (*Sambucus* spp.). Probably the most important plant food species from this life zone are the black oak (*Q. kelloggii*), manzanita, and elderberry. Approximately 15 percent of the plants utilized by the Cahuilla are found in this life zone. Important animal resources found in this life zone include mule deer and ground squirrel.

Lake Cahuilla. Probably the most important environmental change in the Colorado Desert in the past 2,000 years was the formation of Lake Cahuilla, also known geologically as Lake Le

Conte and historically as Blake's Lake. Lake Cahuilla formed numerous times throughout the Pleistocene and Holocene in response to the natural western diversion of the Colorado River into the Salton Trough. During each filling of Lake Cahuilla, water was impounded north of the barrier created by the Colorado River Delta. The lake continued to fill until the water reached an altitude of 12 m (40 ft), the minimum crest of the delta at Cerro Prieto, where excess discharge would overflow into the Gulf of California (Waters 1983:374). Wilke (1976) calculated that about 12 to 20 years would be required to fill Lake Cahuilla to an altitude of 12 m (40 ft) if the lake were to receive the entire flow of the Colorado River; as well, Wilke determined that 60 years would be required to completely desiccate the lake without input from the Colorado River.

Utilizing radiocarbon assays, historical accounts, and cross dating of artifacts found along the former Lake Cahuilla shoreline, Wilke (1976:90–93) posited three lacustrine intervals in the Salton Basin representing an unknown number of stands of Lake Cahuilla during the past 2,000 years. The earliest of these was dated to approximately 2,100 to 1,400 years ago, the second occurred between 1,100 to 750 years ago, and the final lake stand occurred between 700 and 500 years ago.

More recent archaeological research by Waters (1983) in the Salton Basin has further refined Wilke's original estimates of the Lake Cahuilla lacustrine intervals. Based on additional radiocarbon assays, historical evidence, Late Holocene sedimentological history of the Gulf of California, and interpretation of sedimentation rates, Waters (1983) refined Wilke's timing of lacustrine intervals of Lake Cahuilla; this research suggested that there were four lacustrine intervals that reached the 12 m (40 ft) shoreline during the last 1,500 years (Waters 1983:382–385). The first and earliest of these events has been dated to A.D. 700–890, apparently followed by a gradual, but complete, desiccation of the lake at about A.D. 950. The second interval began shortly after A.D. 950, and peaked at approximately A.D. 965–1150; again, this was followed by a gradual, but complete, desiccation of the lake at A.D. 1210. The third interval began shortly after A.D. 1210 and peaked between A.D. 1225 and 1360. The third interval was followed by a gradual desiccation of the lake to an altitude of 40 m (132 ft) below sea level by A.D. 1450, although the lake was still approximately 50 m (165 ft) deep at this time. This desiccation was quickly reversed shortly after A.D. 1450, resulting in the fourth interval which lasted until approximately A.D. 1520. By A.D. 1580, Lake Cahuilla had once again completely desiccated.

Additional archaeological research by Cleland (1998), Laylander (1994), and Schaefer (1986) suggests that a fifth, more recent lacustrine interval of Lake Cahuilla occurred sometime between the Spanish explorations of the region in 1540 and again in 1775; radiocarbon dating indicates that this high stand may have occurred between 1685 and 1740 (Cleland 1998:13). The Lake Cahuilla chronology in calendar years before present (1950; cal B.P.) corrected for variations in 14C is as follows: Lacustrine Interval 5: 330–270 cal B.P.; Lacustrine Interval 4: 520–370 cal B.P.; Lacustrine Interval 3: 740–580 cal B.P.; Lacustrine Interval 2: 1010–740 cal B.P.; and Lacustrine Interval 1: 1250–1010 cal B.P. It should be noted that the dates for the duration of the lake high stands represent maximum spans. The stratigraphic record reveals that the next oldest lacustrine intervals are associated with radiocarbon assays from two distinct sedimentary strata dating to approximately 2285 and 2300 cal B.P. The stratigraphic continuity evident between these older late Holocene lacustrine sediments and the overlying unit representing Lacustrine Unit 1, above, indicates that there were no Lake Cahuilla episodes between about 2300 and 1250 cal B.P. (Waters 1983).

Recent paleoclimatic research indicates that a Medieval Warm climatic anomaly is registered throughout the Far West between ca. 1060 and 575 cal B.P. (Graumlich 1993; Spaulding 2001; Stine 1994). York and Spaulding (1996) relate the general lack of evidence for human occupation of the central Mojave Desert during the Medieval Warm primarily to declining recharges of local aquifers, resulting in the senescence of a sufficient number of springs to make the desert region even more hostile than it is at present. Thus, the Medieval Warm is believed to have restricted prehistoric occupation in the southern California deserts to a few suitable water sources such as the Colorado River and Lake Cahuilla. Indeed, high stands of Lake Cahuilla, whose source is not affected directly by climatic conditions in the desert, are registered between 1010 and 740 cal B.P. and again between 740 and 580 cal B.P. during the Medieval Warm, suggesting that the environs surrounding the lake would have been highly favorable for prehistoric occupation.

In summary, the shoreline of the most recently documented stands of Lake Cahuilla extended from about 32 km (20 mi) south of the international border with Mexico to just northwest of the town of Indio. Inundating the entire lower portion of the Coachella Valley, Lake Cahuilla was approximately 184 km (115 mi) long, about 54 km (34 mi) wide, and nearly 97 m (320 ft) deep; during these periods (ca. 1,500 years ago), the elevation of the lake was 12 m (40 ft) amsl (Wilke 1976:53). When inflow from the Colorado River was sufficient to maintain a relatively stable lake level, extensive marshes would have formed around its margins and freshwater fish and shellfish populations would have flourished. Thus, Lake Cahuilla offered an especially productive environment for aboriginal populations of the western Colorado Desert. When filled, Lake Cahuilla was on the Pacific Flyway for migratory birds; hence, ducks, geese, and other migratory birds, as well as fish, would have been available. Wilke (1976:15) estimated that an annual loss by evaporation of approximately 1.7 m (5.5 ft) of surface elevation would have dried Lake Cahuilla within 60 years, assuming that no renewed inflow from the Colorado River occurred. Thus, it is likely that 30 years of progressive recession, or lowering the surface of the lake by approximately 18 m (60 ft), would have sufficiently altered the chemical and ecological balance of the lake to all but eliminate its economically important plant and animal resources. However, as Lake Cahuilla gradually desiccated, the expansion of mesquite thickets followed the retreating shoreline, resulting in different resource exploitation patterns by the prehistoric inhabitants of the region (Smith and Brock 1998).

3.2 PREHISTORIC SETTING

Excluding the controversial "Early Man" pre-projectile point materials from Calico, Native American occupation of the Colorado Desert can be divided into five cultural periods: Paleoindian/San Dieguito (ca. 12,000–7000 years B.P.; Pinto (ca. 7000–4000 B.P.); Gypsum (ca. 4000–1500 B.P.); Saratoga Springs (ca. 1500–750 B.P.); and, the Late Prehistoric Period (ca. 1200–200 B.P.), which ended in the ethnographic period.

3.2.1 Paleoindian/San Dieguito Period (ca. 12,000 B.P. to 7000 B.P.)

The Paleoindian Period is marked by deglacial climatic changes that began by about 13,000 B.P. (e.g., Gosse et al. 1995; Mix 1987; Sowers and Bender 1995). In the desert interior, the change from glacial to postglacial ecosystems began by at least 11,700 B.P. (Spaulding 1995), but took millennia to complete. Paleoclimatic and paleoecological data suggest that until about 7500 B.P. the prevailing westerly air flow pattern weakened, while the desert interior received moist monsoonal flow from the southeast (Davis and Sellers 1987; Spaulding and Graumlich 1986). This resulted in the interior deserts having considerably higher levels of effective moisture than

present (Van Devender et al. 1987). Thus, the desert interior was apparently less arid than cismontane southern California during this period, and possessed an abundance of water sources and relatively productive ecosystems.

The "San Dieguito Tradition" is relatively coeval to the "Lake Mojave Period," an expression of the so-called "Western Pluvial Lakes Tradition," presumed to begin somewhat earlier than 9500 B.P. and lasting to perhaps 7000 B.P. in the southwestern Great Basin (Basgall and Hall 1993; Warren 1980, 1984). Wallace (1978:27) noted the close correspondence between the "Western Pluvial Lakes Tradition" and the "San Dieguito Tradition" and suggested that the two traditions most likely represent regional variants of an early hunting tradition that prevailed over a wide geographical area.

Both coastal and desert region designations for the early Holocene refer to a long period of human adaptation to environmental changes brought about by the transition from the late Pleistocene to the early Holocene geologic periods. As climatic conditions became warmer and more arid, Pleistocene megafauna perished abruptly between 13,000 and 10,000 B.P. Human populations responded to these changing environmental conditions by focusing their subsistence efforts on the procurement of a wider variety of faunal and floral resources. These early occupants of southern California are believed to have been nomadic large-game hunters whose tool assemblage included percussion-flaked scrapers and knives; large, well-made fluted, leaf-shaped, or stemmed projectile points (e.g., Lake Mojave, Silver Lake); crescentics; heavy core/cobble tools; hammerstones; bifacial cores; and choppers and scraper planes. Both Warren and Wallace suggest that the absence of milling tools commonly used for seed preparation indicates that an orientation toward hunting continued throughout this phase.

Nonetheless, based on ethnographic models developed for hunting-gathering groups throughout the world, populations of this phase undoubtedly exploited plant resources as well. Indeed, most Lake Mojave deposits investigated in the southwestern Great Basin have yielded some amount of milling equipment, usually large slabs with ephemeral wear and handstones, implying regular, albeit limited, use of vegetal resources (Basgall and Hall 1993:19). Although intact stratified sites dating to this period are very scarce, the limited data do suggest that the prehistoric populations of this period moved about the region in small, highly mobile groups, with a wetland-focused subsistence strategy based on hunting and foraging. Sites dating from this interval have generally been found around early Holocene marshes, lakes, and streams which dominated much of the landscape.

3.2.2 Pinto Period (ca. 7000 B.P. to 4000 B.P.)

The Pinto Period is marked by the gradual transition from pluvial to arid conditions during the terminal Pleistocene-Early Holocene. Sites attributed to the Pinto Period are few in number in southern California, with those in the Pinto Basin, Salt Springs, and Death Valley, as well as the Stahl site being best known. These sites are associated with ephemeral lakes, and now-dry streams and springs, suggesting wetter conditions than now prevail in the deserts.

The distinctive characteristics of the Pinto Basin Complex as defined by Campbell and Campbell (1935) are projectile points of the Pinto series, described by Amsden (1935) as coarse in manufacture as well as form, in association with heavy-keeled scrapers, flat milling stones, and manos. Throughout most of the California desert region, sites containing elements of the Pinto Basin Complex are small and are usually limited to surface deposits, suggestive of temporary and perhaps seasonal occupation by small groups of people. One exception is the Stahl site in

the northwestern portion of the Mojave Desert. The Stahl site has a midden more than 1 m deep containing Pinto series points, *Olivella* spire-lopped beads, steatite ornaments and bowls, bone awls, and atlatl spurs and weights, as well as a few early Silver Lake and Lake Mojave style projectile points. Small stemmed points and pottery of a much later occupation are present on the surface of the site. The Pinto points at the Stahl site also resemble the Pinto points from the Pinto Basin and western Great Basin.

Warren postulates that the "Pinto Basin Complex evolved from the earlier hunting complexes of the Lake Mojave Period and that it represents a small population dependent on hunting and gathering, but lacking a well-developed milling technology" (in Moratto 1984:414). As the Pleistocene lakes and rivers dried up, early hunting populations of the Lake Mojave Period likely withdrew to the margins of the deserts or concentrated around the few oases in the desert. According to Warren (Moratto 1984:414), with the return of moister conditions at approximately 6500 B.P., the Pinto Basin peoples appear to have reoccupied much of the lower Mojave Desert where shallow lakes had formed and along stream courses and major springs. With the return of more arid conditions at about 4500 B.P., these people again may have withdrawn to the desert margins and oases, leaving much of the desert region uninhabited until the end of the Pinto Period (ca. 4000/3500 B.P.).

3.2.3 Gypsum Period (ca. 4000 B.P. to 1500 B.P.)

The Gypsum Period is marked by Humboldt Concave Base, Gypsum Cave, and Elko series projectile points and is dated between ca. 4000 B.P. to 1500 B.P. A few Gypsum Period sites from the deserts of California, Nevada, and Arizona have been excavated, including Gypsum Cave, Newberry Cave, Willow Beach, Rose Spring, Indian Hill Rockshelter, and Ray, Baird, and Chapman caves. In addition to diagnostic projectile points, Gypsum Period sites include leaf-shaped points, rectangular-based knives, flake scrapers, T-shaped drills, and occasionally, large scraper planes, choppers, and hammerstones (Moratto 1984:416). Manos and milling stones are common; the mortar and pestle also were introduced during this period. Other artifacts include shaft smoothers, incised slate and sandstone tablets and pendants, bone awls, *Olivella* shell beads, and *Haliotis* beads and ornaments. A wide range of perishable items dating to this period was recovered from Newberry Cave, including atlatl hooks, dartshafts and foreshafts, sandals and S-twist cordage, tortoise-shell bowls, and split-twig animal figurines. The presence of both *Haliotis* and *Olivella* shell beads and ornaments and split-twig animal figurines indicates that the California desert occupants were in contact with populations from the southern California coast and southern Great Basin (e.g., Arizona, Utah, and Nevada).

The beginning of the Gypsum period coincides with the beginning of the Little Pluvial (ca. 4000 B.P.), which apparently allowed for more intensive occupation of the California deserts. During the succeeding arid periods, it appears that these populations gradually adapted in a variety of technological and socioeconomic ways to the more arid desert environment. Technologically, the artifact assemblage of this period is similar to that of the preceding Pinto Basin Period; new tools also were added either as innovations or as "borrowed" cultural items. Included are the mortar and pestle, used for processing hard seeds (e.g., mesquite pods), and the bow and arrow, as evidenced by the presence of Rose Spring projectile points late in this period. Ritual activities became important, as evidenced by split-twig figurines (likely originating from northern Arizona) and petroglyphs depicting hunting scenes. Finally, increased contact with neighboring groups likely provided the desert occupants important storable foodstuffs during less productive seasons or years, in exchange for valuable lithic materials such as obsidian, chalcedonies, and cherts. Warren (in Moratto 1984:420) states, "As a result of these new adaptive means, the

return to arid conditions at the end of the Little Pluvial had relatively little influence on the distribution of the populations of the late Gypsum Period."

3.2.4 Saratoga Springs Period (ca. 1500 B.P. to 750 B.P.)

The Saratoga Springs Period in the Mojave Desert saw essentially a continuation of the Gypsum Period subsistence adaptation throughout much of the California desert. Unlike the preceding period, however, the Saratoga Springs Period is marked by strong regional cultural developments, especially in the southern California desert regions, which were heavily influenced by the Hakataya culture of the lower Colorado River area. Warren has divided the Saratoga Springs Period into three, possibly four, distinct regional developments based largely on pottery types and projectile point styles: Northwestern Mojave, Eastern Mojave, Southern Desert, and possibly Antelope Valley (Moratto 1984:420–424).

In the northwestern Mojave, the Saratoga Springs Period is marked by the dominance of Rose Spring and Eastgate arrow points over the earlier Elko and Humboldt series dart points. Excepting this technological change, there appears to be a strong continuity of the Gypsum Period cultural assemblages in the northwestern Mojave.

In the eastern Mojave Desert, Anasazi interest in turquoise likely influenced populations living in the Mojave Desert as far west as the Halloran Springs area where hundreds of small turquoise mines existed. The presence of Anasazi pottery at many of the turquoise mines suggests that these mines initially were operated by the Anasazi between A.D. 500 and 700.

In the Southern Desert region, the impetus for change appears to have derived from Hakataya influences from the lower Colorado River, evidenced by the introduction of Buff and Brown Ware pottery and Cottonwood and Desert Side-notched projectile points. The initial date for the first Hakataya influence on the southern Mojave Desert remains unknown; however, it does appear that by A.D. 800–900 the Mojave Sink was heavily influenced, if not occupied by, lower Colorado River peoples. Additionally, trade along the Mojave River extended Hakataya influence west and appears to have blocked all Anasazi influence west of the Cronise Basin and south of the New York and Providence mountains by A.D. 1000; this influence apparently continued well after the Saratoga Springs Period (Moratto 1984:423).

In the Antelope Valley and western Mojave Desert, the Saratoga Springs Period is identified by Rose Spring and Cottonwood Triangular projectile points at large village sites containing deep middens and cemeteries which have been dated from 250 B.C. to A.D. 1650 (Sutton 1981:217). These sites also contain large quantities of shell beads and steatite items that originated from the southern California coastal regions. It appears that the occupants of Antelope Valley traded heavily with the coastal populations, developed large villages as early as the Saratoga Springs Period, and may represent another divergent regional development during this period.

In summary, the Saratoga Springs Period is characterized by cultural diversification with strong regional developments. Turquoise mining and long distance trade networks appear to have attracted both the Anasazi and Hakataya peoples into the California deserts from the east and southeast, respectively. Trade with the California coastal populations also appears to have been important in the Antelope Valley region and stimulated the development of large, complex villages. In the northwestern Mojave Desert, however, the basic pattern established during the Gypsum Period changed little during the Saratoga Springs Period. Toward the end of the Saratoga Springs Period, the Hakataya apparently moved far enough north to gain control of the

turquoise mines in the central Mojave Desert, thus replacing the Anasazi occupation of the eastern California desert.

3.2.5 Late Prehistoric Period (ca. 750 B.P. to 200 B.P.)

The Late Prehistoric period in the Colorado Desert is marked by the introduction of new artifact types and technological innovations of the previous Amargosa Period of the Late Archaic and defined as the Patayan Pattern (Cleland 1998; CSRI 1986; Schaefer 1994, 1995). This period is characterized by the introduction of ceramics, including Tizon Brown Ware from the Peninsular Ranges, Colorado Buff Wares from the Colorado River region, and the Salton Buff Ware from the Lake Cahuilla shoreline (Schaefer 1995; Waters 1982). New projectile point types, including Desert Side-notched and Cottonwood Triangular points, signify the introduction of the bow and arrow hunting technology, marking a pre-ceramic phase of the expansion of the earlier Amargosa assemblages perhaps as early as 1500 B.P. Techniques of floodplain horticultural were also introduced to the inhabitants along the Colorado River at the same time as ceramics. As well, burial practices changed from extended inhumations to cremated remains, sometimes buried in ceramic vessels. Typical of the Hohokam culture from southern Arizona, these traits were introduced to the Colorado River inhabitants and gradually spread west to the Peninsular Ranges and Coastal Plains of southern California. Only agriculture remains a problematic trait in regard to its spread beyond the Colorado River and Imperial Valley in late prehistoric times (CSRI 1986:35).

The Patayan Pattern is typified by several differing settlement and subsistence systems (Schaefer 1995). Along the Colorado River, dispersed seasonal settlements were composed of jacal (i.e., adobe style) structures, semi-subterranean pit houses, ramadas, or brush huts, depending on the season and types of settlement. Larger rancherias would disperse to upper terraces of the Colorado River and to special collection areas during the summer months, coinciding with the flood phase of the river, returning to the lower terraces for plant harvesting. At the eastern base of the Peninsular Ranges, the settlement pattern was typified by dispersed rancherias or villages situated at the mouths of canyons supporting perennial streams, at the base of alluvial fans near springs, or down on the valley floor where a shallow water table allowed wells to be dug (e.g., at Indian Wells). In addition to these sites, specialized sites were located in all of the micro-environmental zones that were exploited seasonally. Archaeologically, these specialized sites can range in characteristics from bedrock milling features and pot-drops along trails, to chipping stations and quarries, to temporary camps containing bone, shell, ceramics, flaked and ground stone tools, and ornamental items such as beads and pendants, as well as other occupational debris.

Three phases of Patayan are generally recognized in addition to the pre-ceramic phase (Schaefer 1995). These phases are defined by changes in pottery frequencies and by the cultural and demographic effects of the infilling and subsequent desiccation of ancient Lake Cahuilla. The Patayan I phase appears to have been confined to the Colorado River region and began approximately 1,200 years ago with the introduction of pottery; the artifact assemblage of this phase bears the closest similarity to that of the Hohokam (Schaefer 1995; Waters 1982). The Patayan II phase, beginning about 950 years ago, is contemporary with Lacustrine Interval 2 of Lake Cahuilla. Attracted to highly productive microenvironments along the Lake Cahuilla shoreline, people on both its eastern and western shores were producing pottery by the time the lake was fully formed. New ceramic types indicate that sedimentary, non-marine clays from the Peninsular Ranges were being utilized. The final Patayan III phase began approximately 500 years ago, coinciding with Lake Cahuilla Lacustrine Interval 4. This phase is characterized by

new pottery types that reflect changes in settlement patterns, as well as with intensified communication between the Colorado River and Peninsular Ranges tribes as people living around the former Lake Cahuilla shoreline dispersed to their base territories, and the Imperial and Coachella valleys dried up, facilitating long distance travel (Schaefer 1995). Wilke (1976) has postulated that by approximately 250 years ago with the final desiccation of Lake Cahuilla prior to the twentieth century, the native inhabitants occupying its shores began moving westward into areas such as Anza-Borrego, Coyote Canyon, the Upper Coachella Valley, the Little San Bernardino Mountains, the San Jacinto Valley, and Perris Plain.

The Patayan III phase continued into the ethnographic period, ending in the late nineteenth century when Euro-American incursions disrupted the traditional culture.

3.3 ETHNOGRAPHIC SETTING (by David D. Earle)

3.3.1 Cahuilla Socio-political Organization

The Cahuilla occupied the San Jacinto and Santa Rosa mountains, territories farther west in the Hemet and Perris regions, San Gorgonio Pass, and the Coachella Valley. Bean (1978) has estimated the total population of the three Cahuilla divisions—the Mountain, Pass, and Desert Divisions—at between 6,000 and 10,000 people at Spanish contact in the late eighteenth century. The Cahuilla were grouped into clans or sibs that were organized on the basis of patrilineal descent. Individuals related to a common male ancestor by descent through the male line belonged to the same clan, whether they were males or females. All Cahuilla clans, whether of the Mountain Cahuilla, Pass Cahuilla, or Desert Cahuilla divisions of this native language-culture group, belonged to one of two moiety divisions—Wildcat or Coyote. This moiety system regulated marriage, such that clans that belonged to the Coyote moiety division had to seek a spouse belonging to a clan belonging to the Wildcat moiety division. This moiety system was found among the neighboring Serranos to the west and north as well.

The Cahuilla and the Serranos appear to have differed, however, in how their clans functioned. Among the Serrano, the clan appears to have been the basic territorial unit that occupied a winter village site and surrounding territory. Constituent lineages making up a clan were not independently identified political units that had their own village sites. In the case of the Cahuilla, clans were made up of a number of subsidiary lineages that each could have a politically important independent existence. Independent lineages occupying their own village sites were discussed at length by Cahuilla consultants who were interviewed by anthropologists in the twentieth century. The occupation of independent settlements by these lineages does not appear to have been simply a product of the disruptions caused by the foreign invasion of native California. Thus, we find mentioned in Franciscan Mission records the names of independent Cahuilla lineage villages that form part of a larger clan. This we definitely do not find with the neighboring Serrano (Earle 2004a).

Individual Cahuilla clans were led by a chief or *Net*, who acted as both a political and ceremonial leader. The *Net* had charge of the sacred house (dance house) and sacred bundle, *maswut*. This sacred bundle consisted of matting, originally of seagrass, which was wrapped around ritual paraphernalia and items sacred to the clan. This bundle was a sacred expression of the identity of the clan. It was kept in a special enclosure at the back of the sacred house, which also served as a dance house, and originally as a residence of the *Net*. Among many clans, the *Net* was assisted by a *Paha*, a ritual assistant or "master of ceremonies," also found among other Takic groups. This office may have been absent among some of the most southerly Desert Cahuilla

clans. In addition, among the Mountain and Pass Cahuilla in particular, a ritual assistant at the Mourning Ceremony called the *Takwa* was in charge of the ritual division of food among guests. In addition, the *hauinik* or singer helped the *Net* with the important responsibility of remembering and reciting sacred songs associated with the clan. This pattern of political and ritual "offices" is generally similar to that of the Serrano, Cupeño, and Luiseño. Of particular importance here is the idea that fully independent clans can be identified by their having their own sacred bundle, sacred house, and *Net*. Subsidiary lineages belonging to a particular clan were patrilineally related to one another, and could not marry one another. The individual lineages, however, lacked their own sacred bundle, sacred house, and *Net*. Sometimes the individual lineages might leave to gather at a particular location, but sometimes they lived at separate named localities. Even if they lived separately, however, they were dependent on the *Net*, or clan ritual and religious leader. As Strong pointed out, the *Pūalem*, the shamans or wizards of the Cahuilla, played an important role in Cahuilla culture but were not officers or political or ritual leaders of the individual clans. Their enterprise was individual rather than corporate (Bean 1972, 1978; Hooper 1920).

3.3.2 Cahuilla Religion and Ritual

Like neighboring Takic groups, the Cahuilla held public gatherings for the naming of children, for marriage, for male and female initiation, for the installation of *Nets*, for the Eagle-Killing Ceremony, and for the mourning ceremony, held annually as necessary.

Like other interior Takic groups, the Cahuilla cremated their dead and also burned many belongings of the deceased, in a ceremony that was separate from the mourning ceremony. The latter was held collectively for all those deceased since the last ceremony. The mourning ceremony was the most important ritual and alliance-building undertaking held by the clan, and involved the stockpiling of both food and valued goods such as beads for distribution to visiting groups. The mourning ceremony and other public rituals involved sacred dancing as well as the singing of sacred songs. Relations of reciprocal cooperation between clans of opposite moiety affiliation, linked by marriage ties, were reaffirmed by the presentations of food and valued goods that took place during the mourning ceremony.

Cremation was associated with a version of the "dying God" creation story found in California and the Southwest. This involved the creation of the world and the first "people/animals" by a deity who is slowly poisoned supernaturally to death by an animal daughter, and then cremated. This cremation includes the actions of various "people/animals," including Coyote, who steals the "dying God's" heart. This cremation provides a charter for the later cultural practice. Both this creation story about the "dying God" and stories about the later creation of cultural institutions by two brothers, one good and one evil, are shared with Yuman-speaking groups of the lower Colorado River.

Cahuilla religious traditions can perhaps be characterized as part of an "eastern complex" in southern California. Blackburn and Hudson have identified what they have called the "Northern Complex" of beliefs among the mainland Chumash, the southern Valley Yokuts, and the Kitanemuk, involving elements such as the annual peón game between the sun and Eagle, and the complex of seven deities, and on the recruitment of animal familiars through the ingestion of toloache (Datura) (Hudson and Blackburn 1978). A second religious tradition we might call the "southern complex" was associated with the Channel Islands Chumash, with Santa Catalina, and with the coastal Gabrielino and Juaneño. This "southern complex" involved elements of the historically late religion of Chingichnich and the exclusive 'Antap cult, with its emphasis on the

esoteric rituals of powerful coastal and island wizards, shielded from public view, and elaborations of the toloache ritual. Among the Juaneño and Luiseño nearer to the coast, this "southern complex" was overlain over an earlier "eastern complex" also found among the Cahuilla and Serrano.

This "eastern complex" emphasized the "dying God" and dueling creator-brother theogonies, cremation, and also complex ritual song cycles involving the narration of supernatural travel across the southern California and Southwestern desert sacred landscape. The concept of Chingichnich and his avenging familiars, and the importance of the toloache cult are missing in the "eastern complex." All of these "eastern complex" elements are associated with the Yuman cultures of the lower Colorado River. Certain song cycles were shared between the Cahuilla and Serrano, on the one hand, and the Mojave and Quechan on the other. However, among the Desert Cahuilla, for example, the use of toloache was reported to be unknown. The "eastern complex" was distinguished, however, from the religious institutions of the Yuman groups, among other things, by its greater emphasis on community hortatory ritual, by the absence of the Mostamho tradition, and particularly by its lesser degree of emphasis on the sine qua non of the Colorado River groups, individual interaction with the supernatural realm through dreaming.

3.3.3 Cahuilla Subsistence Practices and Settlement

The three Cahuilla divisions would appear, at first glance, to be focused on two distinct patterns of subsistence, with the Mountain and Pass Cahuilla following a more typically "Californian" subsistence regime emphasizing acorns, salvia, islay, yucca and agave, pinyon and other mountain and foothill resources, and the desert division focusing on mesquite, cactus, and hard seeds (Bean and Saubel 1972). In fact, the distinction was not quite so clear cut. The groups inhabiting settlements in the Coachella Valley in the nineteenth century often retained gathering areas in the Santa Rosa Mountains or in other upland environments. Foothill zones on the west side of the Valley produced cacti, agave, and hard seeds for the desert-dwellers, and pinyon was found further upslope. Agave and hard seeds were also an important resource in the mountains on the east side of the Valley. Within the Valley itself, mesqite and screwbean woodland provided important staples.

Kelly (1977) has distinguished between what he called the "agave desert" of the Coachella Valley and the west side of the Salton Sea and the Imperial Valley, and the "severe desert" lying to the south and east of these areas. He characterized both the desert division of the Cahuilla and Kamia/Kumeyyay/Diegueño of the western edge of the Imperial Valley as adapted to the "agave desert," implying seasonal movements from the desert floor up into the mountain foothills to obtain resources such as agave. This pattern is one of "desert margin" adaptation that can be observed from the western edge of the Imperial Valley northwestwards along the desert side of California's interior mountain ranges to Owens Valley and beyond. Hard seeds, pinyon, agave/yucca, and even acorns (from canyon live oak, for example) are typical resources available to inhabitants of this zone. Kelly maintained that even the Desert Cahuilla were not adapted to exploiting the "severe desert" environment found in areas like the Chocolate Mountains.

3.3.4 Cahuilla Horticulture

By the time the Romero expedition in 1824 visited the Coachella Valley, the Cahuilla's valley floor oasis settlements were producing at least small quantities of cultivated products similar to those grown on the Colorado River—maize, beans, squashes, pumpkins, melons, and wheat (Bean and Lawton 1973). These were produced by way of irrigation, a system completely different from the flood farming of the Colorado River groups. There have been arguments

made that this production pre-dated the Spanish presence in Alta California. In fact, prehistoric horticultural plant remains have been found in Cahuilla archaeological sites. However, Strong (1929:38) noted that he had been told by Francisco Nombre that his grandfather had told him that Cahuilla cultivation of maize and other crops was relatively recent and that the Cahuilla had formerly obtained maize from the "Yumas" via exchange. It is worthy of note that other cases of recent oasis horticulture appear in the California deserts in the early nineteenth century, as discussed by Earle (2004b:74–75,121).

The exchange system mentioned by Nombre's grandfather would appear to have operated along the lines of similar exchange circuits between foraging groups with access to mountain products and lower Colorado riverine horticulturalists. The exporting of maize from the Colorado River westward implies considerable foot traffic on the trails heading westward to the Coachella Valley.

A comparison of the accounts of Estudillo in 1823–1824 and Blake and others in 1853–1863 describing the Desert Cahuilla suggests that horticultural production had expanded at the desert oases. By the 1850s, not only were oasis gardens being cultivated as major contributors of foodstuffs, but gardens existed in some of the canyons as well (Bean et al. 1995). One of the major questions surrounding the late prehistoric archaeology and ethnohistory of the Desert Cahuilla is how ancient the oasis gardening practiced in the Coachella Valley may have been, and whether it indeed had increased in importance during the early nineteenth century.

3.4 HISTORICAL SETTING

The history of the California desert region has been reviewed in detail by von Till Warren et al. (1981:85–105). A very brief summary of historic events in the Study Area is provided below.

Very little is known about the historic developments in the Coachella Valley prior to 1820. However, in 1821, a party of Cocomaricopa Indians arrived at the San Gabriel Mission, announcing they had traveled from the Colorado River in only six days using the Cocomaricopa Trail. This Indian trail began east of Blythe and approximated the present route of Interstate 10 across the Chuckwalla Valley, traversing the Mecca-Indio area and Coachella Valley to the San Gorgonio Pass (northwest of the Study Area). Specifically, in the Coachella Valley, the Cocomaricopa Trail ran south of the Study Area from Mecca west-northwest to the Cahuilla village of Mauulmii (Toro), where it took on a north-northwest alignment paralleling the mountain front as depicted on the Indio (1904) 30' USGS Quadrangle. The Indio (1904) 30' USGS Quadrangle also depicts at least one historical road connecting a number of large Cahuilla village sites containing human cremations to the Cocomaricopa Trail. It is possible that this (these) historical road(s) simply followed former Indian trails already present in the area prior to European settlement, as is the case with the Maricopa-Bradshaw route.

In the early 1850s, the Maricopa-Bradshaw route, paralleling the old Cocomaricopa Trail, was established to serve the mining camps developing near La Paz, Arizona (von Till Warren et al. 1981:85). Also in the 1850s the U.S. Government strongly promoted the establishment of a railroad route to connect the east and west coasts. Because of competing economic and political considerations, however, it was not until 1877 that the Southern Pacific Railroad transected the western Colorado Desert. This route connected the San Gorgonio Pass to the town of Yuma via the eastern shore of the Salton Sea.

The process of surveying and mapping the Colorado Desert began in 1852, when Henry Washington and a small party of surveyors ascended the San Bernardino Mountains and established the S.B.B.M. From 1854 to 1857, Washington extended this line to the Colorado River, working his way through uncharted territory all the way (von Till Warren et al. 1981:94).

Also in the 1850s, the U.S. Government sent Indian Commissioners into the deserts of southern California. Although not authorized to make any commitments to the Native Americans, the Commissioners set aside (illegally) large tracts of land for reservations (von Till Warren et al. 1981:94). Most of these areas were never fully developed as reservations, although the Torres Martinez and Agua Caliente (Palm Springs) reservations were eventually set aside from the larger reserves delineated by the Indian Commission. Once the Indian population was confined to the reservations, the remaining land was made available for mining, ranching, and other uses.

Management of the desert lands was largely the responsibility of the General Land Office, and later the Department of Agriculture Grazing Administration. Until the passage of the Taylor Grazing Act of 1934, however, no control was exercised over the California desert lands. Because of the extremely arid nature of the California deserts, this act had virtually no impact on the region; not until the responsibility for managing the desert came under control of the Bureau of Land Management (BLM) in 1946 were the first attempts made at range management. Since that time, the BLM also has been engaged in evaluating lands for their "uses," and classifying them for different types of management (von Till Warren et al. 1981:95).

The Coachella Valley Stormwater District was initially organized in 1915 by settlers of the Coachella Valley with the objective of controlling floodwater flows and constructing flood channels and levees (Coachella Valley County Water District 1978:18–19). An objective of the District was to replace individual ad hoc levee-building by individuals, which often worked at cross-purposes, with one property owner doing damage to another in times of flood. Devastating flooding in 1916 inundated Indio, Coachella, Thermal, and Mecca, underlining the urgency of flood control for local pioneer farmers. The 1916 flood had cut a channel for the Whitewater River eastward around Indio rather than turning south into the so-called "Noffsiger Wash." The layout of the river channel would have been different in subsequent years if the flood had cut a different route (Coachella Valley County Water District 1978:37).

The Stormwater District's first major effort to control flood flows was carried out in the vicinity of Indio (Coachella Valley County Water District 1978:19). A plan had existed before the 1916 flood to channelize the river around to the east and southeast of Indio, and a mile of levees had been built before the flood struck. Work continued with urgency after the flood had demonstrated the need for a better flood control system. A former protective ditch system installed at Indio had been removed by 1919, and a new channel was improved by that date (Coachella Valley County Water District 1978:55). A $30,000 bond was approved in September of 1918 for flood control activities. A plan proposed before the 1916 flood and reworked afterwards to build a large detention dam at Point Happy was considered and then dropped. Efforts to channelize the Whitewater River below Indio were also made, with an emphasis on levee construction and remodeling. In the vicinity of Avenues 66 and 68, for example, the post-1916 river channel was granted as a right-of-way by private land owners to the Coachella Valley Stormwater District in circa 1923–1924 (Riverside County Assessor 1922–1950: MB 22 [1920–1926]:52). Both improvements to and cleaning of the channel were carried out by the District. Another major flood occurred in 1927, and the Whitewater Channel, as it was called at the time, was downcut in places by several feet. The Whitewater Channel improvements had included a

system of levees which were affected by the storm in the vicinity of Indio, Thermal, and Mecca (Coachella Valley County Water District 1978:20, 99).

In November of 1936, preliminary discussions were held about the merging of the Coachella Valley Stormwater District and the Coachella Valley County Water District. This led to Senator John Phillips introducing a bill in the state legislature to that effect that was signed by Governor Merriam in June. On October 11, 1937, the proposal was approved by district voters, and the districts were subsequently merged (Coachella Valley County Water District 1978:11, 81). On March 2, 1938 another major storm occurred, which also caused downcutting to the channel and levee damage. In the aftermath of this storm, rebuilding and improvement of the channel took place. The Coachella Valley County Water District applied to the State of California for $80,000 in emergency funds "to repair, relocate and reconstruct the channel from Indio to the [Salton] sea" (Coachella Valley County Water District 1978:81). Some changes in stormwater channel easements were made to accommodate the improvements to the channel. The channel is shown on the 1941 Coachella 15' quadrangle. The channel was again rebuilt in the late 1960s and early 1970s, partly with funds from the U.S. Army Corps of Engineers (Coachella Valley County Water District 1978:101).

The paucity of water in many areas of the Colorado Desert discouraged farming, and agricultural development only flourished when water could be imported in significant quantities. Because of the relatively high water table in the Coachella Valley, however, the agricultural industry began to develop prior to the importation of water by means of drilling artesian wells. Beginning in the first decade of the twentieth century, Coachella Valley farmers planted extensive date, fig, and grape acreage. Towns that developed with the agricultural growth include Thermal, Mecca, Indio, and Coachella. Because of the extensive farming efforts, the water table in the Coachella Valley was seriously depleted, stimulating the formation of the CVWD to promote conservation and replenish the ground water basin. Following passage of the Boulder Canyon Project Act of 1928, the waters of the Colorado River were harnessed for the development of agriculture in Imperial and Coachella Valleys. The CVWD cooperated with the Imperial Irrigation District to develop the All-American Canal and the Coachella Valley extension. Branching off from the All-American Canal, the Old Coachella Canal extends 199 km (123.5 mi) north to the northern Coachella Valley, bringing the first imported irrigation water to the valley in 1949 (Norland 1978).

4
METHODS

This cultural resources sensitivity assessment uses a compilation of known cultural resources data and environmental data to model and predict the sensitivity for both buried prehistoric and surficial prehistoric and historical archaeological resources. The resultant sensitivity was reported in four zones. The sensitivity was arrived at through a consideration of geologic sedimentary structures, soil series maps of the Coachella Valley, historical maps and aerial images, modern aerial imagery, and the cultural resources literature and records search of the Study Area. As well, archaeological journals and publications on the Coachella Valley were consulted.

The four zones were established after a review of the data (see Figure 1), being primarily driven by clustering of known archaeological sites, geologic data, and soil series. The boundary between Zones 1 and 2 is located at Alejo Road in Palm Springs. The boundary between Zones 2 and 3 is located in Indian Wells, 2 mi west of Point Happy. The division between Zones 3 and 4 is located along Avenue 52 in the City of Coachella.

Since the zones were established based on the similarity and homogeneity of environmental variables, the sensitivity for cultural resources is fairly consistent throughout the zone. In one instance where this in not the case, it is pointed out in the sensitivity summary for that zone. Sensitivity for surface archaeology, including both prehistoric and historical sites and buried prehistoric resources was established separately in each zone. The resultant surface and buried site sensitivity was summed up individually for each zone. Possible sensitivity scores include low, moderate, and high sensitivity for surface prehistoric and historical archaeological resources, and low, moderate, and high sensitivity for buried prehistoric resources.

Based on the sensitivity for both surface and subsurface archaeology, cultural resources management measures are recommended for future compliance with Section 106 of the National Historic Preservation Act (NHPA); those are presented in Chapter 6. These management recommendations serve as a minimum level of effort and provide guidance for establishing actual level of effort once specific project areas and potential impacts are defined.

5
LITERATURE AND RECORDS SEARCH AND BACKGROUND RESEARCH

In addition to completing a records search, the model was also built on data derived from geologic maps, soils data, historical maps, historical aerial images, and technical reports or theses. The follow section is a review of those data.

5.1 LITERATURE AND RECORDS SEARCH RESULTS AND ANALYSIS

A quarter-mile records search was conducted beyond the centerline of the Whitewater River from the mouth of the canyon where the river emerges into the Banning Pass to the river's current delta into the Salton Sea. The records search area, herein the Study Area, amounted to 58.5 square miles and 52.4 mi in length. Results of the records search indicate that 309 archaeological and built-environment resources are located within this area consisting of 152 prehistoric sites, 34 historical archaeological sites, 15 multicomponent resources (prehistoric and historical archaeological sites), and 108 built-environment sites (historical architectural sites). Of these, 42 resources are located within 100 m of the center line of the Whitewater River. See Appendix A for a list of sites within the Study Area.

Prehistoric resources within the Study Area are difficult to classify due to inconsistent levels of documentation, including a lack of specificity of artifact and feature types, quantities, and details. Despite poor data, resource types identified in the Study Area include habitation, discrete artifact scatters, pot drops, trails, cairns, isolated ceramics, lithics, fire-altered rock (FAR), groundstone, and bedrock milling (BRM) sites. Of these 152 prehistoric resources in the Study Area, 45 are habitation sites, six of which contain evidence of cremation features, and five that have been classified by other researchers as village sites, including the site of *Pal se-ta*.

Resources in the records search data classified as habitation sites range from simple campsites to village sites. The reason for this broad classification is due to the variation in site record detail. Many older records, dating to the 1950s through early 1970s, lack detail to adequately address questions of site function and purpose. Minimally, sites with moderate densities of artifacts, evidence of burning, and faunal remains were classified as habitation sites. In many cases, sites of this type with a certain level of integrity have the potential to answer pertinent questions concerning the regional and local prehistory and after evaluation may be considered significant resources under NHPA.

Historical archaeological resources identified in the records search include refuse scatters, foundations, water conveyance or management features such as levees or pipelines, and agricultural sites. The records search results indicate that 49 sites of this type are within the Study Area. Refuse scatters are the most common type of historical archaeological site identified in the records search area, amounting to 19 sites. Noteworthy sites include the ruins of the Palm Springs Railroad Station (CA-RIV-178), the Whitewater River Diversion Channel (P33-017259), and the ruins of an adobe structure and possible homestead (CA-RIV-3886H).

The results of the records search indicate that 98 built-environment resources are within the records search area. Built-environment resources identified in the records search area include

residences, commercial buildings and stores, agricultural sites, water conveyance features, and communications facilities. More than 80 of the resources are single-family residences, with a few multi-family residences. A large proportion of the built-environment resources are within Cathedral City. Other resources include the White Water Repeater Station, the Oasis Date Garden, the Whitewater Channel, and the Carl Bray Home and Gallery.

No sites within the Study Area have been determined eligible for the NRHP. However, seven resources are listed as ineligible for inclusion on the National Register. There are 70 resources included on the Directory of Properties in the Historic Property Datafile (HPD) for Riverside County, as maintained by the of Historic Preservation . Two resources are listed as potentially eligible (P33-005514 and P33-005629), 11 resources as not eligible but may be of local interest, and the remaining sites are listed as ineligible. See Appendix B for the list of relevant pages of the HPD list.

In all, 407 cultural resources studies have been conducted within the Study Area. This accounts for an estimated 15 percent of the Study Area. The majority of the studies involve Phase I survey, yet also include reconnaissance, records search reports, excavations and site evaluation, and monitoring. These efforts have been concentrated in the central and lower parts of the Study Area, where much of the development of the Coachella Valley has occurred. See Appendix C for a list of cultural resources studies conducted.

There is an uneven distribution of cultural resources throughout the records search area, with high densities of sites occurring in the vicinity of Indio, near the former high stand of ancient Lake Cahuilla, and lower densities near Banning Pass, Coachella, Cathedral City, and Mecca. A low density of sites occurs between these areas.

Nearly 95 percent of prehistoric sites identified in the records search occur between the City of Indian Wells and Coachella. The highest density can be found in Indio. This area is where the high stand of the ancient Lake Cahuilla was located. This pattern of high site density can be seen elsewhere in the valley near the high lake stand (Eddy et al. 2011; Horne 2008).

5.2 HISTORICAL MAP AND AERIAL PHOTO ANALYSIS

Æ consulted historical maps and aerial photos to see what changes have occurred to Coachella Valley and the Study Area in the past century. This is important for assessing the integrity of the modern surficial landscape and assessing the character of the landscape prior to modern development of the valley. Specific points of interest include migration of creek channels, evidence of down-cutting, the presence of dunes, and evidence of abandoned channels, as well as agricultural use of the Study Area over time. Both aerial imagery and historical USGS and army quadrangles were consulted as part of the research. Viewed aerial images include the U.S. Department of Agriculture, Agricultural Adjustment Administration aerial index of Flight 1502 (AXM 1938b), Riverside County, California, flown on June 20, 1938 by Iaval Company (held by the Map and Image Library [MIL] of the University of California, Santa Barbara). Historical maps consulted include the Indio 30' USGS quadrangle (1904), Toro Peak 15' Army Map Service quadrangle (1941), Palm Springs 15' Army Map Service quadrangle (1940, 1942), Edom 15' Army Map Service quadrangle (1941), Coachella 15' Army Map Service quadrangle (1941), Palm Desert 15' USGS quadrangle (1959), Palm Springs 15' USGS quadrangle (1957), Thousand Palms 15' USGS quadrangle (1958), and the Coachella 15' USGS quadrangle (1956).

The analysis is presented in chronological order and will be described relative to Project features. All historical maps or photos were compared to current aerial photographs of the Study Area.

Analysis of the Indio (1904) quadrangle shows the Whitewater River mapped near its modern course with a few deviations. The river is shown as a wide, sandy, unmodified, unconfined wash meandering through the valley. For the most part, the main channel is roughly near the modern course in the northern Study Area, with the exception of meanders near Palm Desert and south of Cathedral City that deviate from the modern course. In the vicinity of Indio, the modern path of the river has been channelized to avoid the city, cutting around to the north. The Indio map depicts the river flowing south of the city and breaking up into multiple channels or washes. The modern course rejoins the historical mapped route south of Thermal, which then roughly overlap until the modern river enters the Salton Sea. Between Indio and Thermal, the modern course is east of the railroad, while the historical course is west, with a branch crossing the Augustine Reservation.

On the 1938 aerial, which shows an area from Point Happy east of Indian Wells to a point south of Thermal, the Whitewater River is depicted as channelized north of Indio. The Deep Creek Stormwater Channel is present, entering the river at Point Happy. The modifications to the river are evident past the town of Thermal. The second aerial from 1938, which depicts the Coachella Valley between Thermal and the Salton Sea, shows modifications to the channel down to the delta. Evidence for the original alignment can also be seen in these images where agricultural development has not obliterated channels and wash sediments.

The Edom (1941) quadrangle shows the river between Palm Springs and Palm Desert and it appears that the river still flows as an unmodified wash, yet closely aligning with the modern channel. To the south, on the Toro (1941) quadrangle, the path of the wash continues unmodified yet near its modern course until it reaches Indio, where it is shown as channelized and diverted northerly around the city. The Coachella (1941) quadrangle shows the river channelized along its modern alignment down to the river delta on the Salton Sea. The feature is officially named on the map as the Whitewater River Storm Channel. The feature is renamed on the Coachella (1956) quadrangle as the Coachella Valley Stormwater Channel. On the Palm Desert (1956) quadrangle, the stormwater channel has been extended to Point Happy, between Indio and Indian Wells, and is intersected by Deep Canyon Stormwater Channel. The northern portion of the Whitewater River, as depicted on the Thousand Palms (1958) quadrangle, shows the river more or less as a natural wash through the cities of Palm Springs, Cathedral City, and northern Palm Desert. The modern photorevised Palm Springs and Cathedral City quadrangles (1988, 1981) show some modification in the form along levees to the channel.

5.3 ANALYSIS OF THE SURFICIAL GEOLOGY OF THE COACHELLA VALLEY AND THE POTENTIAL FOR BURIED CULTURAL RESOURCES

Sediments and soils contain different but complementary information about the history of the Study Area landscapes. Although sediments and soils are created by different surficial processes, the terms are often confused and misused. Sediments are unconsolidated particles that have been eroded from a location on the landscape, physically transported, and deposited to another location. The accumulation of sediment is indicative of unstable landscapes. Soils, in contrast, form in preexisting sediments. As a surficial process, soil formation is dependent on climatic conditions favoring stable landscapes where mechanical, biological, and chemical

weathering can alter the sedimentary deposit or bedrock into a vertical sequence of distinctive horizons.

Knowledge of the sediment-soil distributions in the Study Area is essential for assessing the potential for buried cultural resources. Information gleaned from geologic maps provides the baseline data necessary to determine different landform ages, environmental contexts of the sedimentary deposits, and the textural properties that can yield valuable information for evaluating the potential for intact buried archaeological sites. Identifying the distribution of soil types provides a relative time marker and a greater surficial landscape resolution particularly in basins, where an array of alluvial and aeolian depositional environments exists. The development of alluvial soils is contingent on the complex history of alluvial sedimentation, time, and climate. Thus, differential distributions of alluvial soils are indicators of landscape stability and help determine the potential for intact buried archaeological sites in the alluvial settings of the Study Area.

Geologic maps consulted include the Geological Map of the Palm Springs Quadrangle (Dibblee 2004a), Geologic Map of the Desert Hot Springs Quadrangle (Dibblee 2004b), Geologic Map of the Whitewater Quadrangle (Dibblee 2004c), Geologic Map of the Palm Desert and Coachella 15 Minute Quadrangles (Dibblee 2008a), and Geologic Map of the Thousand Palms and Lost Horse 15 Minute Quadrangles (Dibblee 2008b). Soils data were downloaded from the Natural Resources Conservation Service (NRCS) Web Soils Survey website (2012).

Seven sedimentary units were identified in the Study Area. Nearly the entire Study Area is in a depositional setting, with the exception of small areas near the margin of the valley where various hard rock units are situated. Sedimentary units range in age from mid-Pleistocene to modern in age. Hard rock units have no potential for buried cultural resources and are not described; however, bedrock milling (BRM) features have been identified in these area and therefore, they are sensitive for cultural resources. The sedimentary units in the Study Area are described below:

Qg: A Holocene sediment body composed of alluvial gravel and sand of the Whitewater wash. Near the mouth of the canyon, this unit consists of large cobbles and represents very high energy of deposition. Toward the center of the valley, larger clasts are less frequent, although energy of deposition is still high and frequency of flooding limits soil formation. Due to a high energy of deposition, it is likely that buried cultural features in this formation would be in a secondary redeposited context with flash flooding impacting integrity. Thus, the preservation of cultural features in these sediments would be limited and the sensitivity for buried cultural resources is low.

Qa (northern Study Area): This unit is described as alluvial sand and gravel of flat flood plains and small valleys mostly near and in the San Jacinto Mountains deposited during the early to mid-Holocene. The moderate to high energy of deposition suggests this unit has a low potential for preserving buried cultural resources. However, if aeolian surficial sub-units are identified, they may be covering cultural resources.

Qa (southern Study Area): this unit is described as alluvial sand and clays of valley areas derived from ancient Lake Cahuilla and blow sands deposited during the Holocene. This area is highly sensitive for buried cultural resources. It is located in areas once part of a lacustrine

environment, which was actively exploited by prehistoric inhabitants. Because of a low energy of deposition, this sediment unit has the potential to bury sites with a high degree of integrity.

Qa/Qc: This unit, found in the southern portion of the Study Area, is the same as the Qa described above; with the additional features of exposed areas of lacustrine clay, which are light gray, alkaline, and contain some micaceous silt. This area also has a high potential for buried cultural resources.

Qf: Formally named Late Pleistocene Alluvial Fan of San Gorgonio Pass, this unit consists of sand and gravel of plutonic and gneissic detritus derived from the rising San Bernardino Mountains to the north. It is slightly dissected by stream channels and includes small alluvial fans at the base of and derived from San Jacinto Mountains in the southern area (Dibblee 2004c). The age and energy of deposition of this unit generally precludes the possibility of the presence of buried cultural deposits. However, aeolian surficial components overlying fan sediments may cover cultural resources. The unit as a whole is of low sensitivity for buried cultural resources.

Qs: This unit is described as late Holocene blow sands deposited by prevailing westerly winds in the northern portion of the Study Area and wind-laid dune sands in the southern half of the Study Area. Dunes are prevalent throughout the Study Area and were attractive features for prehistoric use. This unit has a high potential for buried cultural resources due to its low energy of deposition and recent age. However, the fact that this unit may preserve cultural resources, does not indicated that the area where it is located has a high potential for cultural resources.

Qcf: This unit is described as an alluvial fanglomerate, found only in the north near the mouth of the Whitewater Canyon, consisting of light gray, weakly indurated, and crudely bedded unsorted boulders, cobbles, and pebbles of detritus mostly of quartz diorite derived from the San Jacinto Mountains. There is no potential for buried cultural recourses in this unit due to its Pleistocene age.

Based on the analysis of the geologic data, the potential for buried sites in the northern portion of the Study Area is low. This area is characterized by high to moderate energy sediments, derived from Whitewater Canyon, and from the slopes of the San Jacinto Mountains and San Gorgonio Mountains in the form of alluvial fans and channel sediments. South of Palm Desert, the sediments are low energy aeolian and lacustrine-derived materials, which are much more likely to preserve cultural materials and features in situ. This assertion is supported by the observation in the records search data; 95 percent of the prehistoric sites are clustered in this area.

Soils data for the Coachella Valley was ultimately used to refine the geologic model and establish sensitivity units for buried cultural resources. A total of six soil series and three land form types were identified within the Study Area. The boundaries of these soil series and their properties roughly correspond to geologic data, yet offer more detail in specific physical characteristics, such as texture and mineral accumulation, which can be useful in inferring sediment age. The following soil series and landform types were identified in the Study Area (Table 1). Appendix D shows the distribution of soil series in the Study Area.

Table 1
Soil Series and Land Forms Identified in the Study Area

Series	Description	Potential for Buried Resources
Carsitas	Gravelly coarse deep soils formed in alluvium from granitoid or gneissic rocks on alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans, and drainage ways. Contains common gravel and cobbles.	Higher energy; low potential for buried resources
Coachella	Very fine sandy soil with silt lenses that form in lacustrine basins and are derived from igneous rocks.	Moderate to high potential for preserving sites
Gillman	Coarse, loamy soil formed on stratified stream alluvium.	Moderate to low potential for buried sites.
Fluvents	Channel deposits, far from canyon mouth. Typically reworked valley sediments, with finer fraction removed.	High energy; low potential where active.
Indio	Very fine sandy loam, occasionally with freshwater shell fragments. Forms in alluvium derived from mixed rock sources on alluvial fans, lacustrine basins, and flood plains.	Moderate to high potential for buried cultural resources.
Myoma	Fine to very fine sand, with fresh water shells, formed in sand blown from recent alluvium. Surface topography consists of rolling, hummocky micro relief.	Moderate potential to bury resources. Very young sediment.
Salton	Silty clay loam, formed in lacustrine basin derived from silt eroded from recent alluvium.	Moderate to high potential for buried resources
Riverwash	High-energy bouldery, cobbley, gravels, deposited in stream channels	High energy; active; no potential for buried resources
Rock Outcrop	Rock outcrop.	No potential for buried resources

6
RESULTS AND DISCUSSION

The most influential variables in establishing sensitivity zones for the Study Area involve the geomorphology of the Coachella Valley, including the high-energy alluvial deposits in the northern portion of the Study Area and lacustrine deposits and lakeshore sediments in the southern portion. The location and setting of known cultural resources also informs on the likelihood of finding other resources in various settings in the Study Area. Ultimately, much of what is known about the history and prehistory of the valley is dependent on these geomorphic factors.

Based on the results of the review of geologic data, the Study Area was divided up into four zones. The sensitivity and factors leading to that sensitivity will be discussed for each zone below. The fours zones include: Zone 1, which is located mostly in the Banning Pass from the mouth of the Whitewater Canyon to Palm Springs; Zone 2, between Palm Springs and Point Happy in Indian Wells; Zone 3, spanning Point Happy to Coachella; and Zone 4, from Coachella to the Salton Sea.

6.1 ZONE 1

Fifteen previously recorded resources are in Zone 1, including one built-environment resource, two prehistoric isolated artifacts, and 12 historical archaeological sites. Historical sites are primarily refuse sites, likely associated with travel through the Banning Pass and with the railroad. The foundation of one possible homestead is located in the zone, but very little evidence of development, agricultural activity, or settlement. Two water-conveyance and one water-diversion structure are within the zone, associated with the Whitewater River and drainages coming down side canyons, and are intended to supply Palm Springs with water. No known resources physically intersect the delineated area of jurisdictional waters.

According to geologic and soils data, units in the Zone 1 portion of the Study Area are high-energy fluvial and alluvial units. This type of environment is highly active, preventing the development of surfaces and soils development. This can be seen in the gravelly sediments and boulders in the stream channel and nearby floodplain sediments. The primary soil series mapped in the area is the Carsitas, which is a high-energy, cobbley to gravelly, coarse sand. Where finer soil series were identified, such as the Myoma, they were formed on Pleistocene fan deposits which were deposited prior to human occupation of the region. The Whitewater River is mapped as river wash, a high-energy frequently flooded sedimentary unit with boulders, cobbles, and gravels. Much of the area has been used for raw material mining. Active environments promote the movement of artifacts into secondary contexts and the erosion of cultural features. In such environments, it is rare to find intact buried cultural resources or horizons. As well, alluvial fan deposits in the northern portion of the Study Area predate human occupation of the region, having been deposited during the Pleistocene. Therefore, prehistoric remains on the fan, if present, would likely be found on the surface. Since most of the Study Area consists of fluvial sediments of the Whitewater River, prehistoric evidence in most cases has likely been transported to secondary contexts and would no longer be in situ.

In a few cases, aeolian sands are present on the surface covering older fan sediments. Since dune sands are highly active, any prehistoric remains on fan sediments, or possibly historic resources, may be buried. In the review of the geologic literature, sand deposits were identified at the base of the San Jacinto Mountains south of the Whitewater River Channel. This area may have moderate potential to bury cultural resources.

Sites in Zone 1 may potentially include historical refuse scatters associated with water management, railroad, and travel through the region. Surface surveys in this zone in areas undisturbed by modern grading are likely to result in the discovery of sites of this type. As well, prehistoric isolates or small lithic scatters in addition to BRM features on rocks at the base of the mountain may be identified. However, prehistoric sites are likely to occur in low density. Geologic data indicate that the likelihood of intact buried sites, both prehistoric and historical, is low, with the exception of areas covered by blow sands and dune complexes. Thus, Zone 1 has a moderate potential for the discovery of additional surface historical sites, a low potential for the discovery of additional prehistoric sites, and a low to no potential for buried archaeological sites of any type with the exception of aeolian areas, where there is a moderate potential for buried archaeological resources.

6.2 ZONE 2

The records search identified 62 cultural resources in Zone 2; however, 55 of these resources are built-environment resources clustered in the historical portion of Cathedral City. Archaeological resources identified in Zone 2 include six prehistoric resources and one historical resource. Since potential construction activities involve restoring the Whitewater River facilities to an as-built state, there will be no impacts to the identified built sites and these resources will not be considered further in this section. It should be noted, however, that elements of the Whitewater conveyance system are considered built-environment resources and could qualify as historic properties.

The prehistoric resources include sparse artifact scatters involving small quantities of ceramic sherds, debitage, and ground stone. In the case of CA-RIV-141, CA-RIV-1320, and CA-RIV-2003, which are located at foot of the Santa Rosa Mountains, near the mouth of the alluvial fan coming out of a major canyon, numerous stone features are present. While located in close proximity to the main channel of the Whitewater River, these resources are outside the delineated jurisdictional area and will not be affected directly by any maintenance undertakings, but demonstrate potential for this type of site to occur in this zone. Due to the development of the desert cities along State Route 111 (SR-111), the other prehistoric sites appear to have been destroyed and much of the Whitewater River is developed, thus surface archaeology is limited. Only one documented historical archaeological site was located within this zone, consisting of the foundation of an adobe structure; according to modern aerial images; however, it has been destroyed or incorporated into a golf course.

The potential for subsurface archaeology has not been demonstrated in Zone 2, as there are no reports posting the results of subsurface testing available. Sediments in the area, according to geologic data, consist of fluvium in the stream channel, in addition to disturbed sediments from channelization and flood control efforts, which are down cut into Holocene alluvial sands and gravels. In the vicinity of Zone 2, these sediments were likely derived from sediments from Cathedral, Deep, and Magnesia canyons and form the distal end of several coalescing fans. The sediments may have been reworked by flooding of the Whitewater River and include bands of

stream wash deposits. This setting has the possibility to bury and preserve prehistoric cultural resources.

In the northern half of Zone 2, the soil series are mostly Carsitas and Riverwash, which are high-energy deposits not likely to preserve buried cultural resources, and Myoma, which are generally young aeolian fine sands. There is moderate potential for the areas in which the Myoma soil series are found to bury sites, but the lack of characteristics and resources that would attract human use of the area, and the lack of known sites does not support this. The southern portion of Zone 2, south of Palm Desert, is mapped as the Coachella, Carsitas, Gilman, and Myoma series. The Carsitas are located in the mid- and distal portions of alluvial fans emanating from the Santa Rosa Mountains, while Gilman series are found along former washes of these canyons. The Coachella series, fine sandy soils with silt lenses, derived from lacustrine and low-energy settings such as alluvial fan skirt, have the highest potential to preserve and bury cultural resources. It is likely that recent blow sands, mapped as the Myoma series, cover many of these older or higher-energy deposits.

Because most of Zone 2 is developed, with little evidence from previous cultural resources work that this section of the Study Area was intensively used prehistorically or historically, the likelihood of finding additional sites on the surface is low. The potential for subsurface cultural deposits in this zone is also low as evidenced by previous studies. However, the Coachella series has the potential to bury cultural resources with good preservation, if they are present. Overall, Zone 2 has low sensitivity for the discovery of prehistoric and historical cultural resources on the surface, and low sensitivity for buried cultural resources, with the exception of the southern extent, which has a low to moderately low sensitivity.

6.3 ZONE 3

Zone 3 encompasses the former high stand of ancient Lake Cahuilla, approximately 42 ft above sea level. Previous cultural resources record search data for the valley indicates that prehistoric site density at this elevation is extremely high. In the case of Zone 3, 162 resources with a prehistoric component are found in this segment of the Study Area. Of these prehistoric resources, 45 show evidence of habitation, demonstrating the long term and intensive use of this area. Furthermore, five of these habitations are classified by the recorders as village sites, including the ethnohistoric villages of *Pal Se-ta* (CA-RIV-7882) and *Kavinish* (CA-RIV-64). At least seven resources with cremations have been identified, as well as coyote and other animal burials. The remaining prehistoric sites consist of artifact scatters of various densities and isolated artifacts, possibly representing satellite activity areas.

In Zone 3, 32 sites with a historical component (historical or multicomponent resources) were identified in the records search. The majority of these sites are isolated refuse scatters, ranging from isolated historical artifacts to small dumps. As well, five foundations of early twentieth-century structures were identified. Two water-storage and agricultural archaeological sites were also identified. Also, 32 built-environment resources were identified; however, since any modifications to the Whitewater Storm Water Channel will be returning the feature to an as-built state, there will be no impacts to these resources and, therefore, they will not be discussed further (with the exception of the stormwater channel itself).

Eighteen cultural resources are within the area delineated for jurisdictional waters in Zone 3 (Table 2). Of these, one is a historical archaeological resource, and 17 are prehistoric, seven of

which are classified as habitation sites and one that is a village (*Kavinish*). This village site has documented cremation remains as does a second site. Beginning in this zone and extending to the Salton Sea, the Whitewater Stormwater Channel (P33-017259) has been formally documented.

Table 2
List of Archaeological Resources in Zone 3 that Intersect the Area Delineated as Jurisdictional Waters or Wetlands

Primary	Trinomial	Description
	33-017134	Foundation of historical structure.
	33-009019	Isolated ceramic sherd.
CA-RIV-1530	33-001530	A habitation site consisting of fish and mammal bones, charcoal, ceramic artifacts, ground stone, lithic debitage and fire-altered rock (FAR) measuring 62 x 51 m.
CA-RIV-64	33-000064	This site is the village *Kavinish* and early town-site of Indian wells. The site contains many loci with a diverse set of features and artifacts. Cremations were identified at this site.
CA-RIV-6376	33-009461	A habitation site consisting of ceramic artifacts, lithic materials, including two Desert Side-notched points, ground stone, and faunal remains, burnt clay, freshwater shell, charcoal, and FAR.
CA-RIV-3683/3847	33-003683	A habitation site consisting of lithic debitage and a Desert Side-notched point, ground stone, ceramic artifacts, and FAR located on a bench above the Whitewater River.
CA-RIV-6230	33-008741	A habitation site consisting of a low density of artifacts including lithics, ceramics, and bone, as well as faunal remains, shellfish, and burned clay 50 ft west of the Whitewater River flood control channel access road.
CA-RIV-2200	33-002200	A sparse artifact scatter.
	33-009018	An isolated ceramic sherd.
CA-RIV-1770	33-001770	A discrete scatter of ceramic artifacts.
	33-009021	A scatter of three ceramic sherds.
	33-009022	An isolated prehistoric mano.
CA-RIV-3005	33-003005	A habitation site with various lithic artifacts, including a drill, ground stone, manuported stone, possibly FAR, shell pendant fragments and beads, decorated pottery, and a ceramic disk. Additionally, a dense scatter of ceramic sherds and shellfish were found.
CA-RIV-1178	33-001178	A habitation consisting of a dense concentration of ceramic sherds, ash pits, fish bones, ground stone, a clay disc, shell beads, and a human cremation.
CA-RIV-2984	33-002984	Ceramic scatter with faunal and charcoal.
CA-RIV-2983	33-002983	A discrete artifact scatter.
CA-RIV-4132	33-004132	A sparse scatter of ceramic and lithic artifacts.
CA-RIV-5876	33-007924	A sparse scatter of lithic and ground stone artifacts associated with a dense scatter of ceramic sherds and shellfish.

The potential for subsurface archaeology has been demonstrated for this area in the archaeological literature. Data compiled from site records (including CA-RIV-64, -5233, -6484, and -8835) from the literature search in which subsurface excavations are reported, describe depth of cultural deposits typically ranging between 50 and 120 cm in depth. Love and Dahdul (2002) report an ashy cremation at 2 m below the modern ground surface at CA-RIV-1340 dating to 1280 to 830 B.C. and a hearth feature and basalt flake 10 m beneath a modern dune dating to between 1390 and 560 B.C., depending on which dates are accepted at CA-RIV-5346. At CA-RIV-1974, they also report a midden feature thath was encountered at 150 cm deep. These sites and others, dating to the Late Archaic, cluster around Indio and a few are within the Zone 4 portion of the Study Area. Applied EarthWorks, Inc. (2007) reports cultural remains in dune deposits of late prehistoric age more than a meter deep at CA-RIV-6895 and CA-RIV-6897.

Geologic data for this area shows Holocene alluvial valley fill consisting of sands and clay. Soils data indicate that the area is dominated by the Indio, Myoma, Coachella, Gilman series. The coarse-loamy Gilman series is related to old stream deposits and overbank sediment from the Whitewater River as it naturally moved across the valley. The Coachella and Indio series are both lacustrine-based fine sediments related to ancient Lake Cahuilla in this area. The Myoma, most likely the youngest series, consists of blow sands likely overtopping older lacustrine and fluvial sediments. The four series compose the entire zone and all are capable of containing well preserved cultural sediments. Interestingly, 96 of the prehistoric sites (61%) in Zone 3 have been identified in areas mapped as part of the Myoma soils series. Further, in the vicinity of this mapped series, nearly 90 percent of all prehistoric sites are associated with this series. This accounts for nearly all prehistoric sites in the western portion of Zone 3. In the eastern portion of Zone 3, where no Myoma soils are found, no such clustering is observed. This association may be related to the prehistoric use of dunes formed on the lake shore, or preservation factors, and requires further investigation.

While much of this area has been developed as the cities of Indio, Indian Wells, and Coachella, the potential to discover new and additional components of existing resources is high. This zone was the most exploited portion of the Study Area both historically and prehistorically. The potential to find new sites of either age is high. Archaeological and geologic data suggest that the potential for buried prehistoric sites within this zone is very high. Late Archaic to Late Prehistoric sites have been identified either with a subsurface component in migrating dunes, or completely buried. The likelihood of finding new buried prehistoric resources therefore, is very high. This area is highly sensitive for prehistoric and historical surface sites, and highly sensitive for buried prehistoric sites.

6.4 ZONE 4

The southernmost segment of the Study Area, Zone 4, has two known prehistoric and historical sites. The historical sites consist of buried pavement from an old road alignment and refuse, while the prehistoric resources are isolated artifacts. However, 2 mi west of the northern portion of the current location of the Whitewater River, is the Village *Temal Wahkish* (CA-RIV-148). There are 15 built-environment resources within the Study Area of Zone 4; however, restoration of the Whitewater Stormwater Channel to an as-built condition will not impact these built features. No know archaeological sites are within the area delineated as jurisdictional.

The geologic maps indicate that the area is Holocene valley fill, consisting of sands and clays. The soils series present in Zone 4 consist of Gilman and Indio, exclusively in the north and Salton and Gilman in the south. Gilman is associated with fluvial sediments and Indio and Salton are associated with lacustrine sediments. This combination of sediments is suggestive of former pathways of the Whitewater River as a migrating wash through the valley interfingering with lake sediments. Located farther south and therefore in formerly deeper portions of the lake and at greater distances from the mountains is the finer Salton series consisting of clays and fine material. The Indio series, consisting of fine sand and silt, are farther north. This division shows simply a lower energy of deposition, or more frequent lacustrine deposition in the south.

Outside the records search area, where Æ has conducted research previously in the vicinity, few archaeological resources are documented in this portion of the valley, especially at elevations lower than 150 ft below sea level. One hypothesis is that the former native vegetation was not of interest to Native inhabitants because of the abundance of alkali water in the area, thus making this area unattractive. Alternatively, in-filling of the lake may result in the repetitive silting over of resources in this area, burying evidence deeply with each generation of the lake. Strong (1929:50) reports that the village *Palpunivikiktum*, consisting of a well and at least 10 houses, was formerly located approximately 2 mi due east of Alamo. This places the location of the village near the southernmost portion of the Study Area, near the modern shoreline of the Salton Sea. Based on recent survey reports, evidence for surface archaeological resources in that area is absent (Brock 2004). However, modern muds and silts deposited during that latest in-filling of the Salton Sea may be obscuring evidence for this village. Archaeological research exploring the subsurface potential of this area is lacking.

The potential for discovering surface cultural resources in this area, including historical and prehistoric resources, is low. Previous survey work by other researchers has indicated that few to no resource are present within this portion of the Study Area. The potential for buried cultural resources is unknown. No previous studies have demonstrated either a presence or absence of buried cultural resources. However, the location of a village may be present within this area and if present, it is possibly buried by muds deposited during the latest in-filling of the Salton Sea. Thus, the sensitivity of this area can be summed up as low for surface prehistoric and historical archaeology and unknown for buried resources.

7
RECOMMENDATIONS AND CONCLUSIONS

The following sections offer recommendations for culture resources management within each zone analyzed as part of the Study Area. These recommendations address the need and approaches for activities that may be required to satisfy Section 106 of the NHPA. For permitting, the Corps of Engineers will require that an inventory of potential historic properties be conducted, for any areas of ground disturbance. If any cultural resources (historical or prehistoric archaeological sites or built-environment resources) are found in areas of direct impact, their NRHP eligibility would need to be evaluated. Potential impacts of any project on NRHP-eligible properties would have to be assessed. If adverse effects to historic properties cannot be avoided, they must be minimized or mitigated.

7.1 ZONE 1

Because much of this portion of the Study Area contains coarse high-energy sediments and a low density of know sites, the sensitivity for cultural resources is low. However, this area may have been used as an area for acquiring raw materials, including rock and gravel. As well, local water sources were likely exploited for growing desert communities. Cultural resources recommendations for maintenance activities in Zone 1 include, minimally, a surface reconnaissance to inventory cultural resources in the area of direct impact (ADI) for any proposed ground-disturbing activities. Also, background research, including map and aerial image and historical document review to investigate the historic-period exploitation of the area is recommended.

7.2 ZONE 2

Because much of the surface in Zone 2 has been modified and developed with the modern built environment as the cities of Palm Spring, Rancho Mirage, Palm Desert and Indian Well, grow, the ability to detect cultural resources by surface investigation has diminished. Background research indicates that this area has a low sensitivity for historical and prehistoric surface resources. Cultural resources should minimally include a site visit, and intensive survey of any areas with undisturbed soil exposures. As well, map and historical document research can augment the results of the fieldwork.

7.3 ZONE 3

This area was the most intensively utilized portion of the Study Area both historically and prehistorically. Sensitivity for resources is not limited to the surface, but may extend several meters underground. Further, 18 known sites physically overlap the area delineated for jurisdictional waters, and wetlands and could be impacted by maintenance and restoration activities. Projects in Zone 3 should include a surface survey—intensive if the area has exposed sediments—map and background research, and where feasible, some form of subsurface investigation. Most projects in this zone, where sediments will be disturbed, have some potential for adversely affecting historic properties. The benefits and risks of discovering and treating these resources prior to restoration activities, versus during restoration earthmoving should be weighed carefully. Costs of buried site testing or some other means of site detection (e.g.,

remote sensing) prior to construction/restoration could be offset by minimization of monitoring costs and construction delays if resources are discovered during restoration.

7.4 ZONE 4

Despite the low sensitivity of this portion of the Study Area, a surface inventory prior to any earthmoving activities in Zone 4 is recommended. The actual level of effort may vary from reconnaissance to intensive, depending on whether the area is developed, disturbed, or native. Areas that have been tilled or contain spoils of deep excavations may be of interest in terms of identifying potential buried resources. These types of excavations may reveal archaeological materials that were once buried beneath the thick mantle of relatively recent sediments in this zone. Though any cultural material brought to the surface in such a manner would have lost integrity, the presence or absence of archaeological deposits at depth would be instructive. For projects in which the APE has the potential to disturb subsurface sediments, monitoring or buried site testing is recommended. As described for Zone 3, the cost-benefits of each approach should be weighed.

7.5 COACHELLA VALLEY AND WHITEWATER RIVER STORMWATER CHANNELS

Three portions of the Coachella Valley Stormwater Channel have been recorded and evaluated for previous projects. A 669-ft section straddled by the Jefferson Street Bridge was recorded as CA-RIV-9456H (P-33-17913) and found to be ineligible for NRHP-listing under any of the four criteria (George and Mirro 2012). Two other segments, southeast of Thermal, have similarly been recorded and recommended ineligible for the NRHP. One of these, a 4,770-ft segment has the same designation—CA-RIV-9456H (George and Mirro 2009). The third is a 1.5 mi segment, designated P-33-17259 (Ballester 2008).

Other portions of the Coachella Valley Stormwater Channel have not been formally recorded or evaluated. Likewise, there is no official record of the Whitewater River Stormwater Channel as a built-environment resource. While it is unlikely that either of these stormwater channel systems would qualify for NRHP listing, any restoration activities that would physically alter these systems would require formal recordation and assessment of these systems.

8
REFERENCES CITED

Amsden, C. A.

1935 The Pinto Basin Artifacts. In The Pinto Basin Site: An Ancient Aboriginal Camping Ground in the California Desert, edited by E. W. C. Campbell and W. H. Campbell, pp. 33–51. *Southwest Museum Papers* No. 9.

Applied EarthWorks, Inc.

2007 *Archaeological Evaluation Report, 33-011573 (CA-RIV-6896) and 33-011574 (CA-RIV-6897), I-10/Jefferson Street Interchange Improvement Project, Indio, Riverside County, California.* Applied EarthWorks, Inc. Prepared for RBF Consulting on behalf of the City of Indio and California Department of Transportation, District 8.

Ballester, Daniel

2008 Archaeological Site Record for P-33-17259, August 2008. On file, Eastern Archaeological Information Center, University of California, Riverside.

Basgall, M. E., and M. C. Hall

1993 Archaeology of the Awl Site (CA-SBR-4562), Fort Irwin, San Bernardino County, California: An Early Holocene Residential Base in the North-Central Mojave Desert. Far Western Anthropological Research Group, Inc., Davis, California. Submitted to the U.S. Army Corps of Engineers, Los Angeles District.

Bean, Lowell J.

1972 Mukat's People: The Cahuilla Indians of Southern California. University of California Press, Berkeley.

1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, L. J., and H. W. Lawton

1973 Some Explanations for the Rise of Cultural Complexity in Native California with Comments on Proto-Agriculture and Agriculture. In *Patterns of Indian Burning in California: Ecology and Ethnohistor*y, Henry T. Lewis, ed. Ballena Press, Anthropological Papers, No. 1, pp. v-xlvii.

Bean, Lowell J., and K. S. Saubel

1972 *Temalpakh: Cahuilla Indian Knowledge and Use of Plants.* Malki Museum Press, Banning, California.

Bean, L. J., J. Schaefer, and S. Vane.

1995 *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California.* Prepared for Riverside County Flood Control and Water Conservation District. Cultural Systems Research, Inc., Menlo Park, CA.

BLM (Bureau of Land Management, U.S. Department of the Interior)
n.d. Search of the General Land Office Records database. Found at http://www.glorecords.blm.gov/search/default.aspx.

Brock, James
2004 *Phase I Cultural Resources Assessment of an Approximately 85-Acre Pilot Wetland Program Property, Thermal Area of Unincorporated Riverside County, California.* Archaeological Advisory Group.

Campbell, E. W. C., and W. H. Campbell
1935 The Pinto Basin Site: An Ancient Aboriginal Camping Ground in the California Desert. *Southwest Museum Papers* No. 9.

Cleland, James H.
1998 From Paleo-Indian to Protohistoric: The Chronology if Human Occupation of the Salton Sea Test Base. KEA Environmental, Inc. *Proceedings of the Society for California Archaeology*, Volume 12, pp. 10–14.

Coachella Valley County Water District
1978 Coachella Valley's Golden Years: the Early History of the Coachella Valley County Water District and Stories About the Discovery and Development of This Section of the Colorado Desert. Compiled by Ole J. Nordland. Coachella Valley County Water District, Coachella, CA.

Cultural Systems Research, Inc. (CSRI)
1986 *Cultural Resources Testing and Data Recovery, Tahquitz Canyon Project Research Design*. Cultural Systems Research, Inc., Menlo Park, California.

Davis, O. K., and W. D. Sellers
1987 Contrasting Climatic Histories for Western North America During the Early Holocene. *Current Research in the Pleistocene* 4:87–89.

Dibblee, Jr., Thomas W.
2008a *Geologic map of the Palm Desert & Coachella 15 Minute Quadrangles, Riverside County, California.* Geology Palm Desert and Coachella Quadrangles Map DF-373, scale 1:24,000.

2008b *Geologic map of the Thousand Palms & Lost Horse Mountains 15 Minute Quadrangles, Riverside County, California*. Geology Thousand Palms and Lost Horse Mountain Quadrangles Map DF-372, scale 1:62,500.

Dibblee, Thomas W., Jr.
2004a *Geologic map of the Palm Springs Quadrangle, Riverside County, California.* Geology Palm Springs Quadrangle Map DF-123, scale 1:24,000.

2004b *Geologic map of the Desert Hot Springs Quadrangle, Riverside County, California.* Geology Desert Hot Springs Quadrangle Map DF-121, scale 1:24,000.

Dibblee, Thomas W., Jr. (continued)
2004c *Geologic map of the Whitewater Quadrangle, Riverside County, California.* Geology Whitewater Quadrangle Map DF-120, scale 1:24,000.

Earle, D. D.
2004a Native Population and Settlement in the Western Mojave Desert in the Eighteenth and Nineteenth Centuries. *Proceedings of the Millennium Conference: The Human Journey and Ancient Life in California's Deserts, Barstow, California*, May 9–12, 2001. Maturango Museum Press, Ridgecrest, CA.

2004b *Ethnohistorical and Ethnographic Overview and Cultural Affiliation Study of the Fort Irwin Region and the Central Mojave Desert.* Prepared for TRC Solutions, Inc., Salt Lake City, Utah. Earle and Associates, Palmdale, CA.

Eddy, John J., John J., Dennis McDougall, Vanessa Mirro, Mike Mirro, and David D. Earle
2011 *Phase I Cultural Resources Survey for the Vulcan Sand and Gravel Project, Unincorporated Imperial County and Torress Martinez Desert Cahuilla Indian Reservation, California.* Applied EarthWorks, Inc. Prepared for the Torres Martinez Desert Cahuilla Indians and Selnek Is Kawish Sub Corporation.

George, Joan and Vanessa Mirro
2009 *Phase I Cultural Resources Assessment for the Coachella Valley Water District's Stormwater Channel Project, Riverside County, California.* Applied EarthWorks, Inc. Prepared for the Coachella Valley Water District.

2012 *Phase I Cultural Resources Assessment for the Jefferson Street Grade Control and Sewer Replacement Project, Riverside County, California.* Applied EarthWorks, Inc. Prepared for the Coachella Valley Water District.

Gosse, J. C., J. Klein, E. B. Evenson, B. Lawn, and R. Middleton
1995 Beryllium-10 Dating of the Duration and Retreat of the Last Pinedale Glacial Sequence. *Science* 268:1329–1333.

Graumlich, L. J.
1993 A 1000-year Record of Temperature and Precipitation in the Sierra Nevada. *Quaternary Research* 39(2):249–255.

Hooper, L.
1920 The Cahuilla Indians. *University of California Publications in American Archaeology and Ethnology* 16:316–380.

Horne, Melinda, and David D. Earle
2008 Phase I Cultural Resources Surveys for the Travertine Point Specific Plan. Prepared by Applied EarthWorks, Inc., Hemet, CA.

Kelly, W. H.
1977 *Cocopa Ethnography*. University of Arizona Press, Tucson, AZ.

Laflin, Patricia B.
2001 [1998] *Coachella Valley California: A Pictorial History*. 2nd printing. The Donning Company Publishers, Virginia Beach.

Laylander, Don
1994 *Phase III Data Recovery at the Elmore Site (CA-IMP-6427), Imperial County, California, 11-IMP-86, P.M. 33.6/43.2, 11221-100710.* Submitted to Caltrans District 11, San Diego.

Love, Bruce and Miriam Dahdul
2002 Desert Chronologies and the Archaic Period in the Coachella Valley. *Pacific Coast Archaeological Society Quarterly, Volume 38, Numbers 2 & , Spring and Summer 2002,* :65–86.

Mix, A. C.
1987 The Oxygen-Isotope Record of Deglaciation. In *The Geology of North America*, edited by W. F. Ruddiman and H. E. Wright, Jr., pp. 111–136. Geological Society of America, Boulder, Colorado.

Moratto, M. J.
1984 *California Archaeology*. Academic Press, New York.

Norland, Ole J.
1978 *Coachella Valley's Golden Years*. Revised edition. Desert Printing Co., Inc., Indio, California.

Riverside County Assessor.
1920–1950 Riverside County Assessor, Map Book 22 (1920–1926), p. 52. Office of the Riverside County Assessor, Riverside, Ca.

Schaefer, Jerry
1986 *Late Prehistoric Adaptations during the Final Recessions of Lake Cahuilla: Fish Camps and Quarries on West Mesa, Imperial County, California*. Mooney-Levine and Associates. Submitted to the Bureau of Land Management, Department of the Interior, El Centro, California.

1994 The Challenge of Archaeological Research in the Colorado River: Recent Approaches and Discoveries. *Journal of California and Great Basin Anthropology* 16 (1):60–80.

1995 Prehistoric Cultural Setting. In *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon Palm Springs, California, Volume 1A of 4: Management Summary, Forward, Introduction, Environmental Setting, Prehistoric Cultural Setting, Research Orientation, ethnography*. Cultural Systems Research, Inc., Menlo Park, California. Submitted to the Riverside County Flood Control and Conservation District, Riverside, California.

Smith, Brenda D., and James Brock
1998 From Shoreline to Mesquite Dune: Changing Subsistence Strategies at CA-RIV-4754, La Quinta. Archaeological Advisory Group, Pioneertown. *Proceedings of the Society for California Archaeology*, Volume 12, pp. 1–4.

Sowers, T., and M. Bender
1995 Climate Records Covering the Last Deglaciation. *Science* 269:210–214.

Spaulding, W. G.
1995 Environmental Change, Ecosystem Responses, and the Late Quaternary Development of the Mojave Desert. In *Late Quaternary Environments and Deep History: A Tribute to Paul S. Martin*, edited by D. Steadman and J. Mead. The Mammoth Site of Hot Springs, South Dakota, Inc. Scientific Papers, Volume 3. Hot Springs, South Dakota.

2001 Paleoenvironmental Context of the Study Area. In *Metropolitan Water District of Southern California Eastside Reservoir Project Archaeological Investigations*, Vol. IV: Chapter 5. Susan K. Goldberg, general editor.

Spaulding, W. G., and L. J. Graumlich
1986 The Last Pluvial Climatic Episodes in the Deserts of Southwestern North America. *Nature* 320:441–444.

Stine, Scott
1994 Extreme and Persistent Drought in California and Patagonia during Mediaeval Time. *Nature* 369:546–549.

Strong, W. D.
1929 Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology* 26(1):1–358. Berkeley, CA.

Sutton, Mark Q.
1981 *Archaeology of the Antelope Valley, Western Mojave Desert, California.* Manuscript in possession of the author.

U.S. Army (U.S. Army Map Service, Washington D.C.)
1941 Coachella, California. 15' Quadrangle.

1941 Edom, California. 15' Quadrangle.

1940 Palm Springs, California. 15' Quadrangle.

1942 Palm Springs, California. 15' Quadrangle.

1941 Toro Peak, California. 15' Quadrangle.

USGS (U.S. Geological Survey, Washington D.C.)
1904 Indio, California. 30' Quadrangle. Reprinted in 1930. United States Geological Survey, Washington, D.C.

USGS (continued)

1956 Coachella, California. 15' Quadrangle. United States Geological Survey, Washington, D.C.

1957 Palm Springs, California. 15' Quadrangle. United States Geological Survey, Washington, D.C.

1959 Palm Springs, California. 15' Quadrangle. United States Geological Survey, Washington, D.C.

1958 Thousand Palms, California. 15' Quadrangle. United States Geological Survey, Washington, D.C.

Van Devender, T. R., R. S. Thompson, and J. L. Betancourt

1987 Vegetation History of the Deserts of Southwestern North America: The Nature and Timing of the Late Wisconsin-Holocene Transition. In *The Geology of North America*, edited by W. F. Ruddiman and H. E. Wright Jr., pp. 323–352. North America and Adjacent Oceans during the Last Deglaciation, vol. K-3. Geological Society of America, Boulder, Colorado.

von Till Warren, E., R. H. Crabtree, C. N. Warren, M. Knack, and R. McCarty

1981 *A Cultural Resources Overview of the Colorado Desert Planning Units*. U.S. Department of the Interior, Bureau of Land Management, California Desert District, Riverside.

Wallace, W. J.

1978 Post Pleistocene Archaeology, 9000 to 2000 B.C. In *California Indians*, edited by R.F. Heizer and M. A. Whipple, pp. 186–210. University of California Press, Los Angeles.

Warren, C. N.

1980 The Archaeology and Archaeological Resources of the Amargosa–Mojave Basin Planning Units. In *A Cultural Resources Overview for the Amargosa–Mojave Basin Planning Units*, by C. N. Warren, M. Knack, and E. von Till Warren. U.S. Bureau of Land Management, Cultural Resources Publications, Anthropology–History, Riverside, California.

1984 The Desert Region. In *California Archaeology*, by Michael J. Moratto, pp. 339–430. Academic Press, New York and London.

Waters, Michael R.

1982 The Lowland Patayan Ceramic Tradition. In *Hohokan Patayan: Prehistory of Southwestern Arizona*, R. H. McGuire and M. B. Schiffer, editors. Pp. 275–298. Academic Press, New York.

1983 Late Holocene Lacustrine Chronology and Archaeology of Ancient Lake Cahuilla, California. *Quaternary Research* 19: 373–387.

Wilke, Philip J.
1976 *Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California.* Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

York, A. L., and W. G. Spaulding
1996 *Late Holocene Environment and Human Settlement of the Mojave Desert.* Paper presented at the 56th Annual Meeting of the Society of American Archaeology. New Orleans, Louisiana.

Appendix A

List of Resources in the Study Area

Trinomial	Primary	Comment	Site Type
CA-RIV-64	33-000064	village/	Prehistoric
CA-RIV-135	33-000135	Lithic and cermaic scatter	Prehistoric
CA-RIV-141	33-000141	No Description	Prehistoric
CA-RIV-149	33-000149	Village Site	Prehistoric
CA-RIV-150/H	33-000150	Village/Habitation	Multicomponent
CA-RIV-178	33-000178	Palm Springs Railroad Station	Historic
	33-000601	<Null>	Built Environment Resource
CA-RIV-1171	33-001171	Artifact scatter and maize cobb	Prehistoric
CA-RIV-1178	33-001178	Artifact scatter and faunal remains/cremation/Habitation	Prehistoric
CA-RIV-1315	33-001315	Artifact scatter	Prehistoric
CA-RIV-1320	33-001320	Stone circles and trail segment	Prehistoric
CA-RIV-1530	33-001530	Artifact Scatter/Faunal Remains/FAR/Habitation	Prehistoric
CA-RIV-1754	33-001754	Ceramic scatter	Prehistoric
CA-RIV-1770	33-001770	Ceramics	Prehistoric
CA-RIV-1970	33-001970	Artifact Scatter/faunal remains/possible cremations/Habitation	Prehistoric
CA-RIV-1972	33-001972	Ceramics and groundstone	Prehistoric
CA-RIV-1973	33-001973	Artifact scatter/FAR/clay	Prehistoric
CA-RIV-1974	33-001974	Artifact scatter/faunal remains/FAR/possible cremations/habitation	Prehistoric
CA-RIV-2003	33-002003	85 cairns	Prehistoric
CA-RIV-2195	33-002195	ceramic scatter	Prehistoric
CA-RIV-2200	33-002200	artifact scatter - sparse	Prehistoric
CA-RIV-2264	33-002264	artifact scatter BRM features	Prehistoric
CA-RIV-2934	33-002934	artifact scatter/burnt clay	Prehistoric
CA-RIV-2935	33-002935	artifact scatter/burnt clay	Prehistoric
CA-RIV-2936	33-002936	artifact scatter/faunal remains/FAR/burnt clay/habitation	Prehistoric
CA-RIV-2982	33-002982	artifact scatter/FAR/charcoal/habitiation	Prehistoric
CA-RIV-2983	33-002983	Artifact scatter	Prehistoric
CA-RIV-2984	33-002984	ceramic scatter with faunal and charcoal	Prehistoric
CA-RIV-2985	33-002985	ceramic and lithic scatter	Prehistoric
CA-RIV-2986	33-002986	sparse scatter of sherds and flakes	Prehistoric
CA-RIV-2987	33-002987	Sparse scatter of sherds and flakes	Prehistoric
CA-RIV-3005	33-003005	artifact scatter/faunal remains/daub/habitation	Prehistoric
CA-RIV-3007	33-003007	bone awl/ceramics/cremation	Prehistoric
CA-RIV-3008	33-003008	pot drop	Prehistoric
CA-RIV-3659/H	33-003659	artifact scatter/cremation/habitation/trash scatter	Multicomponent
CA-RIV-3679/H	33-003679	artifact scatter/burned clay/refuse	Multicomponent
CA-RIV-3680	33-003680	ceramic/FAR/burnt clay	Prehistoric
CA-RIV-3681	33-003681	ceramic/burnt clay	Prehistoric
CA-RIV-3682	33-003682	cermaic/burnt clay/faunal/lithic/FAR/habitation	Prehistoric
CA-RIV-3683/3847	33-003683	artifact scatter/faunal/FAR/Habitation	Prehistoric
CA-RIV-3866	33-003866	artifact scatter/midden/charcoal/burnt clay/FAR/Habitation	Prehistoric
CA-RIV-3886H	33-003886	adobe ruin	Historic
CA-RIV-4076	33-004076	Ceramic scatter	Prehistoric
CA-RIV-4107	33-004107	cremation	Prehistoric
CA-RIV-4108	33-004108	ceramic scatter	Prehistoric
CA-RIV-4126	33-004126	ceramic/lithic	Prehistoric
CA-RIV-4127	33-004127	cremations/lithics/ceramics/groundstone	Prehistoric
CA-RIV-4128	33-004128	lithics/ceramics/historical refuse	Multicomponent
CA-RIV-4129`	33-004129	lithics/ceramics/FAR/refuse	Multicomponent
CA-RIV-4130	33-004130	lithics/ceramics/FAR/daub/sparse	Prehistoric
CA-RIV-4131/H	33-004131	ceramics/lithics/daub/grounstone/refuse/habitation	Multicomponent
CA-RIV-4132	33-004132	ceranics/lithics/sparse	Prehistoric
CA-RIV-4157	33-004157	ceramics/isolated lithic	Prehistoric

CA-RIV-4165H	33-004165	Homestead	Historic
CA-RIV-4174	33-004174	lithics/ceramics/faunal/fire altered sediment/habitation	Prehistoric
CA-RIV-4745	33-004745	ceramics/FAR/sparse	Prehistoric
CA-RIV-4748H	33-004748	Water storage site	Historic
CA-RIV-4749H	33-004749	depression era foundation	Historic
CA-RIV-4751/H	33-004751	refuse and ceramics	Multicomponent
CA-RIV-4756H	33-004756	Water storage site	Historic
CA-RIV-4757H	33-004757	pre-WWII foundation/home site	Historic
CA-RIV-4780H	33-004780	Single family residence	Built Environment Resource
CA-RIV-4873H	33-004873	ditch/pipeline - conveyance	Historic
CA-RIV-5162	33-005162	BRM feature	Prehistoric
CA-RIV-5233	33-005233	lithic/ceramic/FAR/burnt clay/dense/habitiation	Prehistoric
CA-RIV-5325H	33-005325	refuse	Historic
CA-RIV-5350	33-005350	ceramics/FAR/sparse	Prehistoric
CA-RIV-5252	33-005353	ceramics/lithics/sparse	Prehistoric
CA-RIV-5354H	33-005354	agricultural site	Historic
CA-RIV-5398	33-005398	clay/burnt clay/groundstone/FAR/ceramics/lithics	Prehistoric
	33-005513	single family home	Built Environment Resource
	33-005629	single family home	Built Environment Resource
	33-005631	single family home	Built Environment Resource
	33-005632	single family home	Built Environment Resource
	33-005634	single family home	Built Environment Resource
	33-005637	single family home	Built Environment Resource
	33-005638	single family home	Built Environment Resource
	33-005639	single family home	Built Environment Resource
	33-005640	single family home	Built Environment Resource
	33-005641	single family home	Built Environment Resource
	33-005642	single family home	Built Environment Resource
	33-005643	single family home	Built Environment Resource
	33-005646	single family home	Built Environment Resource
	33-005684	single family home	Built Environment Resource
	33-005705	single family home	Built Environment Resource
	33-005707	single family home	Built Environment Resource
	33-005711	adobe	Built Environment Resource
	33-005792	single family home	Built Environment Resource
	33-007262	single family home	Built Environment Resource
	33-007263	single family home	Built Environment Resource
	33-007264	single family home	Built Environment Resource
	33-007512	single family home	Built Environment Resource
	33-007523	single family home	Built Environment Resource
	33-007527	single family home	Built Environment Resource
CA-RIV-5828	33-007835	ceramic/FAR/faunal/burnt clay/sparse lithics/habiation	Prehistoric
CA-RIV-5832	33-007839	FAR/fuanal/sparse lithic/sparse gorundstone	Prehistoric
CA-RIV-5840	33-007853	ceramics/groundstone/lithic/burnt clay/habitation	Prehistoric
CA-RIV-5841	33-007854	ceramics/FAR/burnt clay	Prehistoric
CA-RIV-5842	33-007855	ceramics\groundstone\hearth\FAR\charcoal\habiation	Prehistoric
CA-RIV-5843	33-007856	ceramics	Prehistoric
CA-RIV-5844	33-007857	ceramics	Prehistoric
CA-RIV-5848/H	33-007886	foundation/BRM features	Multicomponent
CA-RIV-5876	33-007924	sparse lithic/groundstone/dense ceramic/shell	Prehistoric
<Null>	33-008151	residence	Built Environment Resource
CA-RIV-6064H	33-008156	refuse	Prehistoric
	33-008159	corn cob - isolate	Prehistoric
CA-RIV-6075	33-008231	ceramic scatter	Prehistoric
CA-RIV-6190	33-008692	ceramics/faunal/burnt clay/FAR/lithics/habiation	Prehistoric
CA-RIV-6216	33-008727	ceramics/burnt clay/charcoal/possible habitation	Prehistoric

CA-RIV-6217	33-008728	ceramics/burnt clay/FAR/charcoal/possible habitation	Prehistoric
CA-RIV-6218	33-008729	ceramics/burnt clay/FAR/charcoal/possible habitation	Prehistoric
CA-RIV-6219	33-008730	ceramics/faunal/FAR/burnt clay/groundstone/tools/habitation	Prehistoric
CA-RIV-6221	33-008732	ceramics/faunal/burnt clay/charcoal/habitation	Prehistoric
CA-RIV-6222	33-008733	ceramic/burnt clay/charcoal	Prehistoric
CA-RIV-6223	33-008734	ceramics/lithics/shellfish/burnt clay/charcoal/habitation	Prehistoric
CA-RIV-6224	33-008735	ceramics/lithics/burnt clay/charcoal/shellfish/habitation	Prehistoric
CA-RIV-6225	33-008736	ceramics/shellfish/faunal/burnt clay/groundstone/charcoal/habitation	Prehistoric
CA-RIV-6226	33-008737	ceramics/charcoal/shellfish/sparse	Prehistoric
CA-RIV-6227	33-008738	ceramics/shellfish/burnt clay/sparse	Prehistoric
CA-RIV-6228	33-008739	ceramics/shellfish/burnt clay/charcoal	Prehistoric
CA-RIV-6229	33-008740	ceramics/lithics/burnt clay/charcoal/groundstone/habitation	Prehistoric
CA-RIV-6230	33-008741	lithics/ceramics/shellfish/faunal/burnt clay/habitation	Prehistoric
	33-008742	ceramics/shellfish/FAR/Burnt clay/charcoal/habitation	Prehistoric
CA-RIV-6276	33-008842	ceramics	Prehistoric
	33-008844	isolated sherd	Prehistoric
	33-008845	Isolated sherd	Prehistoric
	33-008846	Isolated sherd	Prehistoric
	33-008852	isolated metate	Prehistoric
	33-009015	Isolated sherd	Prehistoric
	33-009016	Isolated sherd	Prehistoric
	33-009017	sherd/ceramic	Prehistoric
	33-009018	isolated sherd	Prehistoric
	33-009019	isolated sherd	Prehistoric
	33-009020	Isolated sherd	Prehistoric
	33-009021	3 sherds	Prehistoric
	33-009022	mano	Prehistoric
	33-009023	sherds	Prehistoric
CA-RIV-6376	33-009461	sherds/lithics/groundstone/tools/faunal/burned clay/FAR/habitation	Prehistoric
CA-RIV-6397H	33-009496	water conveyance	Historic
CA-RIV-6380	33-009497	water conveyance	Historic
CA-RIV-6385	33-009501	burnt clay/ceramics	Prehistoric
	33-009556	Isolate glass and sherd	Multicomponent
	33-009557	hist glass	Historic
	33-009558	sherd	Prehistoric
	33-009643	charcoal/ceramics/clay/lithics/faunal/shell/groundstone/FAR/refuse/posssible habirtaion	Multicomponent
CA-RIV-6442/H	33-009644	granite rock feature/burnt sediment/sherds/clay/lithics/faunal/shell/glass/habitation	Multicomponent
CA-RIV-6443	33-009645	charcoal/ceramics/clay/lithics/faunal/shell/FAR/metal/habitation	Prehistoric
CA-RIV-6444	33-009646	charcoal/ceramics	Prehistoric
CA-RIV-6483	33-009727	FAR/Ceramic/groundstone	Prehistoric
CA-RIV-6484	33-009728	faunal/crematon/lithics/groundstone/beads/FAR/habitation	Prehistoric
	33-010612	<Null>	Built Environment Resource
	33-010814	Isolated sherd	Prehistoric
CA-RIV-6618	33-010905	ceramics/faunal/lithic/groundstone/burnt clay/possible habitation	Prehistoric
	33-011129	Road	Built Environment Resource

	33-011223	historical road	Built Environment Resource
CA-RIV-6822	33-011437	ceramics/beads/faunal/groundstone/lithics	Prehistoric
	33-011476	historical residence	Built Environment Resource
	33-011479	subdivision	Built Environment Resource
	33-011485	residence	Built Environment Resource
	33-011488	Trailer park	Built Environment Resource
	33-011566	Isolated sherd	Prehistoric
CA-RIV-7011	33-012280	ceramics	Prehistoric
CA-RIV-7012	33-012281	ceramics/FAR/burnt clay/faunal/sparse	Prehistoric
	33-012285	Isolated sherd	Prehistoric
	33-012286	Isolated sherd	Prehistoric
	33-012346	Isolated sherd	Prehistoric
	33-012347	lithic isolate	Prehistoric
	33-012348	isolated sherd	Prehistoric
	33-012349	isolated sherd	Prehistoric
	33-012350	FAR	Prehistoric
	33-012352	isolated groundstone	Prehistoric
	33-012353	Isolated sherd	Prehistoric
	33-012354	isolated lithic	Prehistoric
	33-012355	isolated sherd	Prehistoric
	33-012356	isolated lithic	Prehistoric
	33-012516	<Null>	Built Environment Resource
	33-012528	five sherds isolate	Prehistoric
	33-012529	Five sherds isolate	Prehistoric
	33-012562	multi family residence	Built Environment Resource
	33-012563	Cathedral city historical area	Built Environment Resource
	33-012563	multi family residence	Built Environment Resource
	33-012564	Cathedral city historical area	Built Environment Resource
	33-012565	Cathedral city historical area	Built Environment Resource
	33-012566	Cathedral city historical area	Built Environment Resource
	33-012567	Cathedral city historical area	Built Environment Resource
	33-012568	Cathedral city historical area	Built Environment Resource
	33-012569	Cathedral city historical area	Built Environment Resource
	33-012570	Cathedral city historical area	Built Environment Resource
	33-012571	Cathedral city historical area	Built Environment Resource
	33-012572	Cathedral city historical area	Built Environment Resource
	33-012573	Cathedral city historical area	Built Environment Resource
	33-012574	Cathedral city historical area	Built Environment Resource
	33-012575	Cathedral city historical area	Built Environment Resource
	33-012577	Cathedral city historical area	Built Environment Resource
	33-012578	Cathedral city historical area	Built Environment Resource
	33-012579	Cathedral city historical area	Built Environment Resource
	33-012580	Cathedral city historical area	Built Environment Resource
	33-012585	Cathedral city historical area	Built Environment Resource
	33-012586	Cathedral city historical area	Built Environment Resource
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	33-012598	Cathedral city historical area	Built Environment Resource
	33-012599	Cathedral city historical area	Built Environment Resource
	33-012600	Cathedral city historical area	Built Environment Resource

	33-012602	Cathedral city historical area	Built Environment Resource
	33-012603	Cathedral city historical area	Built Environment Resource
	33-012604	Cathedral city historical area	Built Environment Resource
	33-012606	Cathedral city historical area	Built Environment Resource
	33-012607	Cathedral city historical area	Built Environment Resource
	33-012608	Cathedral city historical area	Built Environment Resource
	33-012609	Cathedral city historical area	Built Environment Resource
	33-012610	Cathedral city historical area	Built Environment Resource
	33-012611	Cathedral city historical area	Built Environment Resource
	33-012613	Cathedral city historical area	Built Environment Resource
	33-012614	Cathedral city historical area	Built Environment Resource
	33-012664	isolated sherd	Prehistoric
	33-012665	isolated sherd	Prehistoric
	33-012666	ceramic isolate	Prehistoric
	33-012667	isolated sherds	Prehistoric
	33-012668	isolated sherds	Prehistoric
	33-012669	isolated sherds	Prehistoric
	33-012670	isolated sherds	Prehistoric
	33-012674	isolated sherds	Prehistoric
	33-012677	isolated sherds	Prehistoric
	33-012678	isolated groundstone/hammerstone	Prehistoric
	33-012725	No Record	Prehistoric
	33-013202	pipeline	Historic
	33-013295	residence	Built Environment Resource
	33-013300	sparse lithic/ceramic/faunal/groundstone	Prehistoric
	33-013402	isolated metate	Prehistoric
	33-013403	isolated sherds	Prehistoric
CA-RIV-7450/H	33-013405	sparse artifact scatter	Multicomponent
CA-RIV-7451	33-013406	sparse ceramic/FAR	Prehistoric
CA-RIV-7452	33-013407	five sherds	Prehistoric
	33-013738	isolated sherds	Prehistoric
	33-013826	residence	Built Environment Resource
CA-RIV-7561	33-013834	ceramics/lithics/groundtone/faunal/burnt clay/FAR/habitation	Prehistoric
CA-RIV-7805H	33-014270	refuse	Historic
CA-RIV-7806H	33-014271	refuse	Historic
CA-RIV-7807	33-014272	FAR	Prehistoric
CA-RIV-7808/H	33-014273	ceramics/shell/refuse	Multicomponent
CA-RIV-7810/H	33-014275	ceramic/shell/refuse	Multicomponent
CA-RIV-7811H	33-014276	foundation	Historic
	33-014278	isolate sherd	Prehistoric
CA-RIV-7854	33-014755	Village	Prehistoric
CA-RIV-7882	33-014809	Village Pal Se-ta	Prehistoric
	33-014812	residence	Built Environment Resource
	33-015064	isolate sherd	Prehistoric
	33-015066	burnt clay	Prehistoric
	33-015152	sparse ceramics/charcoal/burnt clay/shell	Prehistoric
	33-015257	building	Built Environment Resource
	33-015297	resfuse isolate	Historic
	33-015337	sherd and glass	Multicomponent
	33-015338	sherd isolate	Prehistoric
	33-015616	residence	Built Environment Resource
	33-015617	residence	Built Environment Resource
	33-015618	residence	Built Environment Resource
	33-015619	residence	Built Environment Resource
	33-015628	county club	Built Environment Resource
	33-015632	residence	Built Environment Resource
	33-015633	residence	Built Environment Resource
	33-015635	residence	Built Environment Resource

	33-015636	residence	Built Environment Resource
	33-015637	residence	Built Environment Resource
	33-015638	residence	Built Environment Resource
	33-015639	residence	Built Environment Resource
	33-016785	utility poles	Historic
	33-016786	residence	Built Environment Resource
	33-016787	residence	Built Environment Resource
	33-016950	daub/FAR/ceramics	Prehistoric
	33-016968	isolate refuse	Historic
	33-016969	isoalte refuse	Historic
	33-016970	ceramic isolate	Prehistoric
	33-016971	isolate refuse	Historic
	33-016972	isolate lithic	Prehistoric
	33-016973	isolate refuse	Historic
	33-017105	sherds/burning/pit feature	Prehistoric
	33-017134	foundation	Historic
	33-017153	Whitewater Repeater Station	Built Environment Resource
	33-017259	Whitewater diversion	Historic
	33-017259	whitewater channel	Historic
	33-017259	whitewater channel	Historic
	33-017520	no record	Built Environment Resource
	33-017522	Structure	Built Environment Resource
	33-017573	isolate sherd	Prehistoric
	33-017574	residence carl bray gallery home	Built Environment Resource
	33-017587	refuse	Historic
	33-017595	levee	Historic
CA-RIV-9132	33-017629	habitation	Prehistoric
CA-RIV-9456H	33-017913	Stormwater channel	Historical Linear Feature (BE)
CA-RIV-9456H	33-017913	Stormwater Channel	Historical Linear Feature (BE)
CA-RIV-9292	33-018090	Trail	Historic
	33-018092	isolate refuse	Historic
	33-018642	isolate refuse	Historic
CA-RIV-10106H	33-019859	buried refuse	Historic
	33-019860	monitoring find - buried pavement	Historic
CA-RIV-10113	33-019867	Oasis Date Garden	Built Environment Resource
	33-020750	Road	Built Environment Resource
	33-020844	Road	Built Environment Resource

Appendix B

Office of Historic Preservation Historic Property Data File List of Properties

Appendix C

List of Cultural Studies in the Project Study Area

Appendix D

Maps Depicting Project Study Area, USACE and CADFG Delineated Areas, and Soil Series in the Study Area

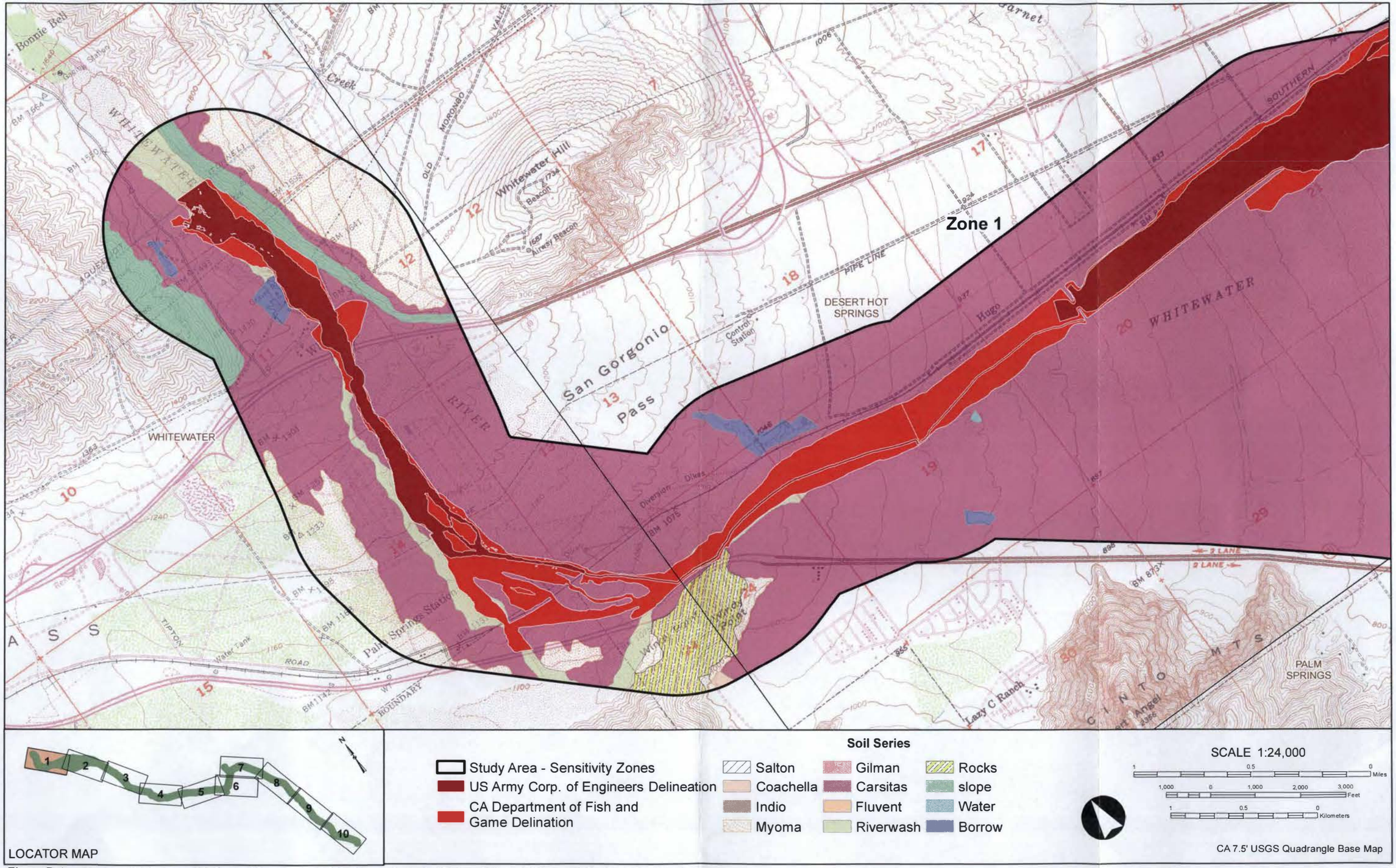


Figure D-1 **Project Study Area, US Corp of Engineers, CA Deptartment of Fish and Game delineated areas, and soil series map.**

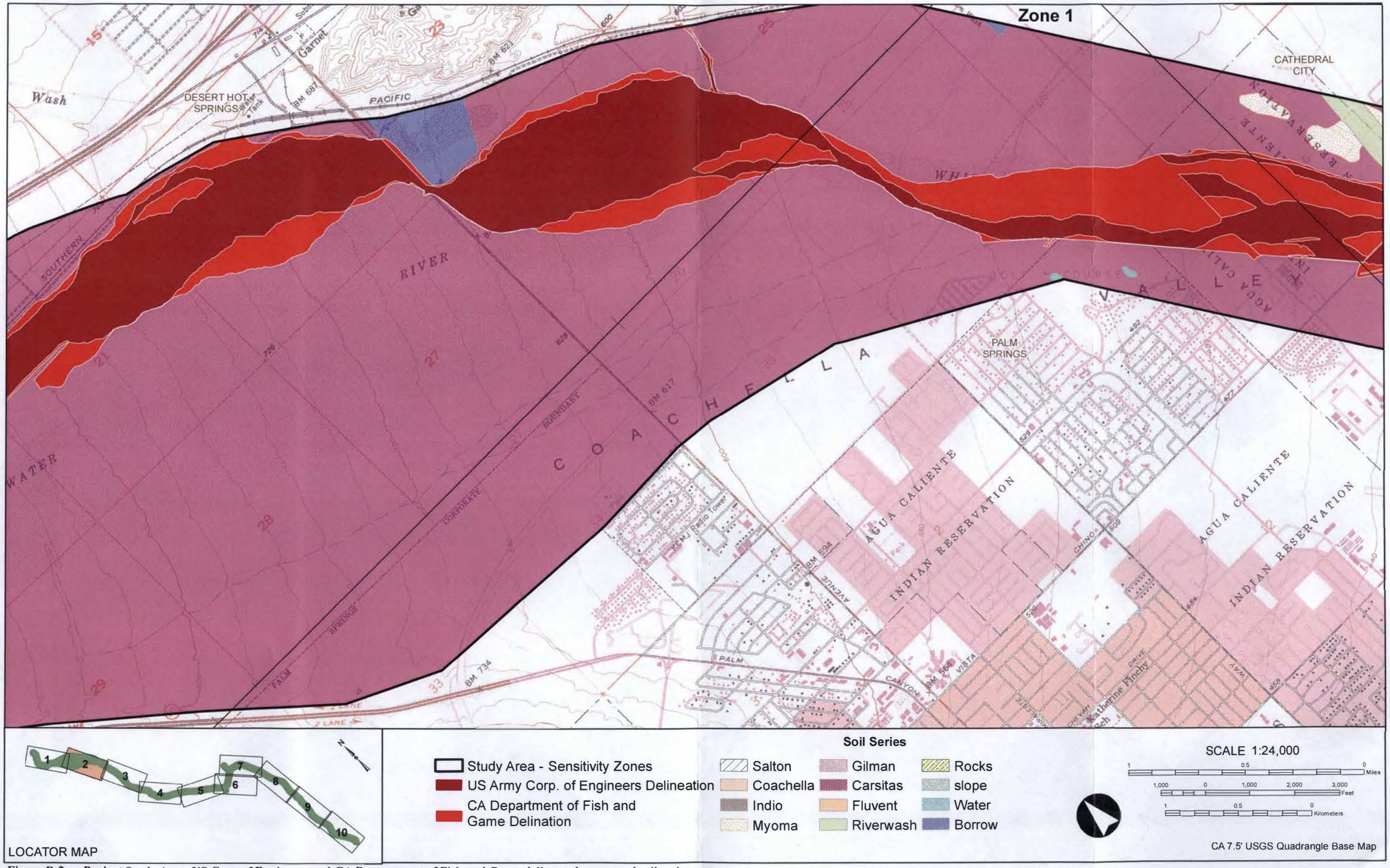


Figure D-2 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

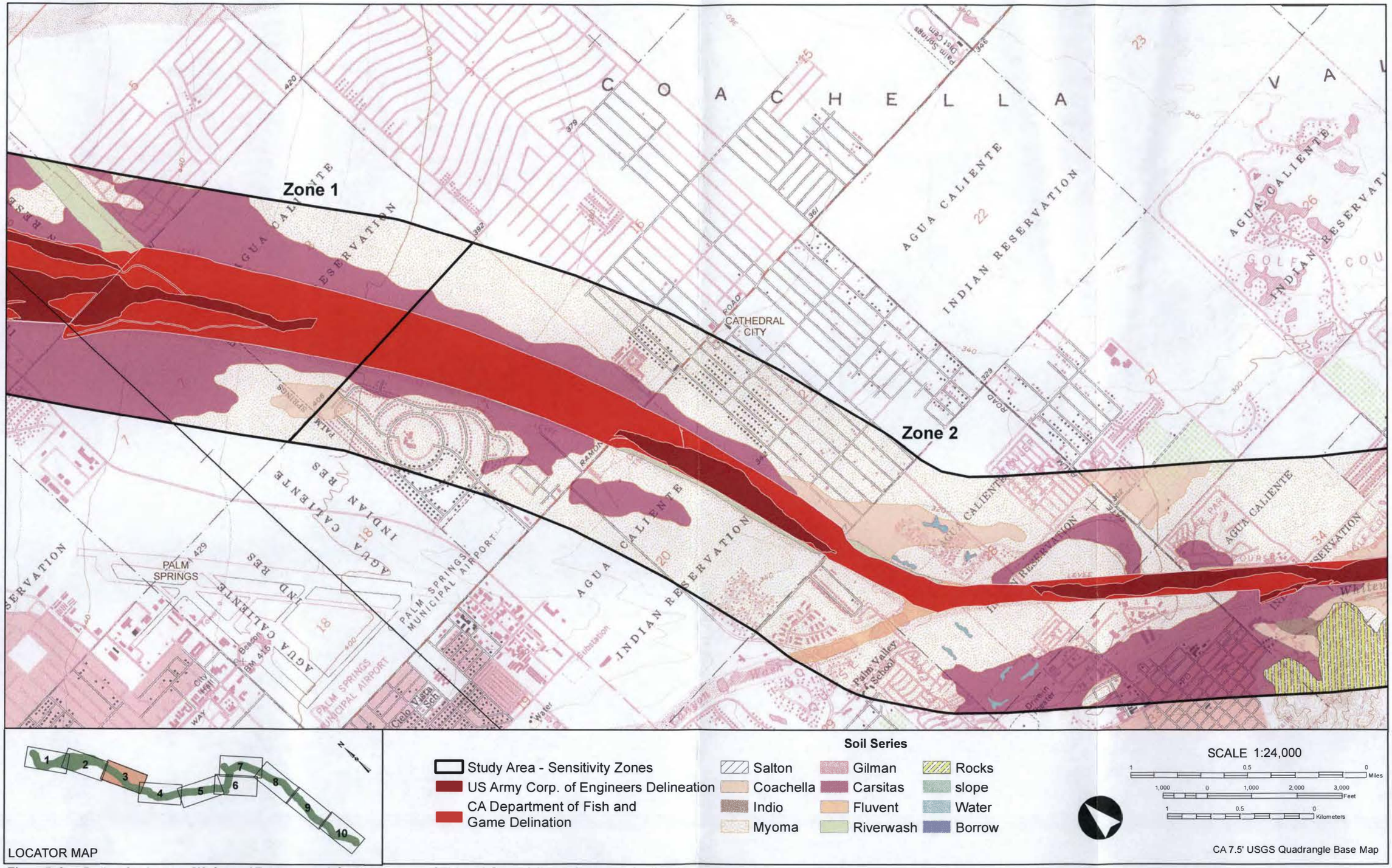


Figure D-3 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

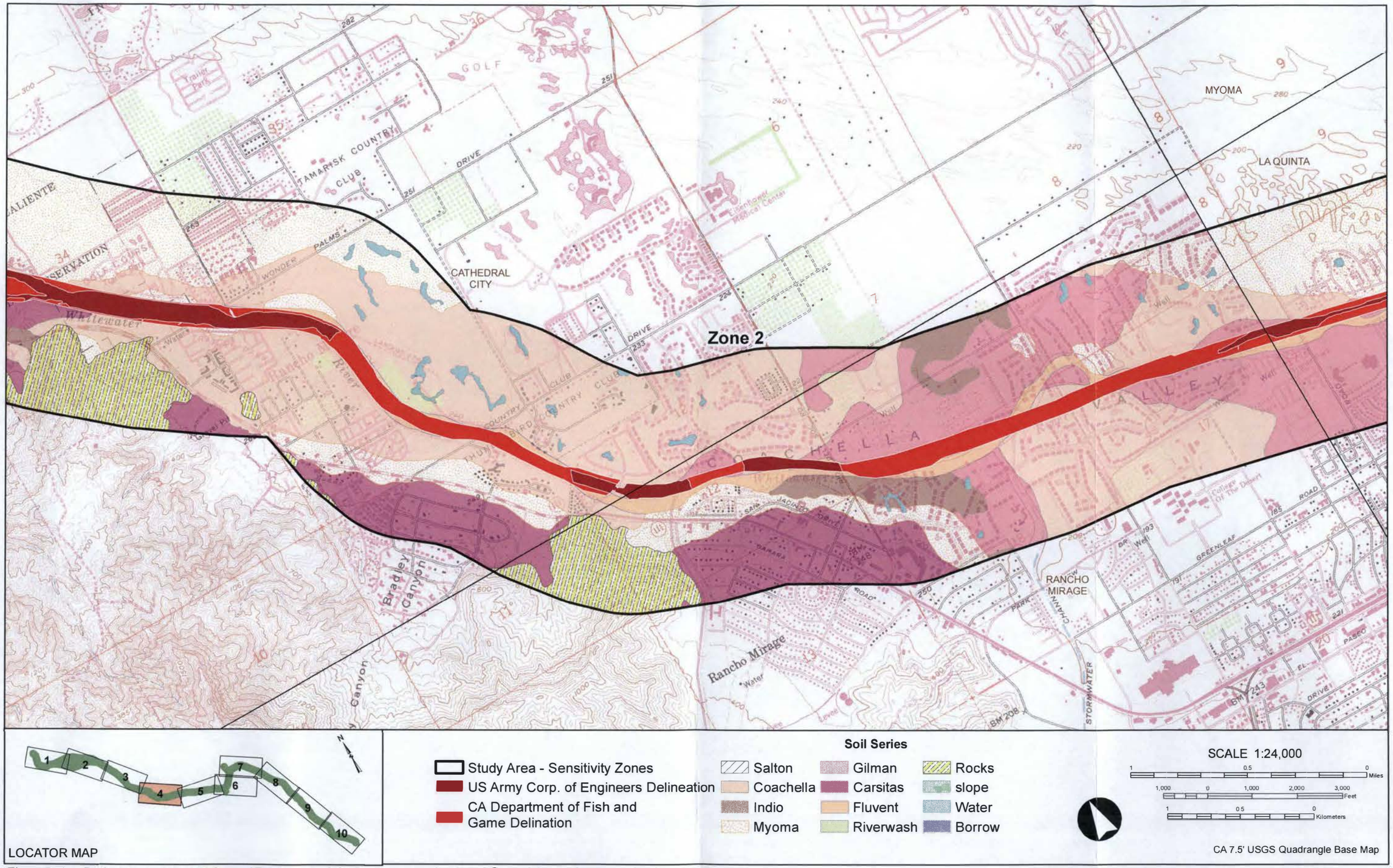


Figure D-4 Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.

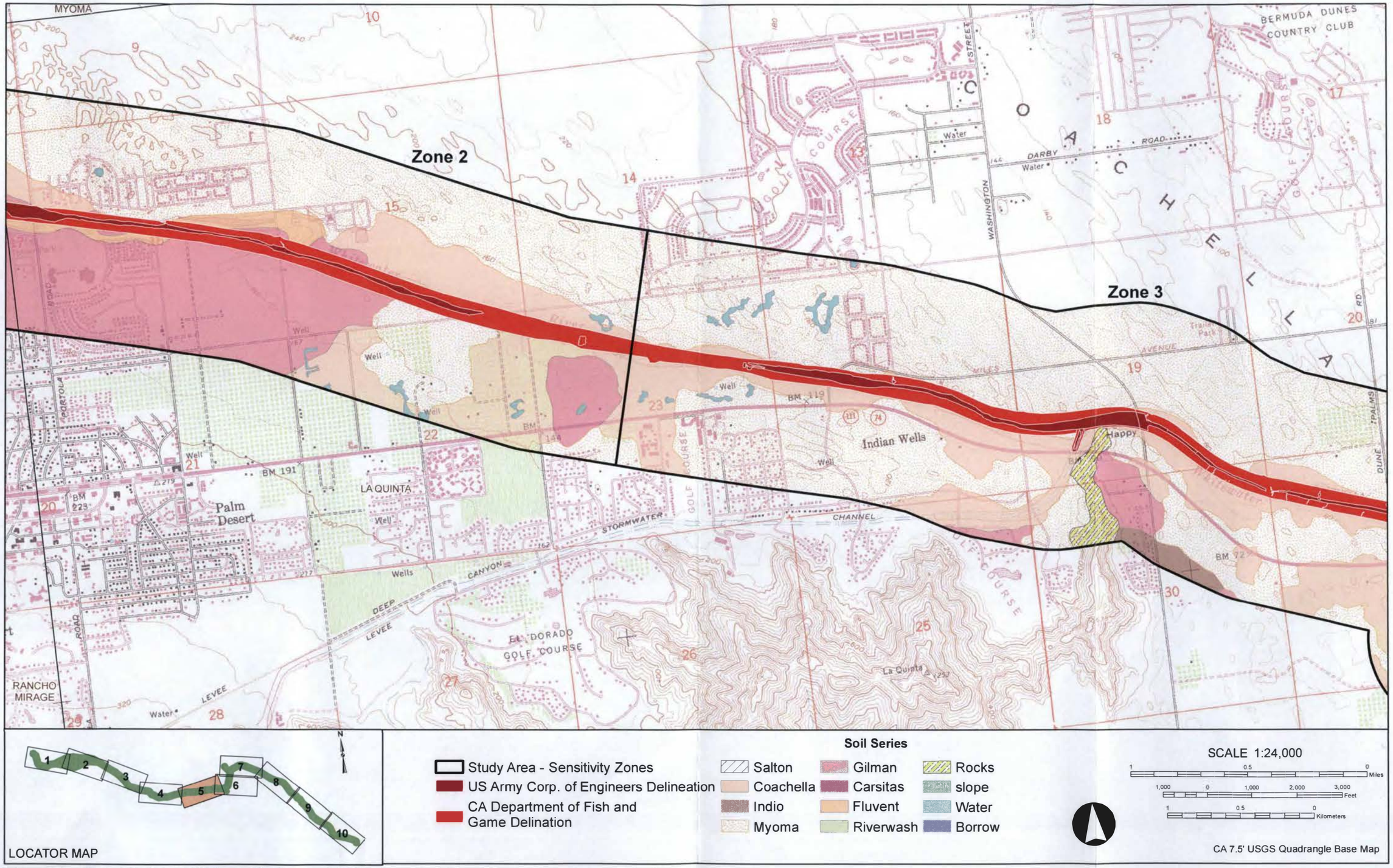


Figure D-5 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

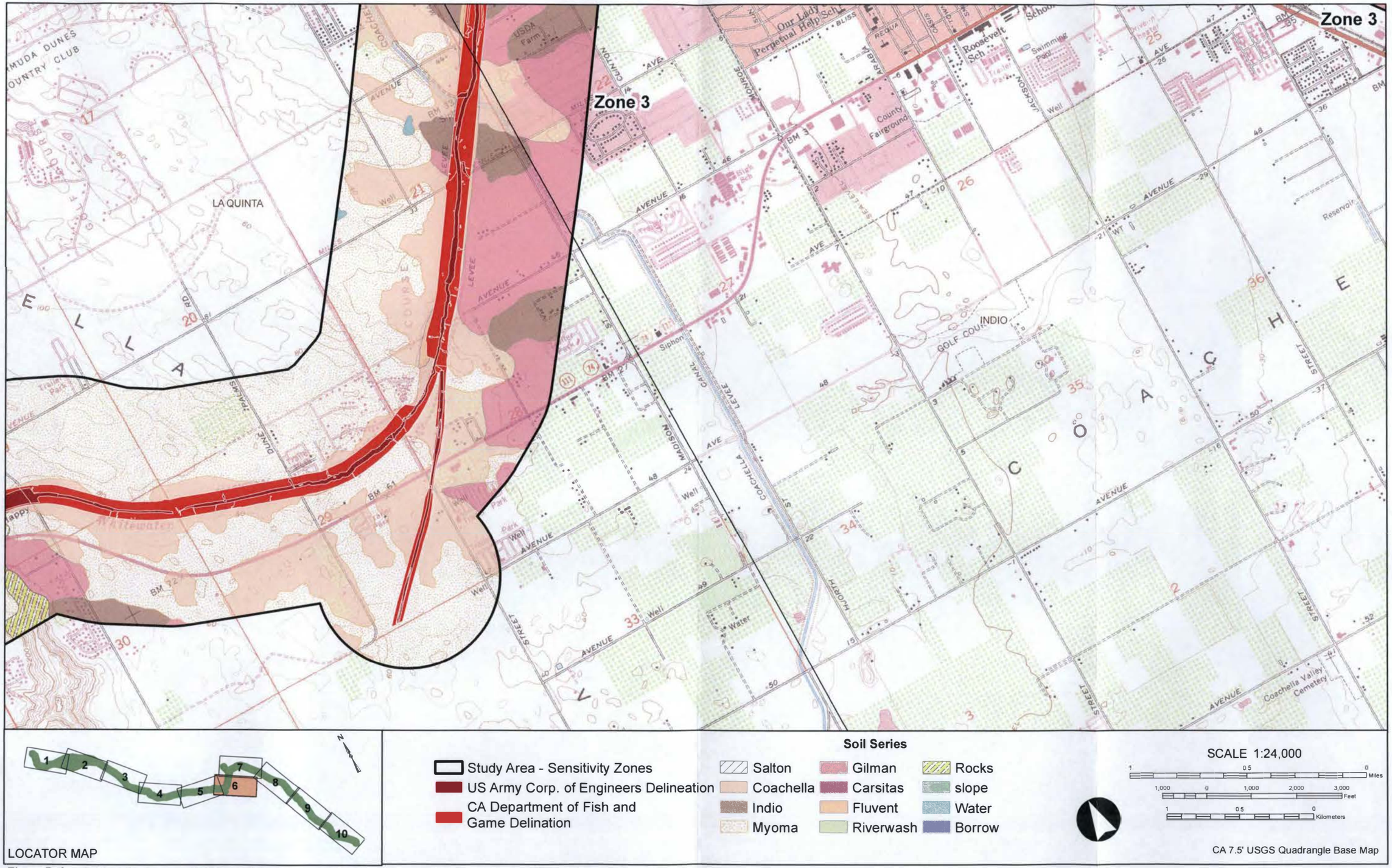


Figure D-6 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

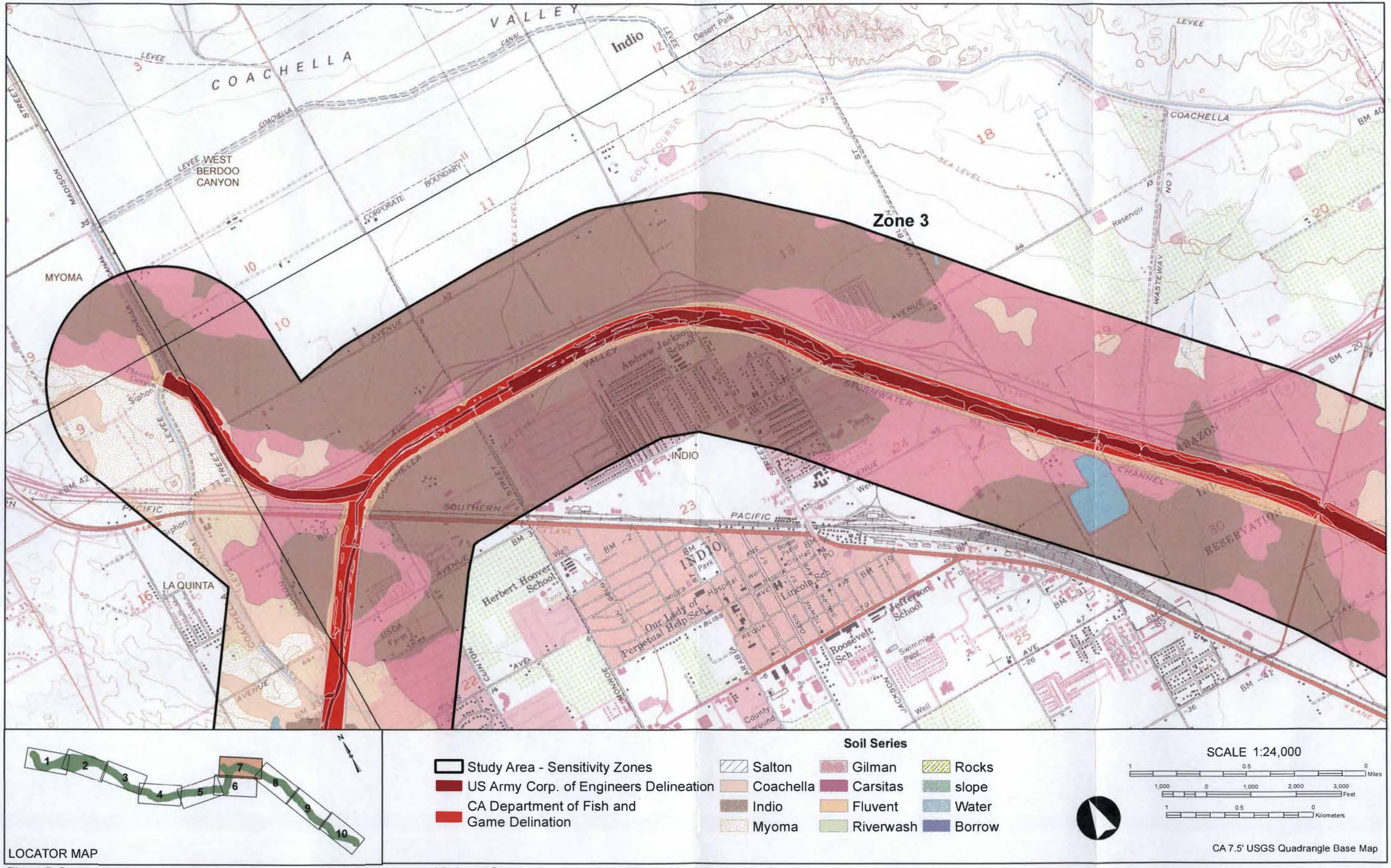


Figure D-7 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

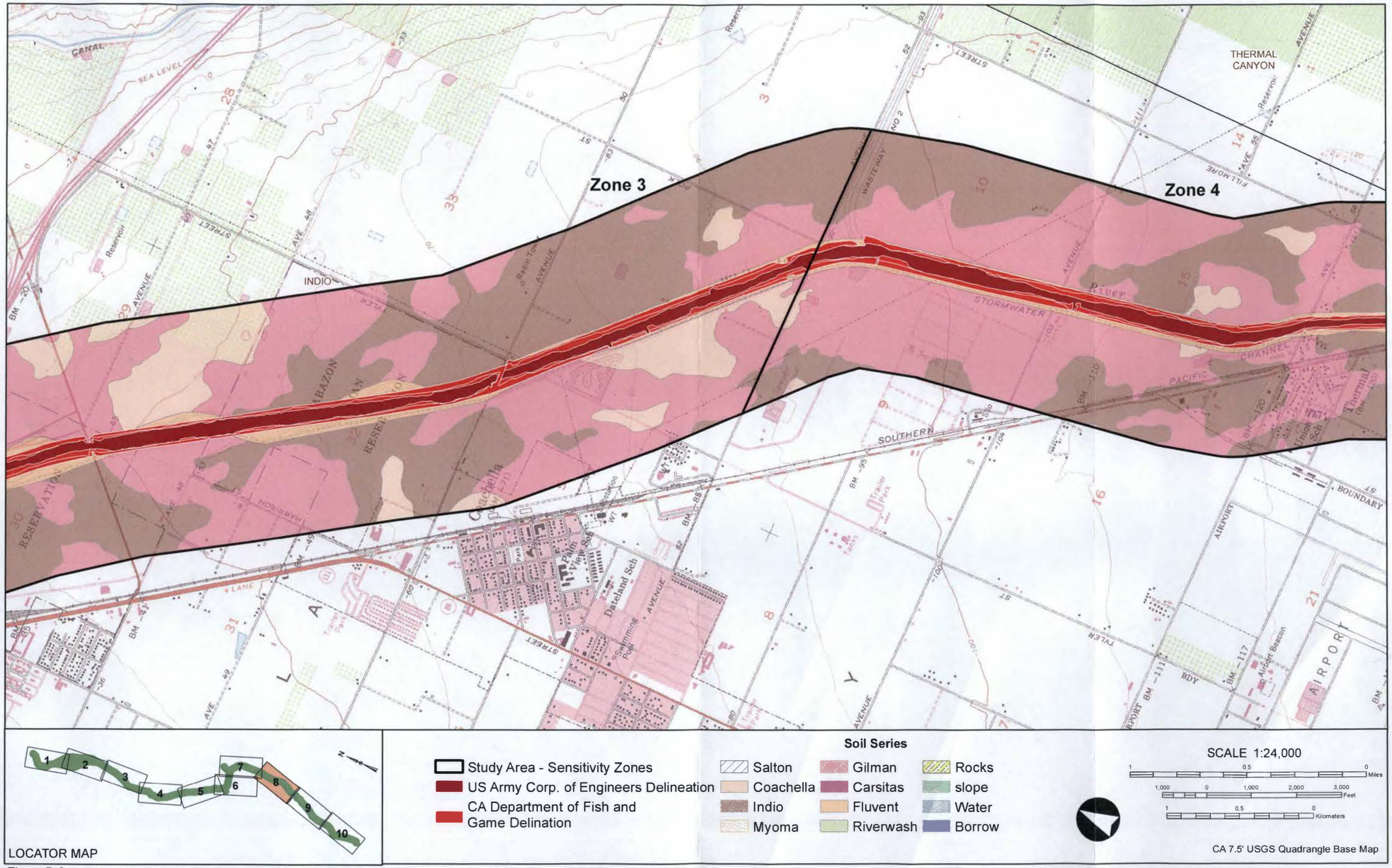


Figure D-8 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

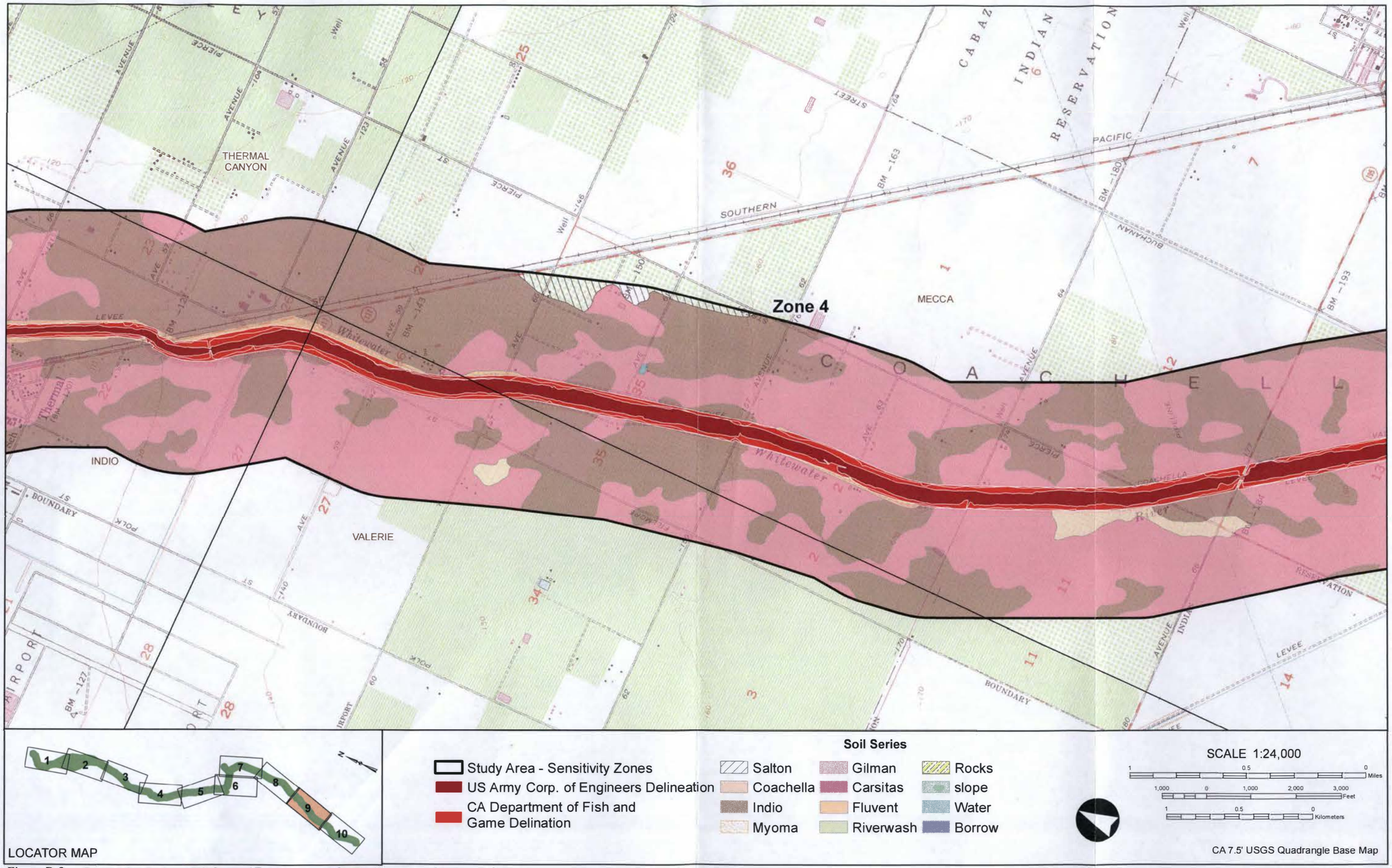


Figure D-9 **Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.**

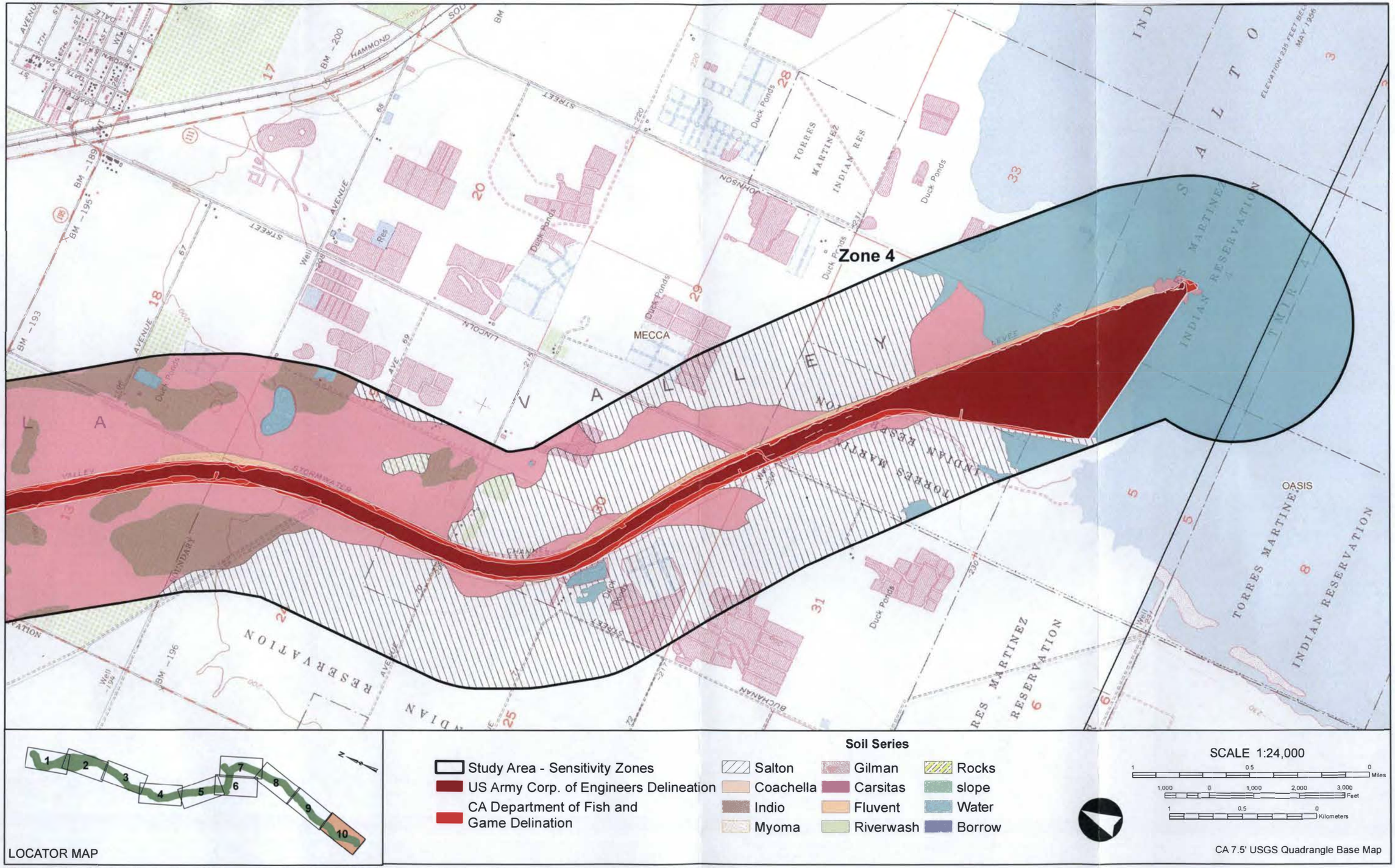


Figure D-10 Project Study Area, US Corp of Engineers and CA Deptartment of Fish and Game delineated areas, and soil series map.

Appendix C:
NAHC Results
and Tribal
Outreach

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Peterson Road Project

County: Riverside County

USGS Quadrangle Name: Cathedral City

Township: 05S **Range:** 05E **Section(s):** 02

Company/Firm/Agency: Material Culture Consulting, Inc.

Street Address: 2701-B N. Towne Ave. Pomona, CA 91766

City: Pomona **Zip:** 91766

Phone: (626) 205-8279

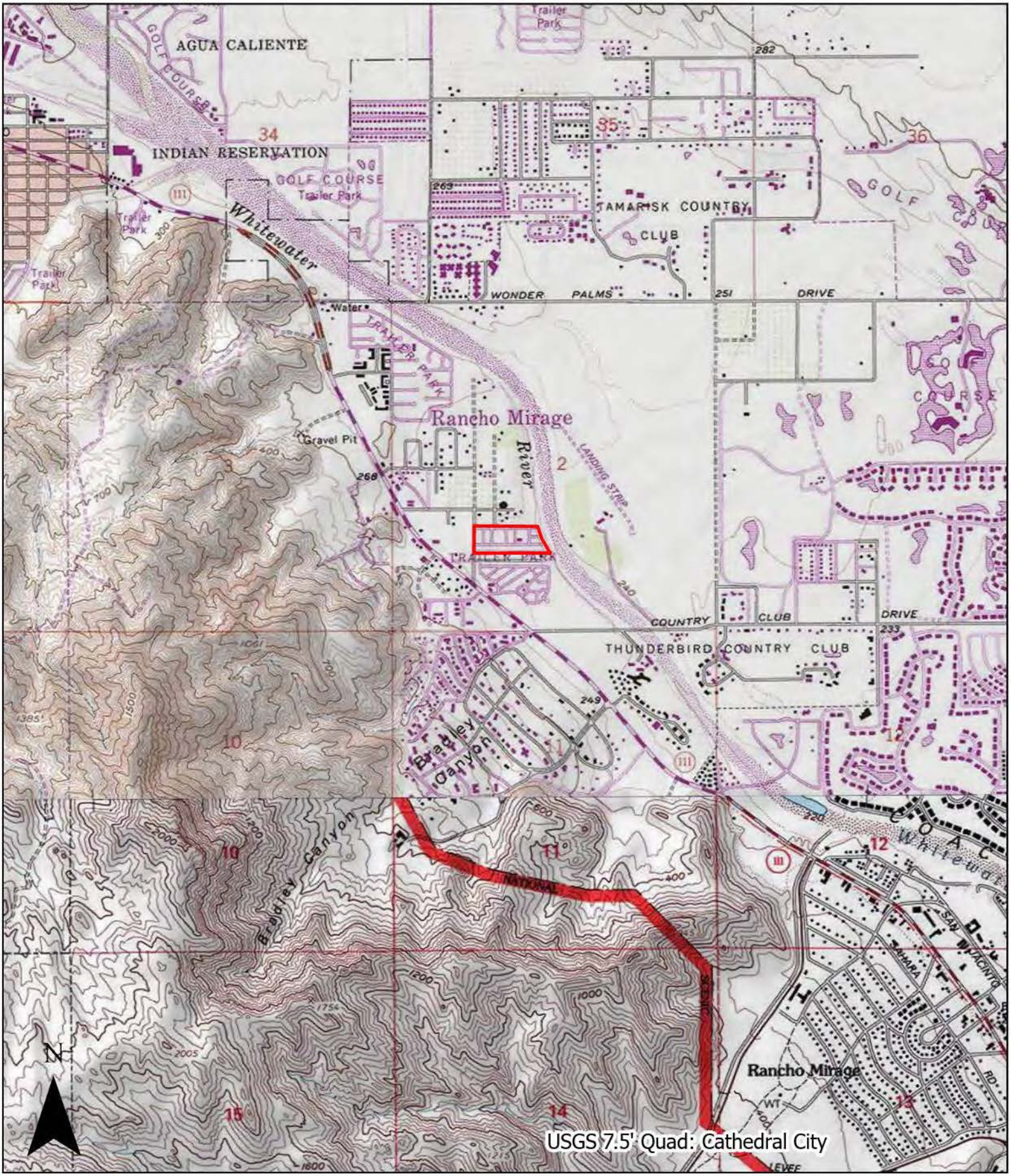
Fax:

Email: tria@materialcultureconsulting.com

Project Description:

Please send results to the above email address and erika@materialcultureconsulting.com, hannah@materialcultureconsulting.com

The Project proposes the redevelopment of a 12-acre lot currently existing as a trailer park into a residential housing complex.



Project Area

0 0.25 0.5 0.75 1 Miles

0 0.5 1 1.5 2 Kilometers

1:24,000

MATERIAL CULTURE CONSULTING

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

February 26, 2024

Tria Belcourt
Material Culture Consulting, Inc.

Via Email to: tria@materialcultureconsulting.com

Re: Peterson Road Project, Riverside County

Dear Ms. Belcourt:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Tribe Name	Fed (F) Non-Fed (N)	Contact Person
Agua Caliente Band of Cahuilla Indians	F	Lacy Padilla, THPO Operations Manager
Augustine Band of Cahuilla Indians	F	Tribal Operations,
Cabazon Band of Mission Indians	F	Doug Welmas, Chairperson
Cahuilla Band of Indians	F	Erica Schenk, Chairperson
Cahuilla Band of Indians	F	Anthony Madrigal, Tribal Historic Preservation Officer
Cahuilla Band of Indians	F	BobbyRay Esaprza, Cultural Director
Los Coyotes Band of Cahuilla and Cupeño Indians	F	Ray Chapparosa, Chairperson
Morongo Band of Mission Indians	F	Ann Brierty, THPO
Morongo Band of Mission Indians	F	Robert Martin, Chairperson

Quechan Tribe of the Fort Yuma Reservation	F	Jill McCormick, Historic Preservation Officer
Quechan Tribe of the Fort Yuma Reservation	F	Jordan Joaquin, President, Quechan Tribal Council
Quechan Tribe of the Fort Yuma Reservation	F	Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee
Ramona Band of Cahuilla	F	Joseph Hamilton, Chairperson
Ramona Band of Cahuilla	F	John Gomez, Environmental Coordinator
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist
Soboba Band of Luiseno Indians	F	Isaiah Vivanco, Chairperson
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer
Torres-Martinez Desert Cahuilla Indians	F	Gary Resvaloso, TM MLD

Torres-Martinez Desert Cahuilla Indians	F	Mary Belardo, Cultural Committee Vice Chair
Torres-Martinez Desert Cahuilla Indians	F	Thomas Tortez, Chairperson
Torres-Martinez Desert Cahuilla Indians	F	Alesia Reed, Cultural Committee Chairwoman
Torres-Martinez Desert Cahuilla Indians	F	Abraham Becerra, Cultural Coordinator

This list is current only as of the date of this document. Distribution of this list does not relieve a

This list is only applicable for contacting lo

Native American Heritage Commission
Native American Contact List
Riverside County
2/26/2024

Contact Address	Phone #	Fax #	Email Address
5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 333-5222	(760) 699-6919	ACBCI-THPO@aguacaliente.net
84-001 Avenue 54 Coachella, CA, 92236	(760) 398-4722		
84-245 Indio Springs Parkway Indio, CA, 92203	(760) 342-2593	(760) 347-7880	jstapp@cabazonindians-nsn.gov
52701 CA Highway 371 Anza, CA, 92539	(951) 590-0942	(951) 763-2808	chair@cahuilla-nsn.gov
52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		anthonymad2002@gmail.com
52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		besparza@cahuilla-nsn.gov
P.O. Box 189 Warner Springs, CA, 92086-0189	(760) 782-0711	(760) 782-0712	
12700 Pumarra Road Banning, CA, 92220	(951) 755-5259	(951) 572-6004	abrierty@morongo-nsn.gov
12700 Pumarra Road Banning, CA, 92220	(951) 755-5110	(951) 755-5177	abrierty@morongo-nsn.gov

P.O. Box 1899 Yuma, AZ, 85366	(928) 261-0254		historicpreservation@quechantribe.com
P.O.Box 1899 Yuma, AZ, 85366	(760) 919-3600		executivesecretary@quechantribe.com
P.O. Box 1899 Yuma, AZ, 85366	(928) 210-8739		culturalcommittee@quechantribe.com
P.O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	admin@ramona-nsn.gov
P. O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	jgomez@ramona-nsn.gov
P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov
P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov
P.O. Box 487 San Jacinto, CA, 92581	(951) 654-5544	(951) 654-4198	ivivanco@soboba-nsn.com
P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov
P.O. Box 1160 Thermal, CA, 92274	(760) 777-0365		grestmtm@gmail.com

P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		belardom@gmail.com
P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300	(760) 397-8146	thomas.tortez@tmdci.org
P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		lisareed990@gmail.com
P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		abecerra@tmdci.org

ıny person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the
Code.

cal Native Americans with regard to cultural resources assessment for the proposed Peterson Road Project, Riverside C

Cultural Affiliation	Counties	Last Updated
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	1/11/2024
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	11/30/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	2/1/2024
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Cahuilla Serrano	Imperial,Los Angeles,Riverside,San Bernardino,San Diego	
Cahuilla Serrano	Imperial,Los Angeles,Riverside,San Bernardino,San Diego	

Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	8/16/2016
Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	
Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023
Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023
Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	10/30/2023

Cahuilla	Imperial,Riverside,San Bernardino,San Diego	10/30/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	10/30/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	10/30/2023
Cahuilla	Imperial,Riverside,San Bernardino,San Diego	10/30/2023

e Public Resource Section 5097.98 of the Public Resources

County.

Record: PROJ-2024-001049
Report Type: List of Tribes
Counties: Riverside
NAHC Group: All

February 26, 2024

RE: Proposed Peterson Road Project, City of Rancho Mirage; Cathedral City USGS Quadrangle, Riverside County, California.

Greetings,
Material Culture Consulting, Inc (MCC) is conducting the cultural resources review of the above Project to support preparation of the environmental documents. The project proposes the redevelopment of a 12-acre lot within the City of Rancho Mirage, Riverside County, CA (see attached map). As part of our background research and forthcoming survey, we would like to invite you to share any knowledge of potential cultural resources within the Project Area. Please note - this request is **not** part of any formal local, state, or federal consultation process, and all requests for consultation should be directed to City of Rancho Mirage as the Lead CEQA Agency.

Our firm contacted the Native American Heritage Commission (NAHC) on January 30, 2024, to request review of the Sacred Lands File and for a list of tribes with traditional lands and/or cultural places within the area. The NAHC responded on February 26, 2024, stating that the Sacred Lands File review resulted in **negative** results and provided your contact information as part of the list. We understand that negative results do not preclude the existence of cultural resources, and that a tribe may be the only source of information regarding the existence of a tribal cultural resource, which is why we are contacting you.

Project Location and Description
The Peterson Road Project is located in the City of Rancho Mirage, Riverside County. The Project proposes the redevelopment of a trailer park into residential housing. The Project is bound by residential housing to the north on Desert Cove Ave. and to the south on Juniper Ln., a golf course and Whitewater River to the east, and public storage to the west near Peterson Road. The Project Area currently exists as a defunct trailer park with all structures removed and concrete and asphalt present. The area of potential impact (API) would encompass a total of 12-acres (APN# 689-180-012). Specifically, the proposed Project is located within Section 02 of Township 05 South and Range 05 East USGS 7.5-minute Cathedral City quadrangle (San Bernardino Base Meridian).

Please respond at your earliest convenience if you wish to share any knowledge of cultural resources within or adjacent to the API. Any information, concerns, or recommendations regarding cultural resources within the API can be shared with the Project Manager Erika McMullin via telephone at 909-967-8216, email at erika@materialcultureconsulting.com, or with MCC Archaeologist Hannah Johnston via telephone at 626-840-1797, email at hannah@materialcultureconsulting.com Thank you very much for your assistance.

Kindest regards,

Tria Belcourt, M.A., RPA
President and Principal Archaeologist
626-205-8279
tria@materialcultureconsulting.com

Name/Affiliation	**Date and Method of 1st Contact**	**Date of 1st Follow Up Attempt**	**Date of 2nd Follow-Up Attempt**	**Results**	**MCC Response**
Lacy Padilla, THPO Operations Manager Agua Caliente Band of Cahuilla Indians 5401 Dinah Shore Drive Palm Springs, CA, 92264	Mailed Letter via USPS on February 27th, 2024	n/a	n/a	On March 4, 2024 Xitlaly Madrigal (Cultural Resources Analyst from the Tribal Historic Preservation Office) responded stated that the Project Area is not located within the boundaries of the ACBCI Reservation, but it is within the Tribes Traditional Use Area. The ACBCI THPO requested a number of policies be conducted.	MCC will include this in our final report.

Tribal Operations **Augustine Band of Cahuilla Indians** **84-001 Avenue 54** **Coachella, CA, 92236**	Mailed Letter via USPS on February 27th, 2024	n/a	n/a	Ana Rios sent the email and letter attached from Jacobia Kirksey, Tribal Operation Specialist responded March 7th stating that at this time, they are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, we discover any cultural resources during the development of this project to please get in touch with them immediately for further evaluation.	MCC thanked Ana Rios and stated the response will be included in the report
Doug Welmas, **Chairperson** **Cabazon Band of Mission Indians** **84-245 Indio Springs Parkway** **Indio, CA, 92203**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.

Erica Schenk, Chairperson **Cahuilla Band of Indians** **52701 CA Highway 371** **Anza, CA, 92539**	Mailed Letter via USPS on February 27th, 2024	n/a	n/a	On March 4, 2024 MCC received an email from Lorrie Gregory stating that they are unaware of any cultural resources at or near the Project Area, but stated that the project is within their traditional land use and requested to review any cultural materials associated with the project.	MCC will include the response in our final report.
Anthony Madrigal, Tribal Historic Preservation Officer **Cahuilla Band of Indians** **52701 CA Highway 371** **Anza, CA, 92539**	Mailed Letter via USPS on February 27th, 2024	n/a	n/a	see above	see above
BobbyRay Esaprza, Cultural Director **Cahuilla Band of Indians** **52701 CA Highway 371** **Anza, CA, 92539**	Mailed Letter via USPS on February 27th, 2024	n/a	n/a	see above	see above
Ray Chapparosa, Chairperson **Los Coyotes Band of Cahuilla and Cupeño Indians** **P.O. Box 189** **Warner Springs, CA, 92086-0189**	Mailed Letter via USPS on February 27th, 2024	Phone call placed on March 18, 2024	Phone call placed on March 28, 2024	On March 28, 2024, Ray Chapparosa, Chairperson stated no comment and differ to the local tribes.	MCC thanked Mr. Chapparosa for his response and will include it on the final report.
Ann Brierty, THPO **Morongo Band of Mission Indians** **12700 Pumarra Road** **Banning, CA, 92220**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.

Robert Martin, Chairperson Morongo Band of Mission Indians 12700 Pumarra Road Banning, CA, 92220	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Jill McCormick, Historic Preservation Officer Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ, 85366	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response. (phone number was no longer in service)	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Jordan Joaquin, President, Quechan Tribal Council Quechan Tribe of the Fort Yuma Reservation P.O.Box 1899 Yuma, AZ, 85366	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	n/a	see below	see below
Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ, 85366	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	On March 28, 20224, Mr. Scott stated the Tribe had no comment and differed to the local tribes.	
Joseph Hamilton, Chairperson Ramona Band of Cahuilla P.O. Box 391670 Anza, CA, 92539	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 202	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
John Gomez, Environmental Coordinator Ramona Band of Cahuilla P. O. Box 391670 Anza, CA, 92539	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 202	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.

Lovina Redner, Tribal Chair **Santa Rosa Band of Cahuilla Indians** **P.O. Box 391820** **Anza, CA, 92539**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 202	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Jessica Valdez, Cultural Resource Specialist **Soboba Band of Luiseno Indians** **P.O. Box 487** **San Jacinto, CA, 92581**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	On March 28, 2024 MCCspoke with Jessica Valdez, Cultural Resource Specialist who said the tribe has no comment and differs to the local Agua Caliente Band.	MCC thanked Ms. Valdez for her response and will include in our report.
Isaiah Vivanco, Chairperson **Soboba Band of Luiseno Indians** **P.O. Box 487** **San Jacinto, CA, 92581**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	n/a	See above	See above
Joseph Ontiveros, Tribal Historic Preservation Officer **Soboba Band of Luiseno Indians** **P.O. Box 487** **San Jacinto, CA, 92581**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	n/a	See above	See above
Gary Resvaloso, TM MLD **Torres-Martinez Desert Cahuilla Indians** **P.O. Box 1160** **Thermal, CA, 92274**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Mary Belardo, Cultural Committee Vice Chair **Torres-Martinez Desert Cahuilla Indians** **P.O. Box 1160** **Thermal, CA, 92274**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.

Thomas Tortez, Chairperson **Torres-Martinez Desert Cahuilla Indians** **P.O. Box 1160** **Thermal, CA, 92274**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Alesia Reed, Cultural Committee Chairwoman **Torres-Martinez Desert Cahuilla Indians** **P.O. Box 1160** **Thermal, CA, 92274**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.
Abraham Becerra, Cultural Coordinator **Torres-Martinez Desert Cahuilla Indians** **P.O. Box 1160** **Thermal, CA, 92274**	Mailed Letter via USPS on February 27th, 2024	Email sent March 18th, 2024	Phone call placed on March 28, 2024	As of March 29, 2024, MCC did not receive a response.	If a response is received after submission, MCC will forward the response to the Client and/or Lead Agency.

AGUA CALIENTE BAND OF CAHUILLA INDIANS
TRIBAL HISTORIC PRESERVATION

03-008-2024-003

March 04, 2024

[VIA EMAIL TO:erika@materialcultureconsulting.com]
Material Culture Consulting
Ms. Erika McMullin
2701-B North Towne Avenue
Pomona, California 91767

Re: Proposed Peterson Road Project

Dear Ms. Erika McMullin,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the Proposed Peterson Road project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.

*A copy of the records search with associated survey reports and site records from the information center.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*We would like to participate in the survey as this project is near the reservation.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760) 423-3485. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Xitlaly Madrigal
Cultural Resources Analyst
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

AUGUSTINE BAND OF CAHUILLA INDIANS

84-001 AVENUE 54 COACHELLA, CA 92236 | T: 760-398-4722 F: 760-369-7161

TRIBAL CHAIRPERSON: AMANDA AUGUSTINE TRIBAL TREASURER: WILLIAM VANCE

TRIBAL COUNCIL MEMBER: RONNIE VANCE

Date: 03/07/2024

Dear: Tria Belcourt, M.A., RPA

SUBJECT: Proposed Peterson Road Project, City of Rancho Mirage; Cathedral City USGS Quadrangle, Riverside County, California.

Thank you for the opportunity to offer input concerning the development of the above-identified project. We appreciate your sensitivity to the cultural resources that may be impacted by your project and the importance of these cultural resources to the Native American peoples that have occupied the land surrounding the area of your project for thousands of years. Your invitation to consult on this project is greatly appreciated.

At this time, we are unaware of specific cultural resources that may be affected by the proposed project, however, in the event, you should discover any cultural resources during the development of this project please get in touch with our office immediately for further evaluation.

Very truly yours,

Jacobia Kirksey

Jacobia Kirksey, Tribal Operation Specialist

Ana Rios
Administrative Assistant
Augustine Band of Cahuilla Indians

Office: (760) 398-4722 Ext 7498

Cell: (760) 450-3883
Email: ARios@augustinetribe.com
Website: augustinetribe-nsn.gov

T. Belcourt 03.07.2024 A.pdf
373K

Gmail **Hannah Johnston <hannah@materialcultureconsulting.com>**

Fwd: Inquiry of the Dinah Shore & Peterson RD Projects

2 messages

Tria Belcourt <tria@materialcultureconsulting.com> Mon, Mar 4, 2024 at 11:23 AM
To: Erika McMullin <erika@materialcultureconsulting.com>, Hannah Johnston <hannah@materialcultureconsulting.com>, Julia Carvajal <julia@materialcultureconsulting.com>, Meghan Lamb <meghan@materialcultureconsulting.com>

FYI

Tria Belcourt, M.A., RPA # 917250
President and Principal Archaeologist

Material Culture Consulting, Inc.
Certified DBE/WBE/SBE

2701-B North Towne Avenue
Pomona CA, 91767
Phone: 626-205-8279
Fax: 626-249-0479

www.materialcultureconsulting.com
tria@materialcultureconsulting.com

The content of this email, including attachments, is the confidential property of Material Culture Consulting. If you are not the intended recipient, please delete all copies and notify us immediately. Thank you.

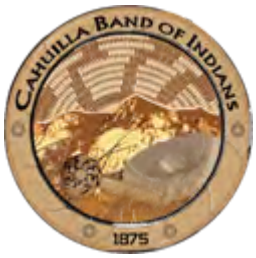
---------- Forwarded message ---------
From: **Lorrie Gregory** <LGregory@cahuilla-nsn.gov>
Date: Mon, Mar 4, 2024 at 11:18 AM
Subject: Inquiry of the Dinah Shore & Peterson RD Projects
To: tria@materialcultureconsulting.com <tria@materialcultureconsulting.com>
CC: BobbyRay Esparza <besparza@cahuilla-nsn.gov>

Good morning,

Thank you for reaching out to the Cahuilla Band of Indians concerning the referenced projects. We are unaware of any cultural resources at/ or near the projects locations. However, both projects are within Cahuilla Traditional land use, therefore we request any cultural materials associated with both projects for review. Thank you again for reaching out, hope to hear from you soon.

Respectfully,

Lorrie Gregory
Cultural Resource Coordinator
Cahuilla Band of Indians
Phone: 1 (760) 315-6839
Email: lgregory@cahuilla-nsn.gov



Erika McMullin <erika@materialcultureconsulting.com> Mon, Mar 4, 2024 at 11:24 AM
To: Tria Belcourt <tria@materialcultureconsulting.com>
Cc: Hannah Johnston <hannah@materialcultureconsulting.com>, Julia Carvajal <julia@materialcultureconsulting.com>, Meghan Lamb <meghan@materialcultureconsulting.com>

Thanks!

Hannah- can you please update the NA logs for BOTH of the projects and upload their response. Thanks!
[Quoted text hidden]

Appendix D
(CONFIDENTIAL):
Department of Parks
and Recreation (DPR)
Series 523

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PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix D
Geotechnical Report

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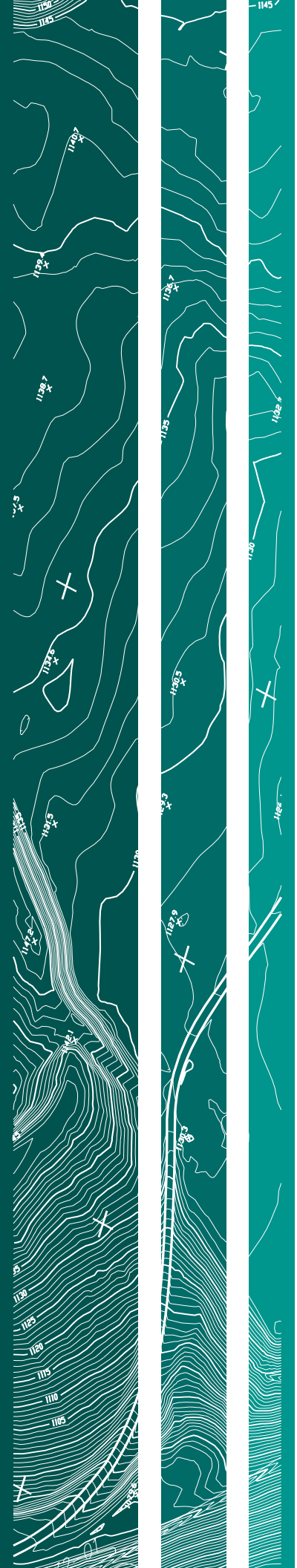

GEOCON

PRELIMINARY GEOTECHNICAL INVESTIGATION

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

APRIL 29, 2023
REVISED May 28, 2024
PROJECT NO. T3065-22-01

PREPARED FOR:
RICK ENGINEERING COMPANY
RIVERSIDE, CALIFORNIA

Project No. T3065-22-01
April 29, 2024
REVISED May 28, 2024

Rick Engineering Company
1770 Iowa Avenue, Suite 100
Riverside, California 92507

Attention: Ms. Stephanie A. Cruz, Associate Project Manager

Subject: PRELIMINARYGEOTECHNICAL INVESTIGATION
MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

Ms. Cruz:

In accordance with your authorization of our Proposal CV-24-0015-P-GT January 4, 2024, Geocon West, Inc. (Geocon) herein submits the results of our preliminary geotechnical investigation for the proposed Multifamily Apartment Community for a 12-acre parcel located east of Peterson Road north of the Santa Rosa Villa apartments in Rancho Mirage, California. The accompanying report presents our findings, conclusions and recommendations pertaining to the geotechnical aspects of the proposed improvements. Based on the results of this study, it is our opinion the site is considered suitable for the proposed improvements provided the recommendations of this report are followed.

This report is preliminary in nature. Geocon should be afforded the opportunity to review the project plans as they develop and progress toward final design, so that that the descriptions and recommendations presented herein can be revised, as needed.

Should you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

LICENSED PROFESSIONAL ENGINEER ★ ASHLEIGH LOVE ★ C 79019 ★ CIVIL ★ STATE OF CALIFORNIA ★

Ashleigh D. Love
PE

PROFESSIONAL GEOLOGIST ★ LISA A. BATTIATO No. 2316 CERTIFIED ENGINEERING GEOLOGIST ★ STATE OF CALIFORNIA ★

Lisa A. Battiato
CEG 2316

REGISTERED PROFESSIONAL ENGINEER ★ H. HARRY DERKALOUSDIAN ★ C79694 ★ CIVIL ★ STATE OF CALIFORNIA ★

Harry Derkalousdian
PE 79694

LAB:ADL:HHD:hd
(email) Addressee

TABLE OF CONTENTS

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GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our preliminary geotechnical investigation for the Multifamily Apartment Community development planned for approximately 12 acres located immediately east of Peterson Road, north of Santa Rosa Villa (apartments), approximately 200 feet south of Desert Cove Avenue, and east of the Whitewater Channel, as depicted on the on the *Vicinity Map*, Figure 1. The site is located at latitude 33.7612 and longitude -116.4370.

The purpose of the investigation was to evaluate subsurface soil and geologic conditions at the site and, based on the conditions encountered, provide preliminary recommendations pertaining to the geotechnical aspects of developing the property as presently proposed.

The scope of our investigation included review of published geologic information, private and public subsurface utility location, subsurface exploration and sample collection, percolation and dry well testing, laboratory testing, engineering analyses, and preparation of this report. A summary of the information and documentation reviewed for this study is presented in the *List of References*.

Our field investigation was conducted on March 14, 2024, and included the drilling of five geotechnical borings (B-1 through B-5) to depths ranging between approximately 21 ½ to 51½ feet below the existing ground surface, to observe the subsurface geological conditions at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to static groundwater. Percolation and dry well testing were performed at three locations each. Dry wells (DW-1 through DW-3) were drilled to 15 feet and percolation tests (P-1 through P-3) were drilled to 5 feet below ground surface. Testing was performed on March 14, 2024 in accordance with Riverside Flood Control and Water Conservation LID BMP Handbook.

Appendix A presents a discussion of the field investigation, detailed logs of the borings, and percolation data. The approximate locations of the exploratory borings are presented on *Geologic Map*, Figure 2. We performed laboratory testing on select soil samples obtained from our field investigation to evaluate pertinent physical and chemical properties for geotechnical engineering analysis. Appendix B presents the results of our laboratory testing.

2. SITE AND PROJECT DESCRIPTION

The *Site Plan by Studio TSQAURE2* depicts 29 residential buildings, a recreation center/office building and associated infrastructure improvements. Storm water will be collected in two basins in the eastern portion of the site and dry wells are proposed for each basin and in the east central areas of the site near the northern and southern property limits.

Structural loading information has not been provided to us at this time; however, we expect proposed buildings will generally consist of light weight wood framed structures and will be two stories high or less. We expect the proposed buildings will be supported by shallow concrete foundations and have slab-on-grade floors or alternatively be supported by post-tensioned foundation systems. For purposes of this preliminary evaluation, column loads for the proposed buildings are assumed to be on the order of 200 kips or less with wall loads on the order of 2 kips per linear foot or less. Geocon should be provided the structural plans and loading calculations when available for review, so that the descriptions and recommendations provided herein can be reevaluated and revised as needed.

3. GEOLOGIC SETTING

The site is located within the Coachella Valley. The Coachella Valley is located within the Colorado Desert Geomorphic Province which is a down dropped graben between branches of the San Andreas fault. Faulting on the southwestern side of the basin is buried by alluvium and no longer considered active. Active faulting is present along the northeastern side of the valley where the San Andreas fault is expressed at the ground surface by the north and south branches which bound the Indio Hills. The valley is bounded on the southwest by the Santa Rosa Mountains and the northeast by the Little San Bernardino Mountains.

4. GEOLOGIC MATERIALS

4.1 General

Based on our field investigation and published geologic maps of the area, the soil underlying the site consists of undocumented artificial fill (afu) and alluvium (Qa), which generally follows that of Dibblee and Minch (2008). The soils at the site generally include poorly-graded sands and silts with some silty sand. They are described in detail on the boring logs in Appendix A. The soil and geologic units encountered at the site are discussed in general terms below.

4.2 Undocumented Artificial Fill (afu)

Undocumented artificial fill was encountered to depths of 5 to 9 feet and it may be deeper where the former community pool was located. The undocumented artificial fill consists of poorly graded and silty sands which are loose to medium dense and dry to moist. Construction debris was encountered within the fill. The fill was likely placed for the previous mobile home park some time between 1959 and 1972. Based on the time period, it is unlikely that geotechnical observation and testing was performed during placement.

4.3 Alluvium (Qa)

The alluvium consists of thickly bedded silts and fine sands. Alluvium was found underlying the undocumented artificial fill to the maximum depth explored of approximately 51½ feet. The alluvium can be characterized as loose to medium dense/firm to hard, dry to slightly moist, and is varying in shades of olive brown and yellowish brown. The unit shows some laminations and at varying depths there exists evidence of oxidation.

5. GROUNDWATER

Static groundwater was not encountered during this investigation to the maximum depth explored of approximately 51½ feet. Based on a well records within approximately one mile from the site, static groundwater is between approximately 161 to 222 feet beneath the ground surface. Static groundwater elevations are dependent on seasonal precipitation, irrigation, and land use, among other factors, and vary as a result. Additionally, perched conditions may exist where none previously existed before.

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a currently established State of California Alquist-Priolo Earthquake Fault Zone or a Riverside County Fault Hazard Zone for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site.

The closest active fault to the site is the South Branch of the San Andreas fault located approximately 7 miles northeast of the site. Faults within a 50-mile radius of the site are listed in Table 6.1A. Historic earthquakes in southern California of magnitude 6.0 and greater, their magnitude, distance, and direction from the site are listed in Table 6.1B.

TABLE 6.1A
ACTIVE FAULTS WITHIN 50 MILES OF THE SITE

Fault Name	Maximum Magnitude (Mw)	Geometry (Slip Character)	Slip Rate (mm/yr)	Information Source	Distance from Site (mi)	Direction from Site
San Andreas -South Branch	7.5	RL-SS	24	a	7	NE
San Andreas – North Branch	7.5	RL-SS	24	a	10	NE
San Jacinto Clark	7.2	RL-SS	12	a	18	SW
Burnt Mountain	6.5	RL-SS	0.6	a	18	N
San Gorgonio Pass	n/a	THRUST	n/a	a	19	NW
Morongo/Pinto Mountain	7.2	LL-SS	2.5	a	22	N
San Jacinto (Casa Loma)	6.9	RL-SS	12	a	30	NW
Coyote Creek	6.8	RL-SS	4	a	22	SW
Copper Mountain	7	RL-SS	0.6	a	36	NE
Mesquite Lake	7.3	RL-SS	0.6	a	36	NE
Earthquake Valley	6.5	RL-SS	2	a	40	SW
North Frontal	6.7	R	0.5	a	41	N
Lenwood	7.5	RL-SS	0.6	a	42	N
Elsinore (Wildomar)	6.8	RL-SS	5	a	42	SW

GEOMETRY: BT = BLIND THRUST, LL = LEFT LATERAL, N = NORMAL, O = OBLIQUE, R = REVERSE, RL = RIGHT LATERAL, SS = STRIKE SLIP.

INFORMATION SOURCES: A = CAO, T., BRYANT, W.A., ROWSHANDEL, B., BRANUM, D., AND WILLS, C.J., 2003, THE REVISED 2002 CALIFORNIA PROBABILISTIC SEISMIC HAZARD MAPS, INCLUDING APPENDICES A, B, AND C, DATED JUNE; B = ONLINE FAULT ACTIVITY MAP OF CALIFORNIA WEBSITE, MAPS.CONSERVATION.CA.GOV/CGS/FAM/, AS OF 1/2017.
N/A = DATA NOT AVAILABLE

TABLE 6.1B
HISTORIC EARTHQUAKE EVENTS WITH RESPECT TO THE SITE

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	49	WNW
Long Beach	March 10, 1933	6.4	88	W
Tehachapi	July 21, 1952	7.5	170	WNW
San Fernando	February 9, 1971	6.6	121	WNW
Whittier Narrows	October 1, 1987	5.9	96	WNW
Sierra Madre	June 28, 1991	5.8	96	WNW
Landers	June 28, 1992	7.3	30	N
Big Bear	June 28, 1992	6.4	38	NW
Northridge	January 17, 1994	6.7	124	WNW
Hector Mine	October 16, 1999	7.1	59	NNE
Ridgecrest China Lake Fault	July 5, 2019	7.1	153	NW

6.2 Liquefaction & Dry Sand Settlement

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Additionally, seismically induced “dry-sand” settlement may occur whether the potential for liquefaction exists or not.

The current standard of practice as outlined in the *Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California* (SCEC, 1999) requires a liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be enough to induce liquefaction.

According to the RCIT *Map My County* online GIS system, the site is located within an area mapped as having a “moderate” potential for liquefaction.

We performed a liquefaction analysis of the soils underlying the site using the 1996 NCEER method of analysis with the updates by Youd et al. (2001). The liquefaction potential evaluation was performed by utilizing a groundwater depth of greater than 51.5 feet, a magnitude 8.08 earthquake, and the site-specific modified MCE_G peak ground acceleration (PGA_M) of 0.708. This semi-empirical method is based on a correlation between values of Standard Penetration Test (SPT) resistance. An average conversion factor of 0.63 was used to derive SPT blow-count values from California Modified Sampler blow-count values. Due to the lack of shallow groundwater at the project site, liquefaction is not a design consideration. Our Empirical Estimation of Liquefaction Potential is included as Figure 4.

An evaluation of seismically induced "dry-sand" settlement was performed, with the resulting seismic "dry-sand" settlement estimated to be 0.65 inches. An analysis of seismically induced "dry-sand" settlement is included as Figure 5.

6.3 Expansive Soil

Laboratory testing of a representative sample of near surface site soil collected during our exploration indicates that soils have an Expansion Index of 0 and would therefore be classified as non-expansive in accordance with Section 1803.5.3 of the 2022 CBC and have a "very low" expansion index in accordance with ASTM D4829 (Expansion Index [EI] of 20 or less).

6.4 Hydrocompression

Hydrocompression is the tendency of unsaturated soil structure to collapse upon wetting resulting in the overall settlement of the affected soil and overlying foundations or improvements supported thereon. Potentially compressible soils underlying the site are typically removed and compacted during remedial site grading. However, if compressible soil is left in-place, a potential for settlement due to hydrocompression of the soil exists.

Based on the laboratory test results, the potential for hydrocompression ranges from 0.23 to 1.5 percent within the alluvial deposits. We expect that the hydrocompressive characteristics of site soils will be effectively reduced as a result of remedial grading operations and adequate drainage measures as provided herein; therefore, we opine that hydrocompression is not a design consideration for the structural components of this project.

6.5 Landslides

The site is not located near a hillside; therefore, landslides are not a design consideration.

6.6 Rock Fall Hazards

Rock falls are not a design consideration due to the lack of natural bedrock slopes above and adjacent to the site.

6.7 Slope Stability

Graded slopes are not proposed on the site at this time, therefore slope stability is not a design consideration.

6.8 Tsunamis and Seiches

A tsunami is a series of long period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, volcanic eruptions, or offshore slope failures. The first order driving force for locally generated tsunamis offshore southern California is expected to be tectonic deformation from large earthquakes (Legg, et al., 2002). The site is located approximately 75 miles from the nearest coastline, separated by two mountain ranges, and at an elevation of 50 feet MSL, therefore, the risk associated with tsunamis is not a design consideration.

A seiche is a run-up of water within a lake or embayment triggered by fault- or landslide-induced ground displacement. The project site is not located adjacent to a body of water; therefore, seiches are not a design consideration for the site.

6.9 Dam Inundation and Flooding

The eastern area of the site is within a flood zone along the Whitewater River per Riverside County Map My County website. The flood hazard should be addressed by the project civil engineer.

6.10 Regional Ground Subsidence

Regional subsidence has occurred in recent history within the Coachella Valley. Initial subsidence occurred between the 1920's and 1940's when groundwater was over-pumped and groundwater levels declined to the order of 50 feet. The introduction of Colorado River water in 1949 reduced groundwater pumping and the related subsidence temporarily stopped. In the 1970's overdraft of the groundwater occurred resulting in groundwater level declines of 50 to 100 feet and subsidence resumed. In 1996, the United States Geologic Survey (USGS) in cooperation with CVWD implemented a geodetic measurement of ground levels from Palm Desert, southwestward to the Salton Sea. Subsidence of 0.39 to 0.57 ft. has occurred within the La Quinta Subsidence Zone, located southwest of the site, between 1996 and 2005. Subsidence at a point located near the intersection of Avenue 54 and Jackson was recorded at 44 mm in 1998. Since that time, no subsidence has been recorded at that location. CVWD has embarked on a groundwater replenishment program which has slowed the rate of subsidence in the region. Ongoing studies from the USGS have discovered that the dominant factor in ground subsidence is the presence of silt layers which compress upon groundwater withdraw (Sneed, APWA Presentation March 2013). Ground subsidence could occur in the future and the site could be affected especially if groundwater withdrawal were to re-initiate. We anticipate the subsidence to be on a regional scale that could cause settlement across the project site. However, the settlement occurs over a relatively large geographic area and typically does not cause differential settlement over a relatively short horizontal distance that should be addressed as a design concern as part of the site development.

7. SITE INFILTRATION

Percolation testing was performed in accordance with the procedures outlined in *Riverside County Flood Control and Water Conservation District LID BMP, Appendix A* (Handbook) for infiltration basins. The percolation test locations are depicted on the *Geologic Map*, Figure 2.

Percolation test borings P-1 through P-3 were excavated to depths of 5 feet below existing grade. "Dry well" or deep percolation test borings were excavated to depths of 15 feet below existing grade. These borings were excavated using a CME 75 hollow-stem auger drilling machine with 8-inch-diameter augers. Approximately two inches of gravel was placed at the bottom of each test hole, and a perforated pipe was placed atop the gravel to keep the test hole open. Gravel was placed around the bottom of the test hole to support the test pipe. The test locations were pre-saturated prior to testing. The boring logs and percolation data is presented in Appendix A. A summary of the percolation data and infiltration rate results are provided in the table below.

CALCULATED INFILTRATION RATES FROM PERCOLATION TEST RESULTS

Parameter	P-1	P-2	P-3	DW-1	DW-2	DW-3
Depth (inches)	60	60	60	180	180	180
Test Type	Sandy	Sandy	Sandy	Sandy	Sandy	Sandy
Change in head over time: ΔH (inches)	26.8	32.6	18.4	67.8	59.4	40.1
Average head: H_{avg} (inches)	20.0	22.1	20.8	96.3	106.3	116.8
Time Interval: Δt (minutes)	10	10	10	10	10	10
Radius of test hole: r (inches)	4.0	4.0	4.0	4.0	4.0	4.0
Calculated Infiltration Rate: It (inches/hour)	14.6	16.3	9.7	8.3	6.6	4.0

The results of the percolation testing indicate that the calculated infiltration rates at the locations tested are between 4.0 and 16.3 inches per hour. The *Handbook* requires a factor of safety of 3 be applied to the values above based on the test method used.

The in-situ field percolation tests performed provide short-term infiltration rates. Where appropriate, the short-term infiltration rates shall be converted to long-term infiltration rates using reduction factors depending on the degree of infiltration quality, maintenance access and frequency, site variability, subsurface stratigraphy variation, and other factors. The small-scale percolation testing cannot model the complexity of the effect of interbedded layers of different soil composition, and our test results should be considered only as index values of infiltration rates.

Due to the presence of potentially hydrocompressive soils, the proposed infiltration system should be located a minimum distance of 25 feet from proposed structures and a minimum distance of 15 feet from site improvements to reduce the potential for induced settlements to adversely impact the proposed structures and improvements. Provided these offsets are maintained, there is a very low potential for infiltration-related soil settlement to adversely affect the proposed structures; some settlement may occur locally within the area of the infiltration system. The proposed infiltration system should also be located at least 50 feet away from the Whitewater Storm Channel along the eastern site boundary.

The civil engineer should also evaluate the impact on surface drainage should some soil settlement occur locally within the area of the infiltration system. It is suggested that flexible connections be utilized between the storm drainpipes and infiltration chambers. The project owner should understand that it is not our intent to completely prevent any soil settlement and/or associated distress of overlying pavement as a result of stormwater infiltration as doing so would be prohibitive to the proposed project.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 General

8.1.1 It is our opinion that neither soil or geologic conditions were encountered during the investigation that would preclude the proposed improvements, provided the recommendations presented herein are followed and implemented during design and construction.

8.1.2 Potential geologic hazards at the site include seismic shaking and compressible near surface soils. Based on our investigation and available geologic information, active, potentially active, or inactive faults are not present underlying or trending toward the site.

8.1.3 The undocumented fill and upper portion of loose, compressible alluvium on the site is not considered suitable for the support of compacted fill or settlement-sensitive improvements. Remedial grading of the surficial soil will be required as discussed herein. The site soils are suitable for re-use as engineered fill provided the recommendations in the *Grading* section of this report are followed.

8.1.4 Although groundwater was not encountered during our subsurface investigation, it is possible that perched water may be encountered during grading, particularly during the wet-weather season.

8.1.5 Soil samples tested for hydrocompression exhibit a collapse potential of up to approximately 1.5 percent. It is anticipated that remedial grading will reduce the hydrocompressive characteristics of the near-surface soils.

8.1.6 Previous improvements on the site, including building pads, slabs-on-grade, pavement, subsurface utilities, septic systems, wells, and the previous swimming pool structures (if not removed) should be removed with the resultant voids backfilled as recommended herein.

8.1.7 Site soils are generally comprised of sand, which are expected to have little to no cohesion and may be subject to caving in un-shored excavations. Excavation and shoring recommendations are provided in the *Temporary Excavations* section of this report.

8.1.8 Proper drainage should be maintained in order to preserve the design properties of the engineered fill. Recommendations for site drainage are provided herein.

8.1.9 We expect the proposed pool to be supported on a conventional shallow foundation system. We expect the residential buildings to be supported on either conventional shallow foundation systems or post-tensioned foundation systems. Foundations are expected to derive support in engineered fill subsequent to the recommended grading. Earthwork and foundation recommendations are provided herein.

8.1.10 Once design or civil grading plans are made available, the recommendations within this report should be reviewed and revised, as necessary. Additionally, as the project design progresses toward a final design, changes in the design, location, or elevation of the proposed improvements should be reviewed by this office. Geocon should be contacted to evaluate the necessity for review and possible revision of this report.

8.2 Excavation and Soil Characteristics

8.2.1 Excavation of the undocumented artificial fill and upper alluvial deposits are expected to be possible with moderate effort using conventional heavy-duty equipment in proper functioning order.

8.2.2 The soil encountered in the field investigation is considered to be "non-expansive" (expansion index [EI] 20 or less) as defined by 2022 California Building Code (CBC) Section 1803.5.3. We expect a majority of the soil encountered possess a "very low" expansion potential (EI of 0 to 20) in accordance with ASTM D4829. The table below presents soil classifications based on the expansion index. Although unlikely, any medium to highly expansive soils encountered at the site should not be placed within 4 feet of the proposed foundations, flatwork or paving improvements.

SOIL CLASSIFICATION BASED ON EXPANSION INDEX

Expansion Index (EI)	ASTM D 4829 Expansion Classification	2022 CBC Expansion Classification
0 – 20	**Very Low**	**Non-Expansive**
21 – 50	Low	Expansive
51 – 90	Medium	
91 – 130	High	
Greater Than 130	Very High	

8.2.3 Additional testing for expansion potential should be performed during grading along with plasticity index testing on soils with expansion indices of more than 20.

8.2.4 We performed laboratory tests on samples of the site materials to evaluate the percentage of water-soluble sulfate content. Appendix B presents results of the laboratory water-soluble sulfate tests. Laboratory tests performed on near surface samples indicate that the on-site materials possess a **"S0"** sulfate exposure to concrete structures as defined by 2022 CBC Section 1904 and ACI 318-19 Chapter 19. The table below presents a summary of concrete requirements set forth by 2022 CBC Section 1904.3 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS

Exposure Class		Water-Soluble Sulfate (SO_4) Percent by Weight	Cement Type (ASTM C 150)	Maximum Water to Cement Ratio by Weight[1]	Minimum Compressive Strength (psi)
S0		**SO_4<0.10**	**No Type Restriction**	**n/a**	**2,500**
S1		0.10≤SO_4<0.20	II	0.50	4,000
S2		0.20≤SO_4≤2.00	V	0.45	4,500
S3	Option 1	SO_4>2.00	V+Pozzolan or Slag	0.45	4,500
	Option 2		V	0.40	5,000

[1] Maximum water to cement ratio limits do not apply to lightweight concrete.

8.2.5 Laboratory test results indicate a resistivity of 1000 ohm-cm, pH of 8.5, chloride content of 390 ppm, and sulfate content of 180 ppm. Resistivity serves as an indication parameter for the presence of soluble salts only and does not specifically indicate a corrosive situation exists. As shown in the table below, the site would not be classified as "corrosive" to buried improvements in accordance with the Caltrans Corrosion Guidelines (Caltrans, 2021). Resistivity is not included as a parameter to define a corrosive area for structures except for MSE walls. MSE walls are not anticipated for this project.

CALTRANS CORROSION GUIDELINES

Corrosion Exposure	Resistivity (ohm-cm)	Chloride (ppm)	Sulfate (ppm)	pH
Corrosive	**<1,500**	500 or greater	1,500 or greater	5.5 or less

8.2.6 Geocon does not practice in the field of corrosion engineering. Therefore, further evaluation by a corrosion engineer may be performed if improvements that could be susceptible to corrosion are planned.

8.3 Grading

8.3.1 Grading should be performed in accordance with the *Recommended Grading Specifications* contained in Appendix C and the Grading Ordinances of the City of Rancho Mirage.

8.3.2 Prior to commencing grading, a preconstruction conference should be held at the site with the City inspector, owner or developer, grading contractor, civil engineer, and geotechnical engineer in attendance. Special soil handling and/or the grading plans can be discussed at that time.

8.3.3 Site preparation should begin with the removal of previous structures and infrastructure, including but not limited to utilities, pavement, slabs-on-grade, deleterious materials, debris, and vegetation. Additionally, if the previous swimming pool and spa structures still remain buried, they should be removed. The approximate location of the previous pool structures are indicated on Figure 2. The depth of removal should be such that material exposed in cut areas or soil to be used as fill is relatively free of organic matter and deleterious debris. Material generated during stripping and/or site demolition should be exported from the site.

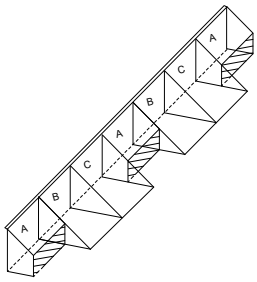
8.3.4 The undocumented artificial fill, and the upper loose alluvium in structural areas should be removed to expose competent alluvium. At least 3 feet of newly placed engineered fill should be placed below proposed building foundations. The removals should be extended laterally a minimum of 5 feet from the building footprint, or for a distance equal to the depth of fill below the footings, whichever is greater. The expected depths of removal are depicted on Figure 2. The actual depth of remedial grading should be evaluated by the geotechnical engineer (a representative of Geocon) during grading operations. In pool areas, removals should be extended laterally a minimum distance of 2 feet beyond the pool footprint. The bottoms of the excavations should be scarified to a depth of at least 1 foot, moisture conditioned to optimum moisture content, and compacted to a minimum of 90 percent of the maximum dry density (ASTM D1557), prior to fill placement.

8.3.5 In areas where small ancillary structures are proposed, such as trash enclosures and equipment pads, remedial removals should provide at least 24 inches of newly placed engineered fill below the bottom of proposed footings.

8.3.6 Remedial removals should be extended to depths of at least 12 inches below planned subgrade elevations in non-structural areas where pavement and flatwork are proposed.

8.3.7 Excavations adjacent to existing improvements that extend below a 1:1 (horizontal:vertical) projection downward and outward from the outside bottom edge of the improvements may utilize slot cutting to construct the improvement while maintaining support for existing utilities, roadways, or walls. Care should be taken by the grading contractor so that impact to existing or proposed improvements does not occur during slot-cut excavations. This may require reduced slot cut lengths if loose or otherwise unstable soil is encountered. The contractor should be aware that there is an inherent risk to slot-cutting as movement of near vertical excavations can cause stress relief features and vertical ground settlement outside of the excavation. The grading contractor should be prepared to take necessary steps to provide lateral stability/temporary buttressing if slot cut sidewalls experience instability.

8.3.8 We recommend that the initial temporary excavation along the property line be sloped back at a uniform 1:1 (horizontal to vertical) slope gradient or flatter for excavation of the existing soils to the necessary depth. The temporary slope may then be excavated using slot-cutting techniques (see illustration below).



8.3.9 The slot-cutting method employs the earth as a buttress and allows the earth excavation to proceed in phases. The initial excavation is made at a slope of 1:1. Alternate "A" slots should be worked first. Slots may be up to 7 feet in width. The backfill should be completed in the "A" slots before the "B" slots are excavated. After completing the backfill in the "B" slots, the "C" slots may be excavated. Slot-cutting is not recommended for vertical excavations greater than 6 feet in height or where surcharged by more than 150 pounds per linear foot. Where slot dimensions or surcharge loads exceed these amounts, Geocon should be contacted for additional recommendations.

8.3.10 Geocon should observe the removal bottoms to check the competence of the exposed soil. Deeper excavations or subgrade stabilization will be required if loose, soft, or porous materials are present at the base of the removals.

8.3.11 The fill placed within 5 feet of proposed foundations should possess a “very low” to “low” expansion potential (EI of 50 or less).

8.3.12 The site should be brought to finish grade elevations with fill compacted in layers. Layers of fill should be no thicker than will allow for adequate bonding and compaction. Fill, including backfill and scarified ground surfaces, should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content as determined by ASTM D1557. Fill materials placed below optimum moisture content may require additional moisture conditioning prior to placing additional fill. Earthwork should be observed, and compacted fill tested by representatives of Geocon.

8.3.13 If needed, import fill should consist of granular materials with a “low” to “very low” expansion potential (EI of 50 or less), non-corrosive, generally free of deleterious material, and contain rock no larger than 6 inches. Geocon should be notified of the import soil source and should be afforded the opportunity to perform laboratory testing of the import soil prior to its arrival at the site to evaluate its suitability as engineered fill material.

8.3.14 Finished slopes should be landscaped with drought-tolerant vegetation having variable root depths and requiring minimal landscape irrigation. In addition, the slopes should be drained and properly maintained to reduce erosion.

8.3.15 Infiltration trenches and ponds should be excavated into native soil without compaction effort applied to the basin bottom. Basin maintenance should include the removal of silt from the basin bottom after each significant rain event.

8.4 Earthwork Grading Factors

8.4.1 Estimates of shrinkage factors are based on empirical judgments comparing the material in its existing or natural state as encountered in the exploratory excavations to a compacted state. Variations in natural soil density and in compacted fill density render shrinkage value estimates very approximate. As an example, the contractor can compact the fill to a dry density of 90 percent or higher of the laboratory maximum dry density. Thus, the contractor has an approximately 10 percent range of control over the fill volume. Due to the variations in the actual shrinkage/bulking factors, a balance area should be provided to accommodate variations.

8.5 Utility Trench Backfill

8.5.1 Utility trenches should be properly backfilled in accordance with the requirements of the City of Rancho Mirage and the following recommendations. The pipes should be bedded with well-graded crushed rock or clean sand (Sand Equivalent greater than 30) to a depth of at least one foot over the pipe. The use of well-graded crushed rock should be used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of 2-sack slurry and controlled low strength material (CLSM) are also acceptable. However, consideration should be given to the possibility of differential settlement where the slurry ends and earthen backfill begins. These transitions should be minimized, and additional stabilization should be considered at these transitions.

8.5.2 Utility trench backfill should be placed in layers no thicker than will allow for adequate bonding and compaction. Utility backfill should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density and moisture conditioned at 0 to 2 percent over optimum moisture content as determined by ASTM D1557. Backfill at the finish subgrade elevation of new pavements should be compacted to at least 95 percent of the maximum dry density in the upper 12 inches. Backfill materials placed below the recommended moisture content may require additional moisture conditioning prior to placing additional fill.

8.5.3 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

8.6 Seismic Design Criteria

8.6.1 The following table summarizes the site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2021 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *U.S. Seismic Design Maps*, provided by the Structural Engineers Association of California (SEAOC). The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16. The values presented in the following table are for the risk-targeted maximum considered earthquake (MCE_R).

2022 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2022 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.50g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.60g	Figure 1613.2.1(3)
Site Coefficient, F_A	1.0	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.50g	Section 1613.2.3 (Eqn 16-20)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.02g*	Section 1613.2.3 (Eqn 16-21)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.00g	Section 1613.2.4 (Eqn 16-22)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.68g*	Section 1613.2.4 (Eqn 16-23)
*Per Supplement 3 of ASCE 7-16, a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class "D" sites with 1-second spectral acceleration (S_1) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that the parameter S_{M1} is increased by 50% for all applications of S_{M1}. The values for parameters S_{M1} and S_{D1} presented above have **not** been increased in accordance with Supplement 3 of ASCE 7-16.		

8.6.2 The following table presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.644g	Figure 22-9
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.708g	Section 11.8.3 (Eqn 11.8-1)

8.6.3 The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2022 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the building code is to maintain "Life Safety" during an MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

8.6.4 Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as an 8.08 magnitude event occurring at a hypocentral distance of 10.98 kilometers from the site.

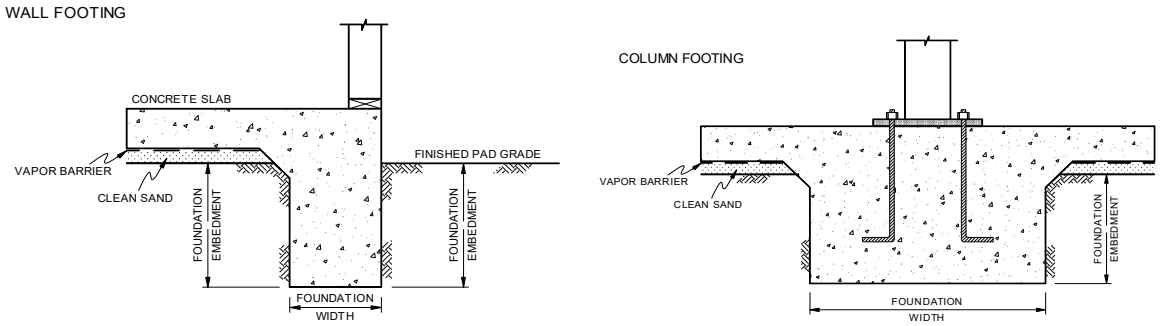
8.6.5 Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.49 magnitude occurring at a hypocentral distance of 10.77 kilometers from the site.

8.6.6 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

8.7 Conventional Foundations and Concrete Slabs-On-Grade

8.7.1 The foundation recommendations presented herein are for the proposed one to two-story structures subsequent to the recommended grading. Future structures supported on a conventional shallow foundation with concrete slab-on-grade are assumed to derive support in newly placed engineered fill.

8.7.2 Conventional foundations for the structures may consist of either continuous strip footings and/or isolated spread footings. Conventionally reinforced continuous footings should be at least 12 inches wide and extend at least 18 inches below lowest adjacent pad grade. Isolated spread footings should have a minimum width of 24 inches and should extend at least 24 inches below lowest adjacent pad grade. A wall/column footing dimension detail depicting footing embedment is provided below.



Wall/Column Footing Detail

8.7.3 Continuous footings may be designed for an allowable soil bearing pressure of 1,800 psf (dead plus live load). Isolated spread footings may be designed for an allowable soil bearing pressure of 2,300 psf (dead plus live load). A one-third increase in allowable bearing capacity is permitted for use with the alternative load combinations given in Section 1605.2 of the 2022 CBC.

8.7.4 From a geotechnical engineering standpoint, concrete slabs-on-grade for the structures should be at least 4 inches thick and be reinforced with No. 3 steel reinforcing bars placed 24 inches on center in both directions. The concrete slab-on-grade recommendations are based on soil support characteristics only. The project structural engineer should evaluate the structural requirements of the concrete slab for supporting equipment and storage loads. A thicker concrete slab may be required for heavier loading conditions. To reduce the effects of differential settlement on the foundation system, thickened slabs and/or an increase in steel reinforcement can provide a benefit to reduce concrete cracking.

8.7.5 The maximum expected static settlement for the planned structure, supported on conventional foundation systems with the above allowable bearing pressures, and deriving support in engineered fill is estimated to be less than ½-inch and to occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on

initial application of loading. Differential settlement is not expected to exceed ¼-inch over a horizontal distance of 40 feet. The estimated seismically induced "dry-sand" settlement of 0.65 inch should also be considered in the design of proposed structures. Based on seismic considerations, proposed structures should be designed for a combined static and seismically induced differential settlement of ¾ inch over a distance of 40 feet.

8.7.6 Once the design and foundation loading configuration proceeds to a more finalized plan, the estimated settlements within this report should be reviewed and revised, if necessary.

8.7.7 Steel reinforcement for continuous footings should consist of at least two No. 4 steel reinforcing bars placed horizontally in the footings, two near the top and two near the bottom. Steel reinforcement for the spread footings should be designed by the project structural engineer.

8.7.8 Foundation excavation bottoms must be observed and approved in writing by a representative of Geocon, prior to placement of reinforcing steel or concrete.

8.7.9 Slabs that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder. The vapor retarder design should be consistent with the guidelines presented in the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06). The vapor retarder used should be specified by the project architect or developer based on the type of floor covering that will be installed and if the structure will possess a humidity-controlled environment.

8.7.10 The bedding sand thickness should be evaluated by the project foundation engineer, architect, and/or developer. However, we should be contacted to provide recommendations if the bedding sand is thicker than 4 inches. Placement of 3 inches and 4 inches of sand is common practice in southern California for 5-inch and 4-inch thick slabs, respectively. The foundation engineer should provide appropriate concrete mix design criteria and curing measures that may be utilized to assure proper curing of the slab to reduce the potential for rapid moisture loss and subsequent cracking and/or slab curl. We suggest that the foundation design engineer present the concrete mix design and proper curing methods on the foundation plans. It is critical that the foundation contractor understands and follows the recommendations presented on the foundation plans.

8.7.11 Special subgrade presaturation is not deemed necessary prior to placing concrete; however, the exposed foundation and slab subgrade soil should be sprinkled to maintain a moist condition as would be expected in any such concrete placement.

8.7.12 The recommendations of this report are intended to reduce the potential for cracking of slabs due to expansive soil (if present), differential settlement of existing soil or soil with varying thicknesses. However, even with the incorporation of the recommendations presented herein, foundations, walls, and slabs-on-grade placed on such conditions may still exhibit some cracking due to soil movement and/or shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular where re-entrant slab corners occur.

8.7.13 Geocon should be consulted to provide additional design parameters as required by the structural engineer.

8.8 Post Tensioned Foundations

8.8.1 Alternatively, a post-tensioned concrete slab and foundation system may be used for support of the proposed structures subsequent to the recommended grading deriving support from the newly placed engineered fill. The post-tensioned system should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils or WRI/CRSI Design of Slab-on-Ground Foundations, as required by the 2022 California Building Code (CBC Section 1808.6.2). Although this procedure was developed for expansive soil conditions, we understand it can also be used to reduce the potential for foundation distress due to differential settlement. The post-tensioned design should incorporate the geotechnical parameters presented in the following table, which are based on the guidelines presented in the PTI, Third Edition design manual.

POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS

Post-Tensioning Institute (PTI) Third Edition Design Parameters	Value
Thornthwaite Index	-20
Equilibrium Suction	3.9
Edge Lift Moisture Variation Distance, e_M (feet)	5.3
Edge Lift, y_M (inches)	0.61
Center Lift Moisture Variation Distance, e_M (feet)	9.0
Center Lift, y_M (inches)	0.3

8.8.2 The foundations for the post-tensioned slabs should be embedded in accordance with the recommendations of the structural engineer. If a post-tensioned mat foundation system is planned, the slab should possess a thickened edge with a minimum width of 12 inches and extend below the clean sand or crushed rock layer.

8.8.3 If the structural engineer proposes a post-tensioned foundation design method other than PTI DC 10.5:

- The post-tensioned foundation system design parameters above are still applicable.
- Interior stiffener beams should be used.
- The width of the perimeter foundations should be at least 12 inches.
- The perimeter footing embedment depths should be at least 12 inches. The embedment depths should be measured from the lowest adjacent pad grade.

8.8.4 Our experience indicates post-tensioned slabs may be susceptible to excessive edge lift, regardless of the underlying soil conditions. Placing reinforcing steel at the bottom of the perimeter footings and the interior stiffener beams may mitigate this potential. The structural engineer should design the foundation system to reduce the potential of edge lift occurring for the proposed structures.

8.8.5 During the construction of the post-tension foundation system, the concrete should be placed monolithically. Under no circumstances should cold joints form between the footings/grade beams and the slab during the construction of the post-tension foundation system unless specifically designed by the structural engineer.

8.8.6 Foundations may be designed for an allowable soil bearing pressure of 2,300 psf (dead plus live load). This bearing pressure may be increased by one-third for transient loads due to wind or seismic forces. The estimated maximum total and differential settlement for the planned structures due to foundation loads is ½-inch and ¼-inch, respectively.

8.8.7 Consideration should be given to connecting patio slabs, which exceed 5 feet in width, to the building foundation to reduce the potential for future separation to occur.

8.8.8 Interior stiffening beams should be incorporated into the design of the foundation system in accordance with the PTI design procedures.

8.8.9 Foundation excavation bottoms must be observed and approved in writing by a representative of Geocon, prior to the placement of reinforcing steel or concrete.

8.8.10 Special subgrade presaturation is not deemed necessary prior to placing concrete; however, the exposed foundation and slab subgrade soil should be moisture conditioned, as necessary, to maintain a moist condition as would be expected in any such concrete placement.

8.8.11 Geocon should be consulted to provide additional design parameters as required by the structural engineer.

8.9 Miscellaneous Foundations

8.9.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structure may be supported on conventional foundations bearing on a minimum of 24 inches of newly placed engineered fill which extends laterally at least 24 inches beyond the foundation area. It is essential that proper drainage be maintained in order to minimize settlements in the soils and any foundations supported therein.

8.9.2 If the soils exposed in the excavation bottom are loose, compaction of the loose soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 pounds per square and should be a minimum of 12 inches in width, 12 inches in depth below lowest adjacent grade, and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

8.9.3 Foundation excavations should be observed and approved in writing by a representative of Geocon, prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

8.10 Conventional Retaining Walls

8.10.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 6 feet. In the event that walls significantly higher than 6 feet are planned, Geocon should be contacted for additional recommendations.

8.10.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Conventional Foundation and Concrete Slab on Grade* section of this report.

8.10.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 49 pcf.

8.10.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 60 pcf.

8.10.5 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Geocon. prior to bringing soil to the site.

8.10.6 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained, restrained walls is 90 pcf for the full height of the wall. The value includes hydrostatic pressures plus buoyant lateral earth pressures. If a partially drained wall is proposed, Geocon should be contacted to provide additional recommendations.

8.10.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

8.11 Swimming Pool

8.11.1 For the proposed swimming pool, the shell bottoms should be designed as a free-standing structure and may derive support on a minimum of 3 feet of engineered fill compacted to a dry density of at least 90 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content as determined by ASTM D1557.

8.11.2 Swimming pool foundations and walls may be designed in accordance with the *Conventional Foundation and Concrete Slab on Grade,* and the *Conventional Retaining Walls* sections of this report. A hydrostatic relief valve should be considered as part of the swimming pool design unless a gravity drain system can be placed beneath the pool shell.

8.11.3 Surface drainage around the pool/spa should be designed to prevent water from ponding and seeping into the ground. Surface water should be collected and conducted through non-erosive devices to the street, storm drain or other approved water course or disposal area. Leakage from the proposed pool/spa could create an artificial groundwater condition that will likely create instability problems. Therefore, all plumbing and the pool/spa should be leak free.

8.11.4 The deck for the swimming pool/spa should be cast separately of the swimming pool/spa, and water stops should be provided between the bond beam and the deck. Jointing for concrete flatwork should be provided in accordance with the recommendations of the American Concrete Institute. The joints should be sealed with an approved flexible sealant to reduce the potential for introduction of surface water into the underlying soil.

8.11.5 Consideration should be given to installing a subdrain system for the pool area. The subgrade surface should be graded to slope a minimum of 1 percent away from the pool. An impermeable liner (e.g. High-density polyethylene, HDPE, with a thickness of about 30 mil or equivalent PVC liner) could be placed over the subgrade soil. The liner, if installed, should overlap by at least 12 inches and sealed in accordance with the manufacturer's recommendations.

8.11.6 To mitigate the potential for moisture infiltration into the subgrade soils beneath the pool deck, we recommend the construction of a deepened footing along the outside edge of the pool deck flatwork. A subdrain consisting of 4-inch diameter perforated PVC pipe should be installed inside the deepened footing and sloped to drain into an approved outlet. The pipe should be surrounded by ¾ inch open-graded gravel and wrapped with filter fabric.

8.11.7 If the proposed pools are in proximity to a proposed or existing structure, consideration should be given to the construction sequence. If the proposed pool is to be constructed near an existing structure, or a proposed structure that is constructed before the pool's construction, the excavation required for the pool could remove a critical component of lateral support from the structure's foundations and would therefore require shoring to

safeguard the structure's foundations. Once information regarding the pool locations and depth becomes available, this information should be provided to Geocon for review and possible revision of these recommendations.

8.12 Exterior Concrete Flatwork

8.12.1 Exterior concrete flatwork not subject to vehicular traffic should be constructed in accordance with the recommendations presented in the table below. The recommended steel reinforcement would help reduce the potential for cracking.

MINIMUM CONCRETE FLATWORK RECOMMENDATIONS

Expansion Index, EI	Minimum Reinforcing Steel* Options	Minimum Thickness
EI $\leq$ 50	6x6-W2.9/W2.9 (6x6-6/6) welded wire mesh	4 Inches
	No. 3 Bars 18 inches on center, Both Directions	

*In excess of 8 feet square.

8.12.2 The subgrade soil should be properly moisturized and compacted prior to the placement of steel and concrete. The subgrade soil should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content in accordance with ASTM D1557.

8.12.3 Even with the incorporation of the recommendations of this report, the exterior concrete flatwork has a potential to experience some uplift due to expansive soil beneath grade. The reinforcing steel should overlap continuously in flatwork to reduce the potential for vertical offsets within flatwork. Additionally, flatwork should be structurally connected to the curbs, where possible, to reduce the potential for offsets between the curbs and the flatwork.

8.12.4 Concrete flatwork should be provided with crack control joints to reduce and/or control shrinkage cracking. Crack control spacing should be determined by the project structural engineer based upon the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack control spacing. Subgrade soil for exterior slabs not subjected to vehicle loads should be compacted in accordance with criteria presented in the *Grading* section of this report prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be verified prior to placing concrete. Base materials will not be required below concrete improvements.

8.12.5 Where exterior flatwork abuts the structure at entrant or exit points, the exterior slab should be dowelled into the structure's foundation stemwall. This recommendation is intended to reduce the potential for differential elevations that could result from differential settlement or minor heave of the flatwork. Dowelling details should be designed by the project structural engineer.

8.12.6 The recommendations presented herein are intended to reduce the potential for cracking of exterior slabs as a result of differential movement. However, even with the incorporation of the recommendations presented herein, slabs-on-grade will still crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, the use of crack control joints and proper concrete placement and curing. Crack control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction, and curing practices, and should be incorporated into project construction.

8.13 Lateral Loading

8.13.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. A passive pressure exerted by an equivalent fluid weight of 250 pounds per cubic foot (pcf), with a maximum earth pressure of 2,500 psf should be used for the design of footings or shear keys poured neat against newly compacted fill. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in design for passive resistance.

8.13.2 If friction is to be used to resist lateral loads, an allowable coefficient of friction between newly compacted fill soil and concrete of 0.4 should be used for design. When combining passive pressure and friction for lateral resistance, the passive component should be reduced by one-third.

8.14 Preliminary Pavement Recommendations

8.14.1 The final pavement design should be based on R-value testing of the subgrade soils. Streets should be designed in accordance with the City of Rancho Mirage standards and specifications when final Traffic Indices and R-Value test results of subgrade soil are completed. For preliminary design purposes, we used an estimated R-value of 50 based on the soil classifications. Preliminary flexible pavement sections are presented in the following table. Geocon should be contacted if other roadway classifications and traffic indices are appropriate for the project.

PRELIMINARY FLEXIBLE PAVEMENT SECTIONS

Road Classification	Traffic Index	Asphalt Concrete (inches)	Aggregate Base (inches)
Alley / Parking Lots	4.0	3	4
Cul-De-Sac	4.5	3	4
Local Road	5.0	3	4
Residential Collector	6.0	3½	4
Industrial Collector/Secondary Major	8.0	4½	6

8.14.2 Prior to construction of new pavement sections, remedial grading should be performed in accordance with the *Grading* section of this report.

8.14.3 The upper 12 inches of the subgrade soil should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content beneath pavement sections.

8.14.4 Aggregate base materials should conform to the requirements for Crushed Aggregate Base (CAB) or Crushed Miscellaneous Base (CMB) in Sections 200-2.2 and 200-2.4, respectively, of the latest edition of the *Standard Specifications for Public Works Construction* (Greenbook). Class 2 aggregate base materials should conform to Section 26-1.02A of the latest edition of the Caltrans *Standard Specifications*. Base materials should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at or slightly above optimum moisture content in accordance with ASTM D1557. Asphalt concrete should be compacted to a density of 95 percent of the laboratory Hveem density in accordance with ASTM D1561.

8.14.5 Where prefabricated concrete pavers (80 mm thick) will be used in site roadways and parking areas, it is acceptable from a geotechnical standpoint to construct the pavers over 2 inches of sand underlain by a properly prepared subgrade and aggregate base per the following table. The aggregate base should be compacted to at least 95 percent relative compaction as in accordance with ASTM D1557. Pavers should be constructed in accordance with the manufacture's guidelines. Preliminary paver design sections are presented in the following table.

PAVER DESIGN SECTIONS

Road Classification/Use	Estimated Traffic Index (TI)	Prefabricated Concrete Paver (inches)	Aggregate Base (inches)
Alley / Parking Lots	4.0	3⅛	6

8.14.6 Where concrete pavers will be placed in pedestrian walkway areas, and will not be subject to vehicle loading, the inclusion of a 4-inch layer of base over properly compacted subgrade underlying the pavers is acceptable from a geotechnical standpoint.

8.14.7 Where different pavement sections are to be constructed adjacent to each other, we recommend that consideration be given to the use of deepened base sections to maintain a uniform base thickness and avoid stepped cuts for placement of base material. This condition is expected to occur across the transition across the areas of asphalt paving and prefabricated pavers.

8.14.8 A rigid Portland cement concrete (PCC) pavement section should be placed in roadway aprons and cross gutters. We calculated the rigid pavement section in general conformance with the procedure recommended by the American Concrete Institute report ACI 330-21 *Commercial Concrete Parking Lots and Site Paving Design and Construction – Guide.* The table below provides the traffic categories and design parameters used for the calculations for 20-year design life.

TRAFFIC CATEGORIES

Traffic Category	Description	Reliability (%)	Slabs Cracked at End of Design Life (%)
A	Car Parking Areas and Access Lanes	60	15
B	Entrance and Truck Service Lanes	60	15
C	School or City Buses (Excluding Large Articulated Buses)	75	15
D	Heavy Duty Trucks (Gross Weight of 80 Kips)	75	15
E	Garbage or Fire Truck Lane	75	15

8.14.9 We used the parameters presented in the following table to calculate the pavement design sections. We should be contacted to provide updated design sections, if necessary.

RIGID PAVEMENT DESIGN PARAMETERS

Design Parameter	Design Value
Modulus of Subgrade Reaction, k	100 pci
Modulus of Rupture for Concrete, M_R	500 psi
Concrete Compressive Strength	3,000 psi
Concrete Modulus of Elasticity, E	3,150,000 psi

8.14.10 Based on the criteria presented herein, the PCC pavement sections should have a minimum thickness as presented in the following table.

RIGID VEHICULAR PAVEMENT RECOMMENDATIONS

Traffic Category	Trucks Per Day	Portland Cement Concrete, T (Inches)
A = Car Parking Areas and Access Lanes	10	5½
B = Entrance and Truck Service Lanes	10	6
	50	6½
	100	6½
C = School or City Buses	50	9½
	100	9½
D = Heavy Duty Trucks	50	6½
	100	7
E = Garbage or Fire Truck Lanes	5	6½
	10	7

8.14.11 The PCC vehicular pavement should be placed over subgrade soil that is compacted to a dry density of at least 95 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content. The garbage truck pad should be large enough such that all wheels are on the concrete pad during the loading operations.

8.14.12 Adequate joint spacing should be incorporated into the design and construction of the rigid pavement in accordance with the following table.

MAXIMUM JOINT SPACING

Pavement Thickness, T (Inches)	Maximum Joint Spacing (Feet)
4<T<5	10
5≤T<6	12½
6≤T	15

8.14.13 The rigid pavement should also be designed and constructed incorporating the parameters presented in the following table.

ADDITIONAL RIGID PAVEMENT RECOMMENDATIONS

Subject	Value
Thickened Edge	1.2 Times Slab Thickness Adjacent to Structures
	1.5 Times Slab Thickness Adjacent to Soil
	Minimum Increase of 2 Inches
	4 Feet Wide
Crack Control Joint Depth	Early Entry Sawn = T/6 to T/5, 1.25 Inch Minimum
	Conventional (Tooled or Conventional Sawing) = T/4 to T/3
Crack Control Joint Width	¼-Inch for Sealed Joints and Per Sealer Manufacturer's Recommendations
	$^{1}/_{16}$- to $^{1}/_{4}$-Inch is Common for Unsealed Joints

8.14.14 Reinforcing steel will not be necessary within the concrete for geotechnical purposes with the possible exception of dowels at construction joints as discussed herein.

8.14.15 To control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab. Crack-control joints should be sealed with an appropriate sealant to prevent the migration of water through the control joint to the subgrade materials. The depth of the crack-control joints should be in accordance with the referenced ACI guide.

8.14.16 To provide load transfer between adjacent pavement slab sections, a butt-type construction joint should be constructed. The butt-type joint should be thickened by at least 20 percent at the edge and taper back at least 4 feet from the face of the slab.

8.14.17 Concrete curb/gutter should be placed on soil subgrade compacted to a dry density of at least 90 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content. Cross-gutters that receive vehicular traffic should be placed on subgrade soil compacted to a dry density of at least 95 percent of the laboratory maximum dry density at 0 to 2 percent above optimum moisture content. Base materials should not be placed below the curb/gutter, or cross-gutters so water is not able to migrate from the adjacent parkways to the pavement sections. Where flatwork is located directly adjacent to the curb/gutter, the concrete flatwork should be structurally connected to the curbs to help reduce the potential for offsets between the curbs and the flatwork.

8.15 Temporary Excavations

8.15.1 Excavations of up to 10 feet in height may be required during earthwork operations. The excavations are expected to expose artificial fill and alluvial deposits, which may contain material that is subject to caving. The contractor should be prepared for caving soils in open excavations, and formwork may be required in foundation excavations. Vertical excavations up to 5 feet in height may be attempted where not surcharged by adjacent foundations or traffic, and where caving soils are not present.

8.15.2 Excavations of up to 10 feet in height are expected for construction of the proposed utility improvements; and we expect that the proposed utilities will be installed with conventional cut-and-cover methods.

8.15.3 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping and/or shoring measures in order to provide a stable excavation. The contractor's competent person should evaluate the appropriate slope and/or shoring based on soil type and prevailing site conditions per Cal-OSHA regulations.

8.15.4 Where there is insufficient space for sloped excavations, shoring or trench shields should be used to support excavations. Shoring may also be necessary where a sloped excavation could remove vertical or lateral support of existing improvements, including existing utilities and adjacent structures. The contractor's competent person should evaluate the appropriate shoring system to provide per Cal-OSHA regulations.

8.15.5 Where temporary construction slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The contractor's competent person should inspect the soils exposed in the cut slopes during excavation in accordance with Cal-OSHA regulations so that modifications of the slopes can be made if variations in the soil conditions occur.

8.15.6 It is difficult to accurately predict the amount of deflection of a shored embankment, but some deflection will occur. We recommend that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where a public right-of-way is present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment and will be assessed and designed by the project shoring engineer.

8.16 Site Drainage and Moisture Protection

8.16.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

8.16.2 Site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within five feet of the building perimeter footings except when enclosed in protected planters.

8.16.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

8.16.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

8.17 Plan Review

8.17.1 Geocon should be provided the opportunity to review the grading, structural, and foundation plans for the project prior to final submittal, to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to determine if additional analyses is required.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous materials was not part of the scope of services provided by Geocon.

This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

The requirements for concrete and reinforcing steel presented in this report are preliminary recommendations from a geotechnical perspective. The civil and structural engineers should provide the final recommendations for structural design of concrete and reinforcing steel for foundation systems, floor slabs, exterior concrete, or other systems where concrete and reinforcing steel are utilized, in accordance with the latest version of applicable codes.

The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

1. American Concrete Institute, 2019, ACI 318-19, *Building Code Requirements for Structural Concrete*, Report by ACI Committee 318.

2. American Concrete Institute, 2021, ACI 330 21 *Commercial Concrete Parking Lots and Site Paving Design and Construction*, Report by ACI Committee 330.

3. American Society of Civil Engineers (ASCE), ASCE 7-16, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, 2017.

4. California Department of Transportation (Caltrans), *Division of Engineering Services, Materials Engineering and Testing Services, 2021, Corrosion Guidelines, Version 3.2*, dated March.

5. California Building Standards Commission, 2022, *California Building Code (CBC)*, California Code of Regulations Title 24, Part 2.

6. California Geological Survey (CGS), *Earthquake Shaking Potential for California*, from USGS/CGS Seismic Hazards Model, CSSC No. 03-02, 2003.

7. California Geological Survey (CGS), *Probabilistic Seismic Hazards Mapping-Ground Motion Page*, 2003, CGS Website: www.conserv.ca.gov/cgs/rghm/pshamap.

8. California Geological Survey, *Seismic Shaking Hazards in California,* Based on the USGS/*CGS Probabilistic* Seismic Hazards Assessment (PSHA) Model, 2002 (revised April 2003). 10% probability of being exceeded in 50 years;

   http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html.

9. California Department of Water Resources (DWR), *Water Data Library* online database, www.water.ca.gov/waterdatalibrary/, accessed March 2024.

10. Dibblee, T.W. and Minch, J.A., 2008, *Geologic Map of the Thousand Palms and Lost Horse Mountain 15 Minute Quadrangles, Riverside County, California*, DF-372, 1:62,500.

11. Jennings, Charles W. and Bryant, William A., 2010, *Fault Activity Map of California,* California Division of Mines and Geology Map No. 6.

12. Legg, M. R., J. C. Borrero, and C. E. Synolakis, *Evaluation of Tsunami Risk to Southern California Coastal Cities*, 2002 NEHRP Professional Fellowship Report, dated January 2003.

13. Public Works Standards, Inc., 2021 *Standard Specifications for Public Works Construction "Greenbook,"* Published by BNi Building News.

14. Riverside County Information Technology (RCIT), *Map My County*, accessed March 2024.

15. Riverside County, 2013, *General Plan Amendment No. 960, Section 4.11 Flood and Dam Inundation Hazards*.

16. U.S. Geological Survey (USGS), *Deaggregation of Seismic Hazard for PGA and 2 Periods of Spectral Acceleration*, 2002, USGS Website: www.earthquake.usgs.gov/research/hazmaps.

SOURCE: Google Earth 2024

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KD		

VICINITY MAP

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

APRIL 2024	PROJECT NO. T3065-22-01	FIG. 1

GEOCON LEGEND

Locations are approximate

- B-5 ..... GEOTECHNICAL BORING LOCATION
- 8' .....ESTIMATED REMEDIAL REMOVAL DEPTH
- P-3 .....PERCOLATION TEST LOCATION
- DW-3 .....DRY WELL TEST LOCATION
- afu ..... UNDOCUMENTED ARTIFICAL FILL
- .....PROJECT EXTENTS
- .....APPROXIMATE LOCATION OF PREVIOUS SWIMMING POOL

0' 100' 200'

SCALE

N

SOURCE: Google Earth Pro, 2023

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GEOLOGIC MAP

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

APRIL 2024 | PROJECT NO. T3065-22-01 | FIG. 2

EMPIRICAL ESTIMATION OF LIQUEFACTION POTENTIAL
MAXIMUM CONSIDERED EARTHQUAKE

NCEER (1996) METHOD W 2001 UPDATES

EARTHQUAKE INFORMATION:

Earthquake Magnitude:	8.08
Peak Horiz. Acceleration PGA_M (g):	0.708
Magnitude Scaling Factor:	0.826
Historic High Groundwater:	161.0
Groundwater Depth During Exploratio	100.0

ENERGY & ROD CORRECTIONS:

Energy Correction (CE) for N60:	1.25
Rod Len.Corr.(CR) (0-no or 1-yes):	1
Bore Dia. Corr. (CB):	1.00
Sampler Corr. (CS):	1.20
Use Ksigma (0-no or 1-yes):	1

Boring ID: B-3

LIQUEFACTION CALCULATIONS:

Unit Wt. Water (pcf): 62.4

Depth to Base (ft)	Total Unit Wt. (pcf)	Water (0 or 1)	Field SPT (N)	Depth of SPT (ft)	Liq.Sus. (0 or 1)	-200 (%)	Est. Dr (%)	CN Factor	Corrected (N1)60cs	Eff. Unit Wt. (psf)	Resist. CRR 7.5	rd Factor	Induced CSR	Liquefac. Safe.Fact.
1.0	108.0	0	7	5.0	1	71	58	1.700	21.1	108.0	0.229	1.000	0.460	--
2.0	108.0	0	7	5.0	1	71	58	1.700	21.1	108.0	0.229	0.998	0.459	--
3.0	108.0	0	7	5.0	1	71	58	1.700	21.1	108.0	0.229	0.996	0.458	--
4.0	108.0	0	7	5.0	1	71	58	1.700	21.1	108.0	0.229	0.994	0.457	--
5.0	108.0	0	7	5.0	1	71	58	1.700	21.1	108.0	0.229	0.991	0.456	--
6.0	91.8	0	7	5.0	1	71	58	1.700	21.1	91.8	0.229	0.989	0.455	--
7.0	91.8	0	15	7.5	1	70	81	1.700	39.4	91.8	Infin.	0.987	0.454	--
8.0	91.8	0	15	7.5	1	70	81	1.648	38.4	91.8	Infin.	0.985	0.453	--
9.0	91.8	0	15	7.5	1	70	81	1.557	36.5	91.8	Infin.	0.982	0.452	--
10.0	91.8	0	15	7.5	1	70	81	1.480	35.0	91.8	Infin.	0.980	0.451	--
11.0	96.5	0	10	10.0	1	49	64	1.412	24.1	96.5	0.275	0.978	0.450	--
12.0	96.5	0	10	10.0	1	49	64	1.351	23.2	96.5	0.261	0.976	0.449	--
13.0	96.5	0	10	10.0	1	49	64	1.298	22.5	96.5	0.250	0.974	0.448	--
14.0	96.5	0	10	10.0	1	49	64	1.250	21.9	96.5	0.240	0.972	0.447	--
15.0	96.5	0	10	10.0	1	49	64	1.207	21.3	96.5	0.232	0.970	0.446	--
16.0	95.1	0	15	15.0	1	11	73	1.169	23.1	95.1	0.259	0.967	0.445	--
17.0	95.1	0	15	15.0	1	11	73	1.134	22.5	95.1	0.249	0.965	0.444	--
18.0	95.1	0	15	15.0	1	11	73	1.102	21.9	95.1	0.240	0.963	0.443	--
19.0	95.1	0	15	15.0	1	11	73	1.073	21.3	95.1	0.233	0.961	0.442	--
20.0	95.1	0	15	15.0	1	11	73	1.046	20.8	95.1	0.226	0.958	0.441	--
21.0	95.1	0	13	20.0	1	11	63	1.021	19.6	95.1	0.211	0.956	0.440	--
22.0	95.1	0	13	20.0	1	11	63	0.997	19.2	95.1	0.206	0.953	0.438	--
23.0	95.1	0	13	20.0	1		63	0.975	17.0	95.1	0.181	0.950	0.437	--
24.0	107.9	0	21	22.5	1		79	0.954	28.4	107.9	0.385	0.947	0.436	--
25.0	107.9	0	21	22.5	1		79	0.932	27.8	107.9	0.362	0.944	0.434	--
26.0	104.3	0	15	25.0	1	9	64	0.912	20.6	104.3	0.223	0.940	0.433	--
27.0	104.3	0	15	25.0	1	9	64	0.894	20.2	104.3	0.218	0.936	0.431	--
28.0	104.3	0	15	25.0	1	9	64	0.876	19.8	104.3	0.213	0.932	0.429	--
29.0	104.3	0	15	25.0	1	9	64	0.860	19.5	104.3	0.209	0.928	0.427	--
30.0	104.3	0	15	25.0	1	9	64	0.845	19.1	104.3	0.205	0.923	0.425	--
31.0	104.3	0	17	30.0	1	7	65	0.830	21.4	104.3	0.234	0.918	0.422	--
32.0	104.3	0	17	30.0	1	7	65	0.816	21.0	104.3	0.229	0.912	0.420	--
33.0	104.3	0	17	30.0	1	7	65	0.803	20.7	104.3	0.224	0.907	0.417	--
34.0	104.3	0	17	30.0	1	7	65	0.790	20.4	104.3	0.220	0.900	0.414	--
35.0	104.3	0	17	30.0	1	7	65	0.778	20.1	104.3	0.216	0.894	0.411	--
36.0	104.3	0	19	35.0	1	6	65	0.767	22.0	104.3	0.242	0.887	0.408	--
37.0	104.3	0	19	35.0	1	6	65	0.756	21.7	104.3	0.238	0.880	0.405	--
38.0	104.3	0	19	35.0	1	6	65	0.745	21.4	104.3	0.233	0.872	0.401	--
39.0	94.2	0	22	40.0	1		67	0.735	24.3	94.2	0.278	0.864	0.397	--
40.0	94.2	0	22	40.0	1		67	0.727	24.0	94.2	0.273	0.855	0.394	--
41.0	94.2	0	22	40.0	1		67	0.718	23.7	94.2	0.268	0.846	0.389	--
42.0	94.2	0	22	40.0	1		67	0.710	23.4	94.2	0.264	0.837	0.385	--
43.0	94.2	0	22	40.0	1		67	0.702	23.2	94.2	0.260	0.828	0.381	--
44.0	93.5	0	21	45.0	1		63	0.694	21.9	93.5	0.240	0.818	0.377	--
45.0	93.5	0	21	45.0	1		63	0.687	21.6	93.5	0.237	0.808	0.372	--
46.0	93.5	0	21	45.0	1		63	0.680	21.4	93.5	0.234	0.798	0.367	--
47.0	93.5	0	21	45.0	1		63	0.673	21.2	93.5	0.231	0.788	0.363	--
48.0	116.8	0	21	45.0	1		63	0.665	21.0	116.8	0.228	0.778	0.358	--
49.0	116.8	0	21	45.0	1		63	0.657	20.7	116.8	0.224	0.768	0.353	--
50.0	116.8	0	16	50.0	1	38	53	0.649	23.7	116.8	0.268	0.757	0.349	--
51.0	116.8	0	16	50.0	1	38	53	0.642	23.5	116.8	0.265	0.747	0.344	--

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LIQUEFACTION POTENTIAL - MAXIMUM CONSIDERED EARTHQUAKE

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

DRAFTED BY: ADL	CHECKED BY: HHD	APRIL 2024	PROJECT NO. T3065-22-01	FIGURE 3

MCE EARTHQUAKE INFORMATION:

Earthquake Magnitude:	8.08
Peak Horiz. Acceleration (g):	0.708

Boring ID: B-3

Depth of Base of Strate (ft)	Thickness of Layer (ft)	Depth of Mid-point of Layer (ft)	Soil Unit Weight (pcf)	Overburden Pressure at Mid-point (tsf)	Mean Effective Pressure at Mid-point (tsf)	Average Cyclic Shear Stress [Tav]	Field SPT [N]	Correction Factor [Cer]	Relative Density [Dr] (%)	Correction Factor [Cn]	Corrected [N1]60	rd Factor	Maximum Shear Mod. [Gmax] (tsf)	[yeff]*[Geff] [Gmax]	yeff Shear Strain	[yeff]*100%	Volumetric Strain M7.5 [E15] (%)	Number of Strain Cycles [Nc]	Corrected Vol. Strains [Ec]	Estimated Settlement [S] (inches)
1.0	1.0	0.5	108.0	0.03	0.02	0.012	7	1.25	58.3	1.7	21.1	1.0	166.0	7.41E-05	1.40E-04	0.014	1.32E-02	21.1	1.54E-02	0.00
2.0	1.0	1.5	108.0	0.08	0.05	0.037	7	1.25	58.3	1.7	21.1	1.0	287.5	1.26E-04	2.30E-04	0.023	2.16E-02	21.1	2.52E-02	0.01
3.0	1.0	2.5	108.0	0.13	0.09	0.062	7	1.25	58.3	1.7	21.1	1.0	371.2	1.59E-04	2.30E-04	0.023	2.16E-02	21.1	2.52E-02	0.01
4.0	1.0	3.5	108.0	0.19	0.13	0.087	7	1.25	58.3	1.7	21.1	1.0	439.2	1.85E-04	1.70E-04	0.017	1.60E-02	21.1	1.86E-02	0.00
5.0	1.0	4.5	108.0	0.24	0.16	0.112	7	1.25	58.3	1.7	21.1	1.0	498.0	2.06E-04	8.10E-04	0.081	7.61E-02	21.1	8.88E-02	0.02
6.0	1.0	5.5	91.8	0.29	0.20	0.134	7	1.25	58.3	1.7	21.1	1.0	546.8	2.21E-04	8.10E-04	0.081	7.61E-02	21.1	8.88E-02	0.02
7.0	1.0	6.5	91.8	0.34	0.23	0.155	15	1.25	80.9	1.7	39.4	1.0	724.8	1.90E-04	1.50E-04	0.015	6.64E-03	21.1	7.75E-03	0.00
8.0	1.0	7.5	91.8	0.38	0.26	0.176	15	1.25	80.9	1.6	38.4	1.0	765.3	2.00E-04	4.50E-04	0.045	2.06E-02	21.1	2.40E-02	0.01
9.0	1.0	8.5	91.8	0.43	0.29	0.197	15	1.25	80.9	1.6	36.5	1.0	796.6	2.11E-04	4.50E-04	0.045	2.18E-02	21.1	2.55E-02	0.01
10.0	1.0	9.5	91.8	0.48	0.32	0.217	15	1.25	80.9	1.5	35.0	1.0	825.9	2.21E-04	4.50E-04	0.045	2.30E-02	21.1	2.69E-02	0.01
11.0	1.0	10.5	96.5	0.52	0.35	0.238	10	1.25	64.0	1.4	24.1	1.0	764.3	2.58E-04	4.50E-04	0.045	3.60E-02	21.1	4.21E-02	0.01
12.0	1.0	11.5	96.5	0.57	0.38	0.260	10	1.25	64.0	1.4	23.2	1.0	789.5	2.68E-04	4.50E-04	0.045	3.76E-02	21.1	4.39E-02	0.01
13.0	1.0	12.5	96.5	0.62	0.42	0.281	10	1.25	64.0	1.3	22.5	1.0	813.6	2.77E-04	4.50E-04	0.045	3.90E-02	21.1	4.55E-02	0.01
14.0	1.0	13.5	96.5	0.67	0.45	0.302	10	1.25	64.0	1.2	21.9	1.0	836.5	2.85E-04	4.50E-04	0.045	4.04E-02	21.1	4.72E-02	0.01
15.0	1.0	14.5	96.5	0.72	0.48	0.323	10	1.25	64.0	1.2	21.3	1.0	858.5	2.93E-04	4.50E-04	0.045	4.17E-02	21.1	4.87E-02	0.01
16.0	1.0	15.5	95.1	0.76	0.51	0.344	15	1.25	72.7	1.2	23.1	1.0	911.3	2.89E-04	3.70E-04	0.037	3.11E-02	21.1	3.63E-02	0.01
17.0	1.0	16.5	95.1	0.81	0.54	0.364	15	1.25	72.7	1.1	22.5	1.0	930.3	2.96E-04	3.70E-04	0.037	3.22E-02	21.1	3.76E-02	0.01
18.0	1.0	17.5	95.1	0.86	0.58	0.384	15	1.25	72.7	1.1	21.9	1.0	948.6	3.02E-04	7.10E-04	0.071	6.38E-02	21.1	7.44E-02	0.02
19.0	1.0	18.5	95.1	0.91	0.61	0.404	15	1.25	72.7	1.1	21.3	1.0	966.4	3.08E-04	7.10E-04	0.071	6.57E-02	21.1	7.67E-02	0.02
20.0	1.0	19.5	95.1	0.95	0.64	0.423	15	1.25	72.7	1.0	20.8	1.0	983.5	3.13E-04	7.10E-04	0.071	6.77E-02	21.1	7.89E-02	0.02
21.0	1.0	20.5	95.1	1.00	0.67	0.443	13	1.25	63.4	1.0	19.6	1.0	988.0	3.21E-04	7.10E-04	0.071	7.26E-02	21.1	8.48E-02	0.02
22.0	1.0	21.5	95.1	1.05	0.70	0.462	13	1.25	63.4	1.0	19.2	1.0	1003.9	3.26E-04	7.10E-04	0.071	7.45E-02	21.1	8.70E-02	0.02
23.0	1.0	22.5	95.1	1.10	0.74	0.481	13	1.25	63.4	1.0	17.0	0.9	985.9	3.41E-04	7.10E-04	0.071	8.61E-02	21.1	1.01E-01	0.02
24.0	1.0	23.5	107.9	1.15	0.77	0.501	21.42	1.25	78.6	1.0	28.4	0.9	1196.4	2.90E-04	3.70E-04	0.037	2.43E-02	21.1	2.83E-02	0.01
25.0	1.0	24.5	107.9	1.20	0.81	0.522	21.42	1.25	78.6	0.9	27.8	0.9	1214.8	2.94E-04	3.70E-04	0.037	2.49E-02	21.1	2.91E-02	0.01
26.0	1.0	25.5	104.3	1.25	0.84	0.542	15	1.25	64.2	0.9	20.6	0.9	1123.8	3.26E-04	7.10E-04	0.071	6.85E-02	21.1	7.99E-02	0.02
27.0	1.0	26.5	104.3	1.31	0.88	0.562	15	1.25	64.2	0.9	20.2	0.9	1139.4	3.30E-04	7.10E-04	0.071	7.01E-02	21.1	8.18E-02	0.02
28.0	1.0	27.5	104.3	1.36	0.91	0.582	15	1.25	64.2	0.9	19.8	0.9	1154.6	3.33E-04	7.10E-04	0.071	7.17E-02	21.1	8.37E-02	0.02
29.0	1.0	28.5	104.3	1.41	0.95	0.601	15	1.25	64.2	0.9	19.5	0.9	1169.4	3.36E-04	7.10E-04	0.071	7.33E-02	21.1	8.56E-02	0.02
30.0	1.0	29.5	104.3	1.46	0.98	0.620	15	1.25	64.2	0.8	19.1	0.9	1183.9	3.39E-04	7.10E-04	0.071	7.49E-02	21.1	8.74E-02	0.02
31.0	1.0	30.5	104.3	1.52	1.02	0.638	17	1.25	64.6	0.8	21.4	0.9	1250.7	3.28E-04	5.20E-04	0.052	4.79E-02	21.1	5.59E-02	0.01
32.0	1.0	31.5	104.3	1.57	1.05	0.656	17	1.25	64.6	0.8	21.0	0.9	1264.9	3.30E-04	5.20E-04	0.052	4.89E-02	21.1	5.71E-02	0.01
33.0	1.0	32.5	104.3	1.62	1.09	0.674	17	1.25	64.6	0.8	20.7	0.9	1278.8	3.32E-04	5.20E-04	0.052	4.99E-02	21.1	5.82E-02	0.01
34.0	1.0	33.5	104.3	1.67	1.12	0.692	17	1.25	64.6	0.8	20.4	0.9	1292.4	3.34E-04	5.20E-04	0.052	5.08E-02	21.1	5.93E-02	0.01
35.0	1.0	34.5	104.3	1.72	1.16	0.709	17	1.25	64.6	0.8	20.1	0.9	1305.8	3.36E-04	5.20E-04	0.052	5.18E-02	21.1	6.04E-02	0.01
36.0	1.0	35.5	104.3	1.78	1.19	0.726	19	1.25	64.9	0.8	22.0	0.9	1366.7	3.26E-04	5.20E-04	0.052	4.64E-02	21.1	5.41E-02	0.01
37.0	1.0	36.5	104.3	1.83	1.23	0.743	19	1.25	64.9	0.8	21.7	0.9	1379.9	3.27E-04	5.20E-04	0.052	4.72E-02	21.1	5.50E-02	0.01
38.0	1.0	37.5	104.3	1.88	1.26	0.759	19	1.25	64.9	0.7	21.4	0.9	1393.0	3.29E-04	5.20E-04	0.052	4.80E-02	21.1	5.60E-02	0.01
39.0	1.0	38.5	94.2	1.93	1.29	0.774	22	1.25	66.8	0.7	24.3	0.9	1471.9	3.15E-04	5.20E-04	0.052	4.12E-02	21.1	4.81E-02	0.01
40.0	1.0	39.5	94.2	1.98	1.33	0.787	22	1.25	66.8	0.7	24.0	0.9	1483.7	3.15E-04	5.20E-04	0.052	4.18E-02	21.1	4.88E-02	0.01
41.0	1.0	40.5	94.2	2.02	1.36	0.801	22	1.25	66.8	0.7	23.7	0.8	1495.4	3.16E-04	5.20E-04	0.052	4.24E-02	21.1	4.95E-02	0.01
42.0	1.0	41.5	94.2	2.07	1.39	0.813	22	1.25	66.8	0.7	23.4	0.8	1506.9	3.16E-04	5.20E-04	0.052	4.30E-02	21.1	5.02E-02	0.01
43.0	1.0	42.5	94.2	2.12	1.42	0.826	22	1.25	66.8	0.7	23.2	0.8	1518.2	3.16E-04	5.20E-04	0.052	4.36E-02	21.1	5.09E-02	0.01
44.0	1.0	43.5	93.5	2.17	1.45	0.838	21	1.25	62.8	0.7	21.9	0.8	1505.8	3.21E-04	5.20E-04	0.052	4.67E-02	21.1	5.45E-02	0.01
45.0	1.0	44.5	93.5	2.21	1.48	0.850	21	1.25	62.8	0.7	21.6	0.8	1516.6	3.22E-04	5.20E-04	0.052	4.73E-02	21.1	5.52E-02	0.01
46.0	1.0	45.5	93.5	2.26	1.51	0.861	21	1.25	62.8	0.7	21.4	0.8	1527.2	3.22E-04	5.20E-04	0.052	4.79E-02	21.1	5.59E-02	0.01
47.0	1.0	46.5	93.5	2.31	1.55	0.873	21	1.25	62.8	0.7	21.2	0.8	1537.6	3.22E-04	5.20E-04	0.052	4.85E-02	21.1	5.66E-02	0.01
48.0	1.0	47.5	116.8	2.36	1.58	0.886	21	1.25	62.8	0.7	21.0	0.8	1549.2	3.22E-04	5.20E-04	0.052	4.92E-02	21.1	5.74E-02	0.01
49.0	1.0	48.5	116.8	2.42	1.62	0.901	21	1.25	62.8	0.7	20.7	0.8	1561.9	3.23E-04	5.20E-04	0.052	4.99E-02	21.1	5.82E-02	0.01
50.0	1.0	49.5	116.8	2.48	1.66	0.915	16	1.25	52.7	0.6	23.7	0.8	1653.6	3.08E-04	5.20E-04	0.052	4.24E-02	21.1	4.95E-02	0.01

REFERENCE: TECHNICAL ENGINEERING AND DESIGN GUIDES AS ADAPTED FROM THE US ARMY CORPS OF ENGINEERS, NO. 9

TOTAL SETTLEMENT (inches) = 0.65

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DRAFTED BY: ADL | CHECKED BY: HHD

EVALUATION OF EARTHQUAKE-INDUCED SETTLEMENTS IN DRY SANDY SOILS

MAXIMUM CONSIDERED EARTHQUAKE

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

APRIL 2024 | PROJECT NO. T3065-22-01 | FIGURE 4

APPENDIX A

APPENDIX A
FIELD INVESTIGATION

Our field investigation was conducted on March 14, 2024, which included the drilling of five geotechnical borings and six percolation test borings to depths of 5 to 51½ feet below existing grades.

The geotechnical borings were drilled with a CME 75 truck-mounted drill rig equipped with an 8-inch-diameter hollow-stem auger. The geotechnical borings were drilled to observe the subsurface geological conditions at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to groundwater. We collected bulk and relatively undisturbed samples from the borings by driving a 3-inch O. D., California Modified Sampler or Standard Penetration Test Sampler (SPT) into the "undisturbed" soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by $2^{3}/_{8}$-inch inside diameter brass sampler rings to facilitate removal and testing. Relatively undisturbed samples and bulk samples of disturbed soils were transported to our laboratory for testing. The soil conditions encountered were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the geotechnical borings are presented on Figures A-1 through A-5.

The percolation testing was performed on March 14, 2024, in accordance with Riverside County Flood Control and Water Conservation District's *Low Impact Development Best Management Practices Handbook*. Percolation boring logs are presented on Figures A-6 through A-11 and percolation test data sheets are presented on Figures A-12 through A-17. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained.

The approximate locations of the borings and percolation tests are depicted on the *Geologic Map*, Figure 2.

PROJECT NO. T3065-22-01

BORING B-1

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, medium dense, dry, yellow brown to grayish brown; fine to medium sand; brick pieces in cuttings			
2	B-1@1-5'							
	B-1@2.5'					18	102.6	1.1
4								
6	B-1@5'				- Becomes loose, moist, gray	16	93.8	9.4
				ML	**ALLUVIUM (Qa)** Sandy SILT, firm, damp, grayish brown; fine sand			
8	B-1@7.5'					12	90.3	3.1
10	B-1@10'				- Becomes hard, moist, gray to olive brown; alternating layers of silt and silty sand; laminated	32	93.8	10.0
12								
14								
	B-1@15'				- Becomes damp, grayish brown	31	92.2	2.5
16								
18								
20	B-1@20'			SP	Poorly-graded SAND, medium dense, dry, yellow brown; fine to coarse sand with gravel	32	114.3	1.9
					Total Depth = 21.5' feet Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 03/14/2024			

Figure A-1,
Log of Boring B-1, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T3065-22-01

BORING B-2

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP	**ARTIFICIAL FILL (afu)** Poorly-graded SAND, loose, dry, yellow brown; fine sand			
2	B-2@1-5'							
4	B-2@2.5'					13	86.8	0.9
6	B-2@5'			SP-SM	**ALLUVIUM (Qa)** Poorly graded SAND with silt, dense, moist, light gray; trace fine sand	15	87.5	6.3
8	B-2@7.5'			ML	Sandy SILT, stiff, moist, gray; fine sand; laminated; mottling iron oxide	14	83.0	16.0
10	B-2@10'			SP-SM	Poorly-graded SAND with silt, loose to medium dense, moist, light grayish brown; fine sand; trace gravel	16	75.2	26.8
12								
14								
16	B-2@15'				- Becomes medium dense, damp	23	105.2	2.7
18								
20	B-2@20'					25	96.8	8.9
22								
24								
26	B-2@25'				- Becomes yellowish gray brown	21	94.1	3.8
					Total Depth = 26.5' feet Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 03/14/2024			

T3065-22-01 BORING LOGS.GPJ

Figure A-2,
Log of Boring B-2, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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PROJECT NO. T3065-22-01

BORING B-3

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, medium dense, dry, yellow brown; fine to medium sand			
2	B-3@1-5'							
	B-3@2.5'					17	100.9	0.7
4								
	B-3@5'					7		
6				ML	**ALLUVIUM (Qa)** Sandy SILT, soft, damp, yellow brown; fine sand			
8	B-3@7.5'					15	89.1	3.0
					- Becomes stiff			
10	B-3@10'			SP-SM	Poorly-graded SAND with silt, loose, dry, alternating laminations of yellow gray brown; fine sand	10		
12								
	B-3@12.5'					32	95.3	1.3
14								
	B-3@15'			SP	Poorly-graded SAND, medium dense, dry, yellow gray brown; fine to medium sand	15		
16								
18	B-3@17.5'				- Becomes red and yellow brown; mottling	26	93.3	1.9
					- Becomes gravelly, rocky			
20	B-3@20'				- No recovery	13		
22								
	B-3@22.5'			SM	Silty SAND with coarse gravel, dry to damp, medium dense, yellow gray brown; fine sand; cemented silt laminations	34	105.7	2.1
24								
	B-3@25'			SP-SM	Poorly-graded SAND with silt, loose, dry, yellow brown to black, fine sand	15		
26								
28	B-3@27.5'				- Becomes medium dense	28	103.3	1.0

Figure A-3,
Log of Boring B-3, Page 1 of 2

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

BORING B-3

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-3@30'			SP	Poorly-graded SAND, medium dense, dry, yellow brown with black; fine to medium grained	17		
32	B-3@32.5'				- Little recovery	44		
34								
36	B-3@35'					19		
38	B-3@37.5'			ML	SILT, very stiff, moist,red; thin layers of silt/clay; oxidation; trace organics	42	90.9	3.6
40	B-3@40'				- Becomes silty clayey, yellow gray brown; laminated	22		
42	B-3@42.5'					44	85.2	9.7
44				SP	Poorly-graded SAND, medium dense, dry, yellow brown with black; fine to medium sand; no recovery			
46	B-3@45'				- No recovery	21		
48	B-3@47.5'				- Becomes dense	52	115.8	0.9
50	B-3@50'			SM	Silty SAND, medium dense, dry, yellow brown; fine grained	16		
					Total Depth = 51.5' feet Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 03/14/2024			

Figure A-3,
Log of Boring B-3, Page 2 of 2

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◹ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

BORING B-4

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
	B-4@1-5'			SP	**ARTIFICIAL FILL (afu)** Poorly-graded SAND, loose, moist, gray black brown; fine sand			
2								
	B-4@2.5'					13	105.3	3.0
4								
	B-4@5'			SP	**ALLUVIUM (Qa)** Poorly-graded SAND, loose, damp, yellow gray brown; interlayers of silt; fine to medium sand	14	100.3	2.4
6								
	B-4@7.5'				- Becomes yellow brown	15	98.1	3.1
8								
	B-4@10'				- Becomes fine to medium dense, moist	26	95.1	9.2
10								
12								
14								
	B-4@15'					30	106.2	0.9
16								
18								
	B-4@20'				- Becomes dry, yellow gray black red orange; gravelly sand; coarse gravel and weathered rocks	34	108.8	1.1
20								
22								
24								
	B-4@25'					40	108.0	0.6
26								
					Total Depth = 26.5' feet Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 03/14/2024			

Figure A-4,
Log of Boring B-4, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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PROJECT NO. T3065-22-01

BORING B-5

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, loose, dry, yellow brown; fine sand			
2	B-5@1-5'							
4	B-5@2.5'					16	91.1	0.6
6	B-5@5'			ML	**ALLUVIUM (Qa)** Sandy SILT, stiff, moist, gray; fine sand; laminated	14	87.1	20.2
8	B-5@7.5'					14	93.2	2.4
10	B-5@10'			SP-SM	Poorly-graded SAND with silt, medium dense, moist, yellow brown; fine sand	19	95.0	6.2
12								
14								
16	B-5@15'					26	93.9	4.6
18								
20	B-5@20'				- Becomes light gray, damp	20	102.1	2.6
					Total Depth = 21.5' feet Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 03/14/2024			

T3065-22-01 BORING LOGS.GPJ

Figure A-5,
Log of Boring B-5, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

BORING DW-1

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, loose, dry, yellow brown; fine to medium sand			
2								
4								
6				ML	**ALLUVIUM (Qa)** Sandy SILT, firm, damp, gray brown; fine sand			
8								
10				SP-SM	Poorly-graded SAND silt, loose, dry to damp, yellow brown; fine sand			
12								
14	DW-1@13.5			SM	Silty SAND, loose, dry to damp, yellow brown, alternating laminations of fine sand and silt	9		
					Total Depth = 15' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/2024			

Figure A-6,
Log of Boring DW-1, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING DW-2** ELEV. (MSL.) **250** DATE COMPLETED **3/14/24** EQUIPMENT **CME 75** BY: **ADL**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly graded SAND with silt, dry, loose, yellow brown; fine to medium sand			
2								
4								
6								
8					- gravel in cuttings; pieces of brick in cuttings; fill			
10				SP-SM	**ALLUVIUM (Qa)** Poorly-graded SAND with silt, loose, damp, yellow brown to grayish brown; fine to medium sand			
12								
14	DW-2@13.5				- Becomes medium dense	17		
					Total Depth = 15' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/2024			

Figure A-7,
Log of Boring DW-2, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

BORING DW-3

ELEV. (MSL.) **250** DATE COMPLETED **3/14/24**

EQUIPMENT **CME 75** BY: **ADL**

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SP	**ARTIFICIAL FILL (afu)** Poorly-graded SAND, loose, dry, yellow brown; fine to medium sand			
2								
4								
6				ML	**ALLUVIUM (Qa)** Sandy SILT, firm, damp, yellow brown; trace fine sand			
8								
10								
12								
14	DW-3@13.5				Alternating layers of poorly-graded sand and sandy silt; stratified	31		
					Total Depth = 15' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/024			

Figure A-8,
Log of Boring DW-3, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-1** ELEV. (MSL.) **250** DATE COMPLETED **3/14/24** EQUIPMENT **CME 75** BY: **ADL**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, loose, dry, yellow brown to grayish brown; fine sand, weeds and gravel at surface			
2								
4	P-1@3.5'				Alternating layers of poorly-graded sand with silt and silty sand; stratified	12		
					Total Depth = 5' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/2024			

Figure A-9,
Log of Boring P-1, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-2** ELEV. (MSL.) **250** DATE COMPLETED **3/14/24** EQUIPMENT **CME 75** BY: **ADL**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, loose, dry, yellow brown to grayish brown; fine sand			
2								
4	P-2@3.5'				- Roots in sample, trace gravel	8		
					Total Depth = 5' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/2024			

T3065-22-01 BORING LOGS.GPJ

Figure A-10,
Log of Boring P-2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T3065-22-01

DEPTH IN FT	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-3** ELEV. (MSL.) **250** DATE COMPLETED **3/14/24** EQUIPMENT **CME 75** BY: **ADL**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP-SM	**ARTIFICIAL FILL (afu)** Poorly-graded SAND with silt, loose, dry, yellow brown to grayish brown; fine to medium sand			
2								
4	P-3@3.5'					4		
					Total Depth = 5' Groundwater not encountered Percolation Test Equipment Set on 03/14/2024 Percolation Test Ran on 03/14/2024 Presaturated with 5 gallons of water Backfilled with cuttings 03/14/2024			

Figure A-11,
Log of Boring P-3, Page 1 of 1

T3065-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	DW-1	**Date Excavated:**	3/14/2024
Length of Test Pipe:	186.0 inches	**Soil Classification:**	SM
Height of Pipe above Ground:	6.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	180.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	8:25 AM 8:50 AM	25	25	131.4	0.0	131.4	0.2
2	8:50 AM 9:15 AM	25	50	131.8	0.0	131.8	0.2

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	9:18 AM 9:28 AM	10	10	132.0	52.4	79.6	0.1
2	9:28 AM 9:38 AM	10	20	135.2	64.4	70.8	0.1
3	9:38 AM 9:48 AM	10	30	135.6	48.1	87.5	0.1
4	9:48 AM 9:58 AM	10	40	135.0	54.0	81.0	0.1
5	9:58 AM 10:08 AM	10	50	135.0	67.2	67.8	0.2
6	10:08 AM 10:18 AM	10	60	130.2	62.4	67.8	0.2

Infiltration Rate (in/hr):	8.3
Radius of test hole (in):	4
Average Head (in):	96.3

Figure A-12

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	DW-2	**Date Excavated:**	3/14/2024
Length of Test Pipe:	186.0 inches	**Soil Classification:**	SP-SM
Height of Pipe above Ground:	6.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	180.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	10:05 AM 10:30 AM	25	25	130.4	0.0	130.4	0.2
2	10:30 AM 10:55 AM	25	50	132.4	0.0	132.4	0.2

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	11:01 AM 11:11 AM	10	10	135.1	85.4	49.7	0.2
2	11:11 AM 11:21 AM	10	20	126.6	60.0	66.6	0.2
3	11:21 AM 11:31 AM	10	30	129.8	82.4	47.4	0.2
4	11:31 AM 11:41 AM	10	40	124.4	58.8	65.6	0.2
5	11:41 AM 11:51 AM	10	50	131.4	75.5	55.9	0.2
6	11:51 AM 12:01 PM	10	60	136.0	76.6	59.4	0.2

Infiltration Rate (in/hr):	6.6
Radius of test hole (in):	4
Average Head (in):	106.3

Figure A-13

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	DW-3	**Date Excavated:**	3/14/2024
Length of Test Pipe:	183.0 inches	**Soil Classification:**	SP / ML
Height of Pipe above Ground:	3.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	180.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	11:57 AM 12:22 PM	25	25	139.2	0.0	139.2	0.2
2	12:22 PM 12:47 PM	25	50	136.8	0.0	136.8	0.2

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	12:51 PM 1:01 PM	10	10	133.2	81.8	51.4	0.2
2	1:01 PM 1:11 PM	10	20	139.2	88.7	50.5	0.2
3	1:11 PM 1:21 PM	10	30	137.8	91.6	46.2	0.2
4	1:21 PM 1:31 PM	10	40	136.4	94.0	42.5	0.2
5	1:31 PM 1:41 PM	10	50	142.2	102.0	40.2	0.3
6	1:41 PM 1:51 PM	10	60	136.8	96.7	40.1	0.3

Infiltration Rate (in/hr):	4.0
Radius of test hole (in):	4
Average Head (in):	116.8

Figure A-14

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	P-1	**Date Excavated:**	3/14/2024
Length of Test Pipe:	63.0 inches	**Soil Classification:**	SP-SM
Height of Pipe above Ground:	3.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	60.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	8:15 AM 8:40 AM	25	25	24.0	0.0	24.0	1.0
2	8:40 AM 9:05 AM	25	50	24.0	0.0	24.0	1.0

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	9:11 AM 9:21 AM	10	10	20.4	2.4	18.0	0.6
2	9:21 AM 9:31 AM	10	20	37.2	18.0	19.2	0.5
3	9:31 AM 9:41 AM	10	30	33.6	6.7	26.9	0.4
4	9:41 AM 9:51 AM	10	40	38.0	13.2	24.8	0.4
5	9:51 AM 10:01 AM	10	50	54.0	26.4	27.6	0.4
6	10:01 AM 10:11 AM	10	60	33.4	6.6	26.8	0.4

Infiltration Rate (in/hr):	14.6
Radius of test hole (in):	4
Average Head (in):	20.0

Figure A-15

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	P-2	**Date Excavated:**	3/14/2024
Length of Test Pipe:	63.0 inches	**Soil Classification:**	SP
Height of Pipe above Ground:	3.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	60.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	10:08 AM 10:33 AM	25	25	30.0	0.0	30.0	0.8
2	10:33 AM 10:58 AM	25	50	28.8	0.0	28.8	0.9

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	11:03 AM 11:13 AM	10	10	27.6	7.2	20.4	0.5
2	11:13 AM 11:23 AM	10	20	30.0	3.6	26.4	0.4
3	11:23 AM 11:33 AM	10	30	31.2	7.2	24.0	0.4
4	11:33 AM 11:43 AM	10	40	32.4	0.0	32.4	0.3
5	11:43 AM 11:53 AM	10	50	30.2	0.0	30.2	0.3
6	11:53 AM 12:03 PM	10	60	38.4	5.8	32.6	0.3

Infiltration Rate (in/hr):	16.3
Radius of test hole (in):	4
Average Head (in):	22.1

Figure A-16

PERCOLATION TEST REPORT

Project Name:	UHC Peterson Rd	**Project No.:**	T3065-22-01
Test Hole No.:	P-3	**Date Excavated:**	3/14/2024
Length of Test Pipe:	66.0 inches	**Soil Classification:**	SP-SM
Height of Pipe above Ground:	6.0 inches	**Presoak Date:**	3/14/2024
Depth of Test Hole:	60.0 inches	**Perc Test Date:**	3/14/2024
Check for Sandy Soil Criteria Tested by:	KD	**Percolation Tested by:**	KD

Water level measured from BOTTOM of hole

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (in)	Final Water Level (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	11:40 AM 12:05 PM	25	25	26.4	0.0	26.4	0.9
2	12:05 PM 12:30 PM	25	50	26.4	0.0	26.4	0.9

Soil Criteria: Sandy

Percolation Test

Reading No.	Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Head (in)	Final Water Head (in)	Δ in Water Level (in)	Percolation Rate (min/inch)
1	12:47 PM 12:57 PM	10	10	25.2	15.6	9.6	1.0
2	12:57 PM 1:07 PM	10	20	26.4	14.4	12.0	0.8
3	1:07 PM 1:17 PM	10	30	26.4	13.8	12.6	0.8
4	1:17 PM 1:27 PM	10	40	26.4	13.8	12.6	0.8
5	1:27 PM 1:37 PM	10	50	34.8	19.2	15.6	0.6
6	1:37 PM 1:47 PM	10	60	30.0	11.6	18.4	0.5

Infiltration Rate (in/hr):	9.7
Radius of test hole (in):	4
Average Head (in):	20.8

Figure A-17

APPENDIX B

APPENDIX B
LABORATORY TESTING

We performed laboratory tests in accordance with current, generally accepted test methods of ASTM International (ASTM) or other suggested procedures. We analyzed selected soil samples for in-situ density and moisture content, maximum dry density and optimum moisture content, expansion index, corrosion potential, grain size distribution and analysis, consolidation and collapse characteristics, and direct shear strength. The results of the laboratory tests are presented in Figures B-1 through B-21. The in-place dry density and moisture content of the samples tested are presented on the boring logs in Appendix A.

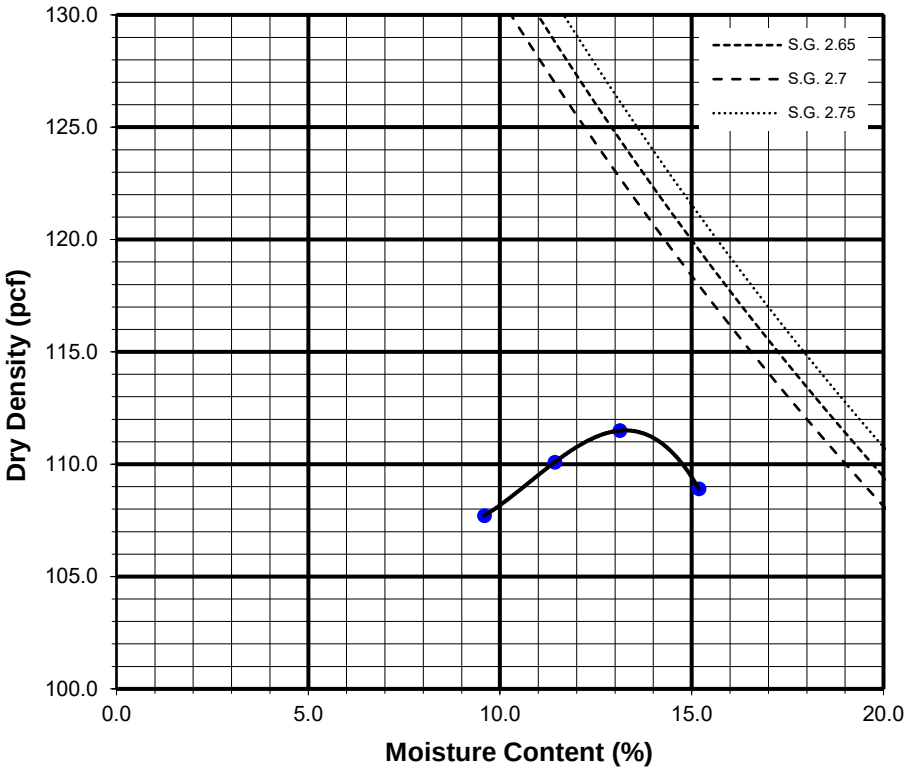
Sample No:

B-1@1-5	Poorly graded SAND with silt (SP-SM), yellow brown to grayish brown

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6040	6110	6162	6152		
Weight of Mold	(g)	4257	4257	4257	4257		
Net Weight of Soil	(g)	1783	1853	1905	1895		
Wet Weight of Soil + Cont.	(g)	842.4	903.5	854.3	947.0		
Dry Weight of Soil + Cont.	(g)	791.2	837.4	784.8	856.0		
Weight of Container	(g)	257.4	259.1	255.3	256.8		
Moisture Content	(%)	9.6	11.4	13.1	15.2		
Wet Density	(pcf)	118.0	122.7	126.1	125.4		
Dry Density	(pcf)	107.7	110.1	111.5	108.9		

Maximum Dry Density (pcf)	**111.5**

Optimum Moisture Content (%)	**13.0**



Preparation Method: A

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COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

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MULTIFAMILY APARTMENT COMMUNITY
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Rancho Mirage, California

April 2024 Figure B-1

B-5@1-5

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
Wt. Comp. Soil + Mold	(gm)	552.0	584.2
Wt. of Mold	(gm)	198.4	198.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	473.3	584.2
Dry Wt. of Soil + Cont.	(gm)	433.9	307.2
Wt. of Container	(gm)	173.3	198.4
Moisture Content	(%)	15.1	25.6
Wet Density	(pcf)	106.7	116.2
Dry Density	(pcf)	92.7	92.5
Void Ratio		0.8	0.8
Total Porosity		0.5	0.4
Pore Volume	(cc)	93.2	92.9
Degree of Saturation	(%) [S_{meas}]	50.2	84.6

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
3/25/2024	10:00	1.0	0	0.3213
3/25/2024	10:10	1.0	10	0.3213
Add Distilled Water to the Specimen				
3/26/2024	10:00	1.0	1430	0.3198
3/26/2024	11:00	1.0	1490	0.3198

Expansion Index (EI meas) =	-1.5
Expansion Index (Report) =	**0**

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2022 California Building Code, Section 1803.5.3

** Reference: 1997 Uniform Building Code, Table 18-I-B.

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EXPANSION INDEX TEST RESULTS

ASTM D-4829

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MULTIFAMILY APARTMENT COMMUNITY
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April 2024 Figure B-2

SUMMARY OF LABORATORY
POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resistivity (ohm centimeters)
B-2@1-5	8.5	1000

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chloride Ion Content (%)
B-2@1-5	0.039

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure
B-2@1-5	0.018	S0

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CORROSIVITY TEST RESULTS

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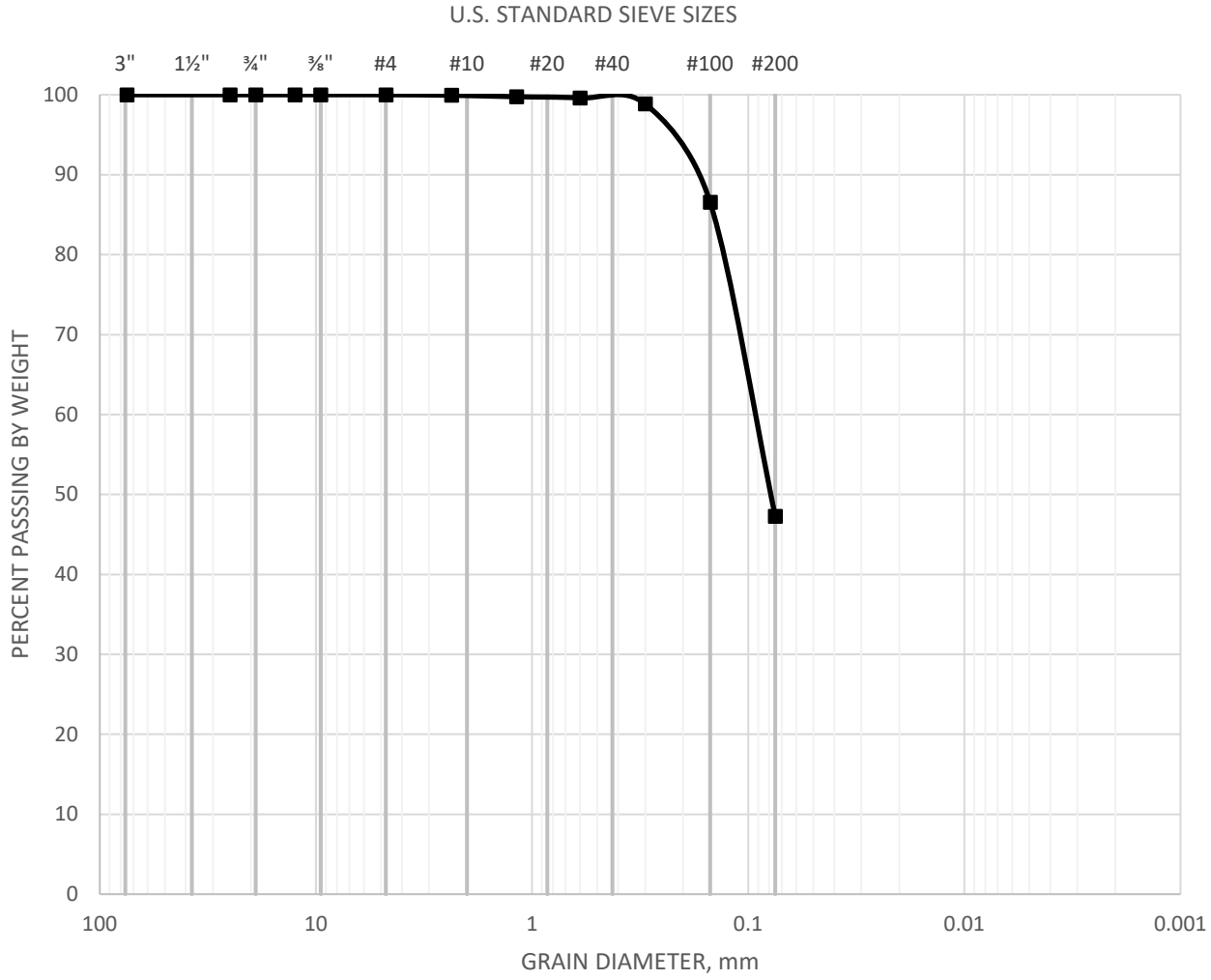
Project No.: T3065-22-01
MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California
April 2024 Figure B-3

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
DW-1@13.5	Silty SAND (SM), yellow brown	0.094		

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GRAIN SIZE DISTRIBUTION

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MULTIFAMILY APARTMENT COMMUNITY
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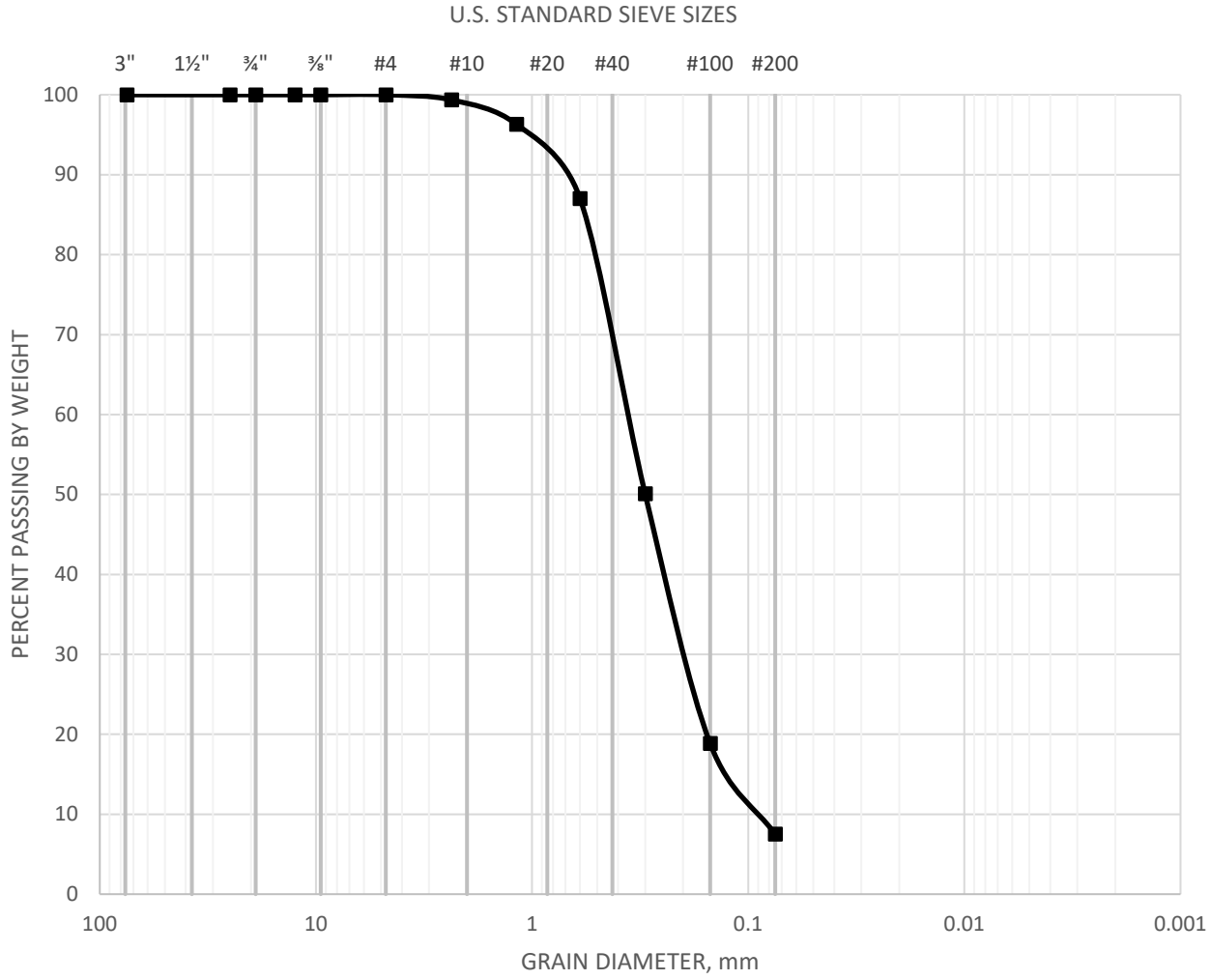
April 2024 Figure B-4

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
DW-2@13.5	Poorly Graded SAND with Silt (SP-SM), yellow brown to grayish brown	0.37	0.2	0.08

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GRAIN SIZE DISTRIBUTION

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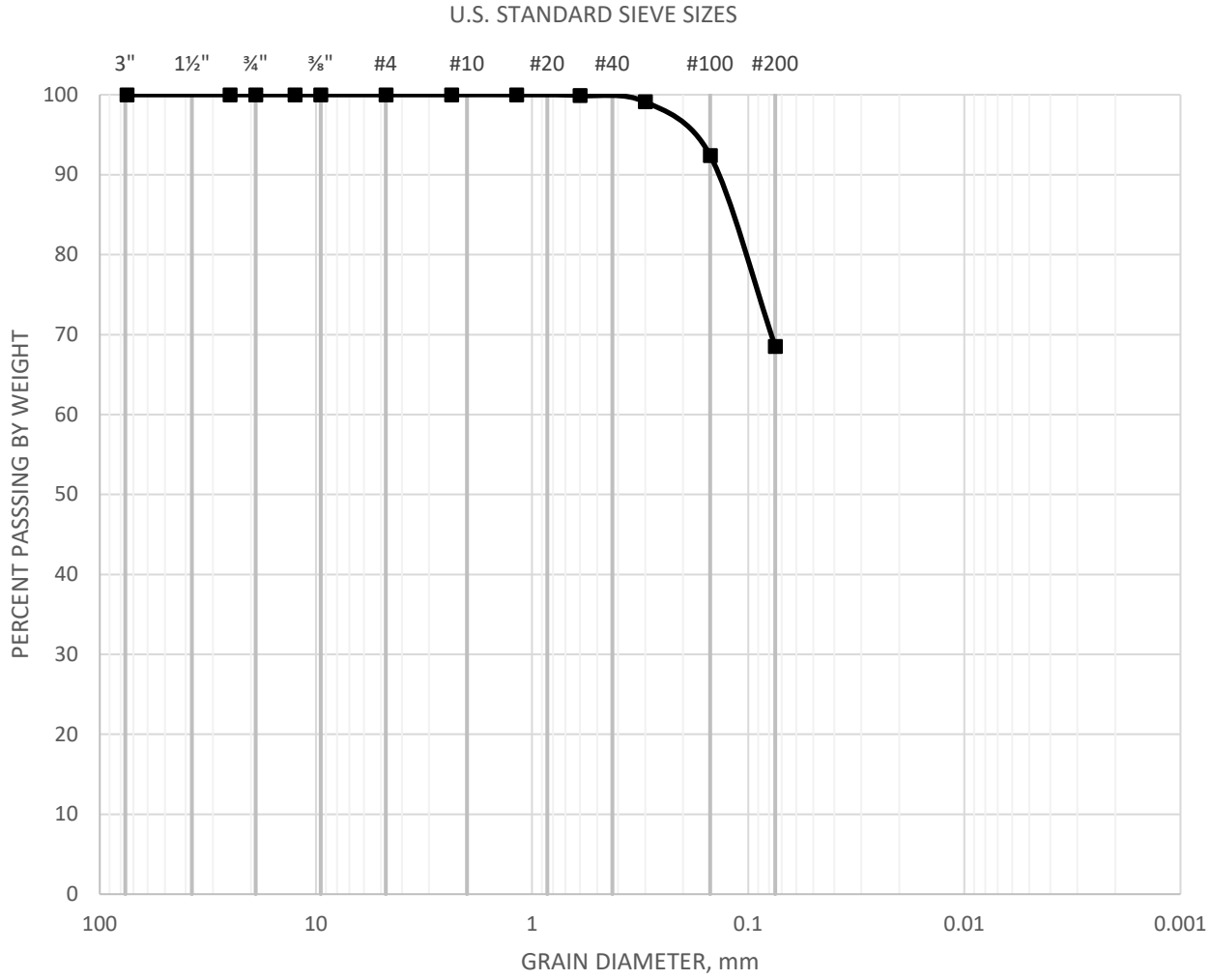
MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-5

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
DW-3@13.5	Sandy SILT (ML), grayish brown			

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GRAIN SIZE DISTRIBUTION

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MULTIFAMILY APARTMENT COMMUNITY
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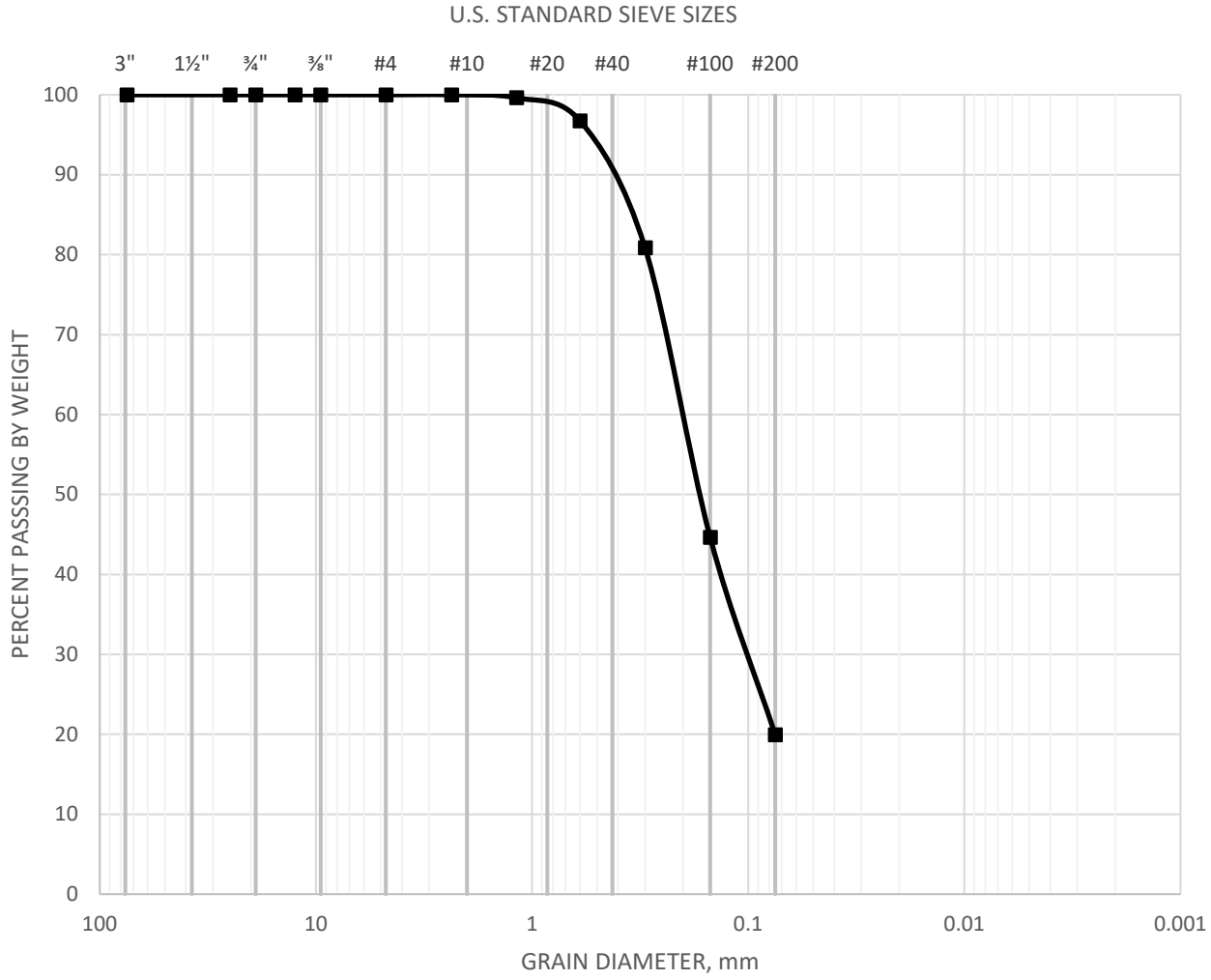
Rancho Mirage, California

April 2024 Figure B-6

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P-1@3.5	Poorly graded SAND with silt (SP-SM), alternating layers of Silty SAND, yellow brown to grayish brown	0.2	0.1	

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GRAIN SIZE DISTRIBUTION

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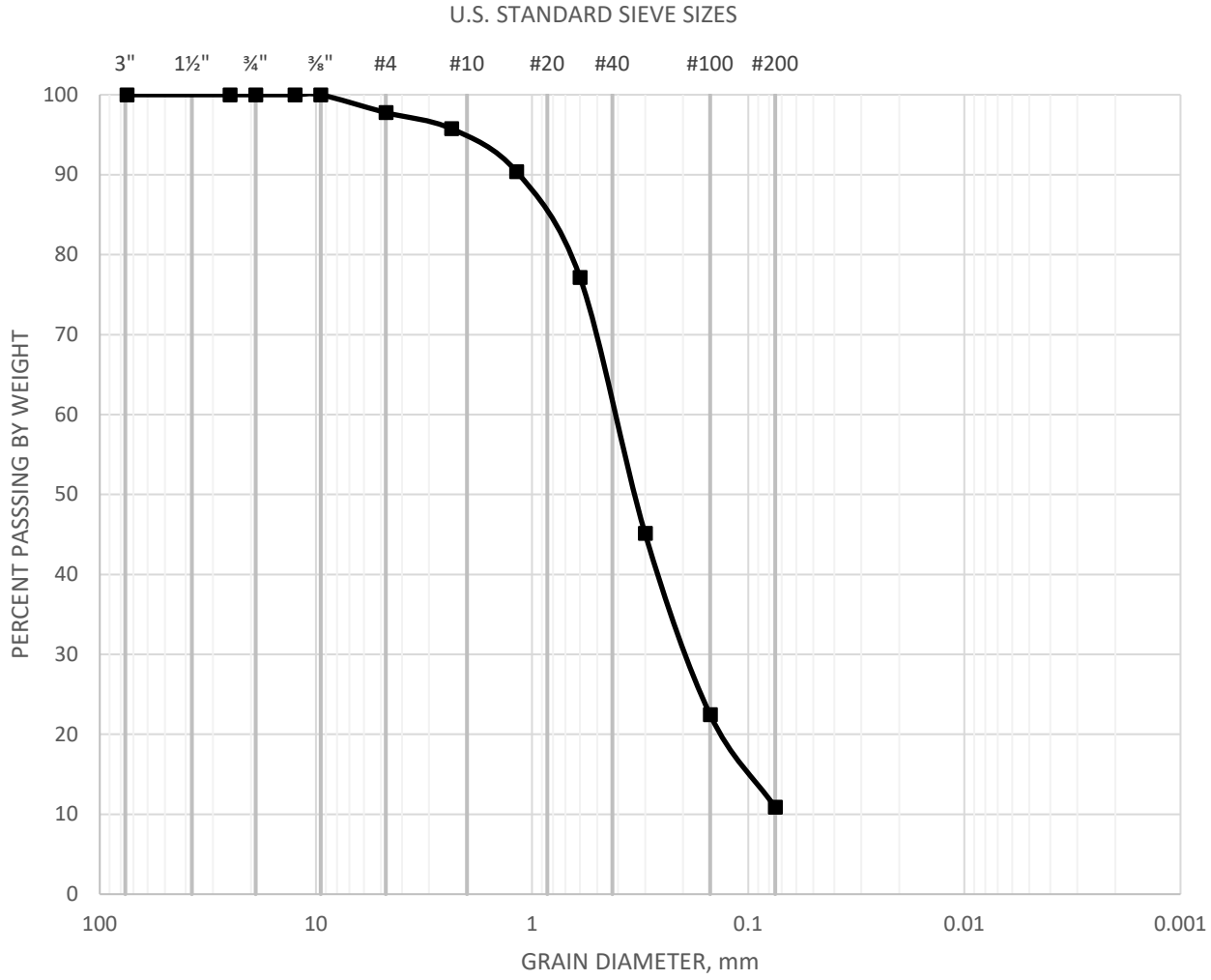
MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-7

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P-2@3.5	Poorly Graded SAND with Silt (SP-SM), yellow brown to grayish brown	0.41	0.2	

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GRAIN SIZE DISTRIBUTION

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MULTIFAMILY APARTMENT COMMUNITY
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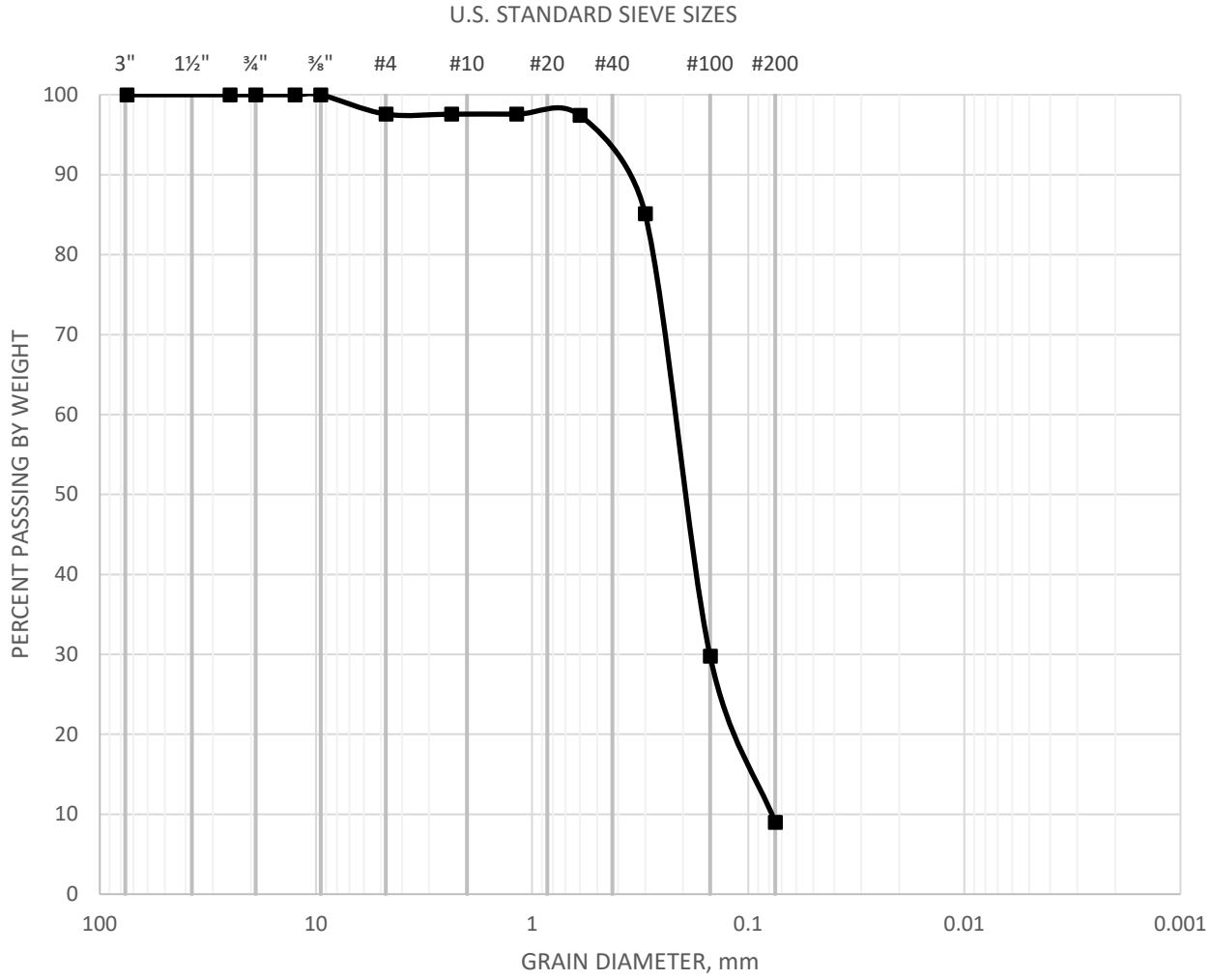
Rancho Mirage, California

April 2024 Figure B-8

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P-3@3.5	Poorly Graded SAND with Silt (SP-SM), yellow brown to grayish brown	0.22	0.16	0.08

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GRAIN SIZE DISTRIBUTION

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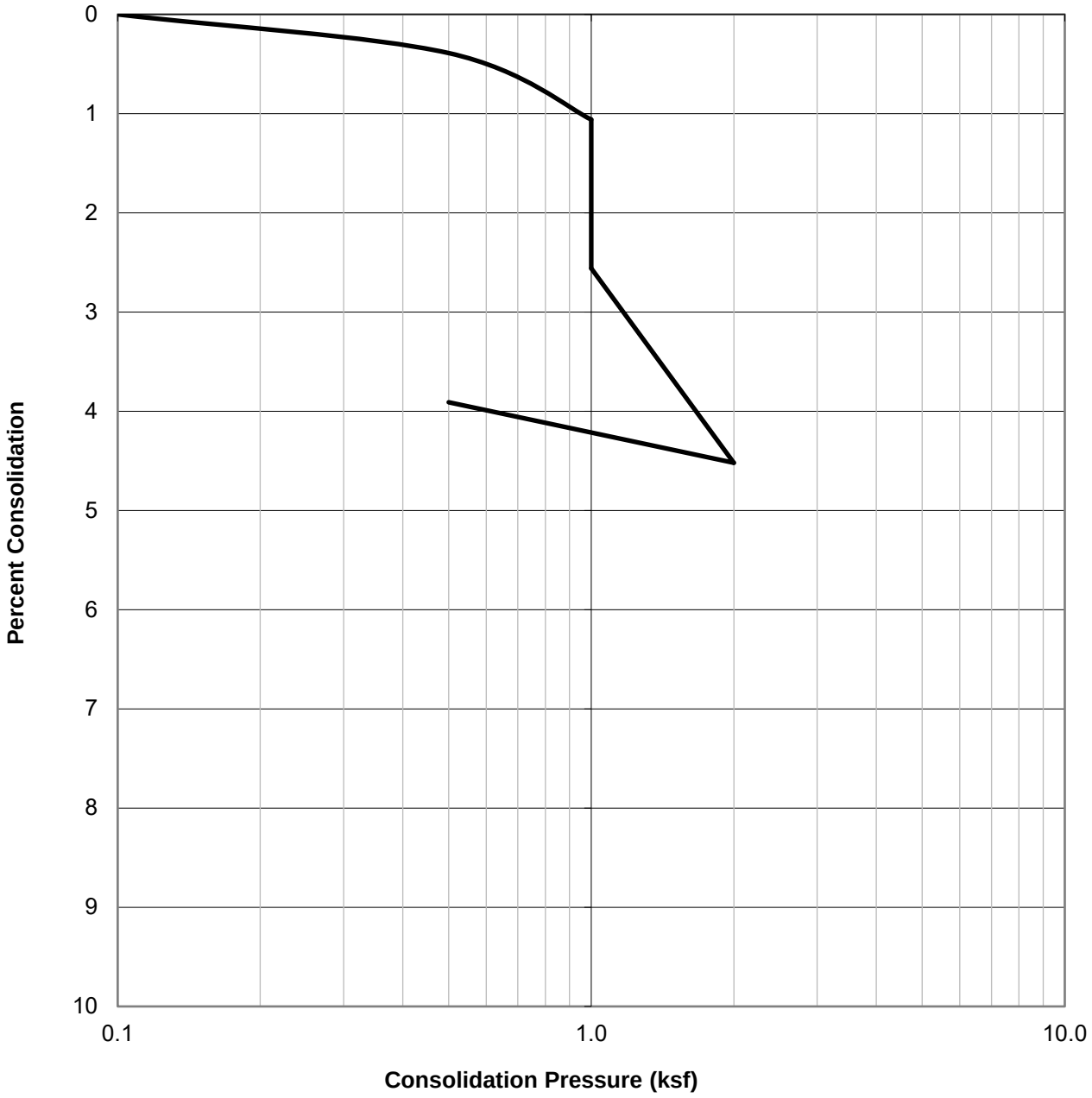
MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-9

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2@5	Poorly Graded SAND with Silt (SP-SM), light gray	79.7	6.3	38.8

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CONSOLIDATION TEST RESULTS

ASTM D-2435

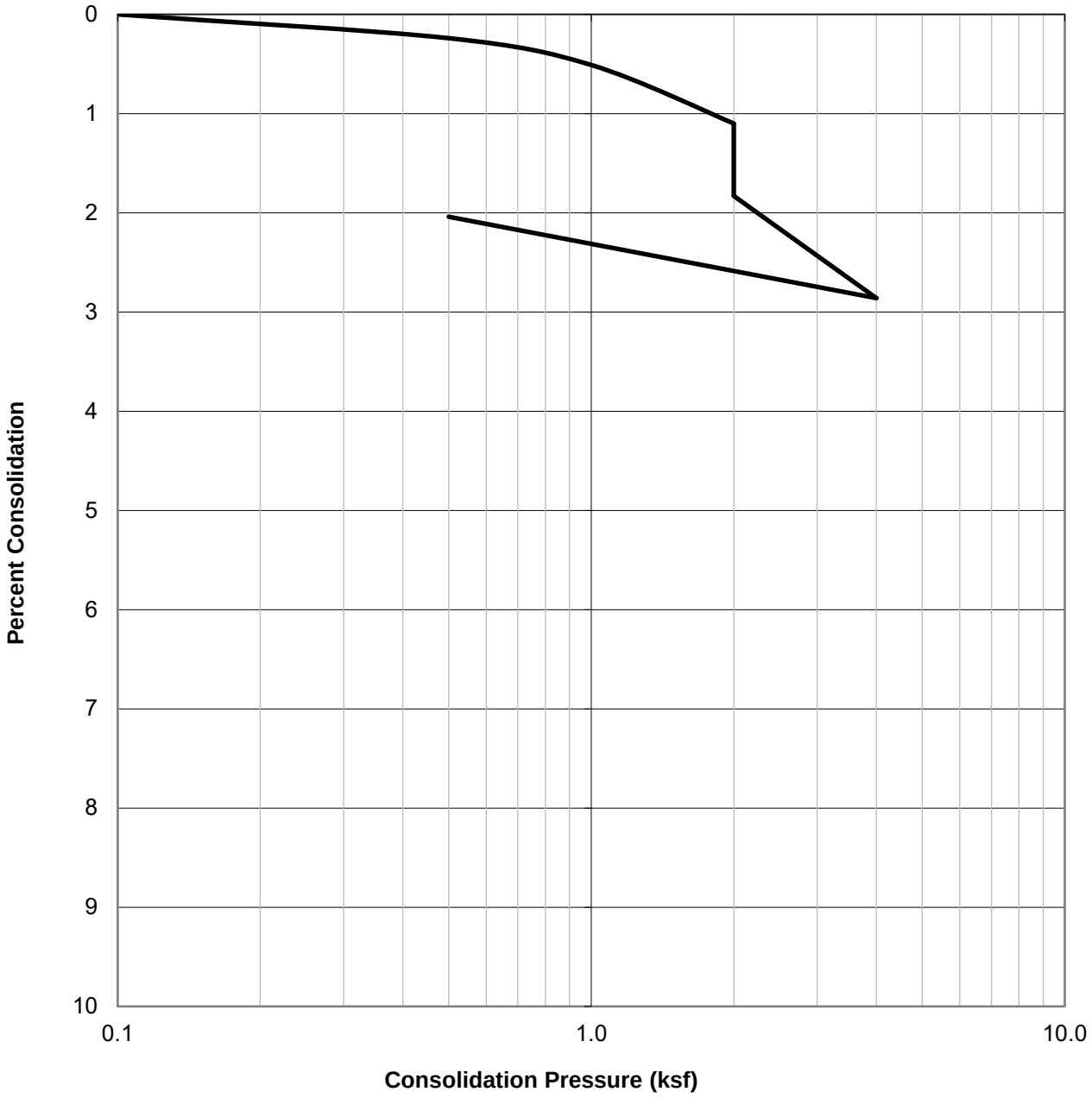
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-10

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1@7.5	Sandy SILT (ML), grayish brown	87.6	3.5	33.2

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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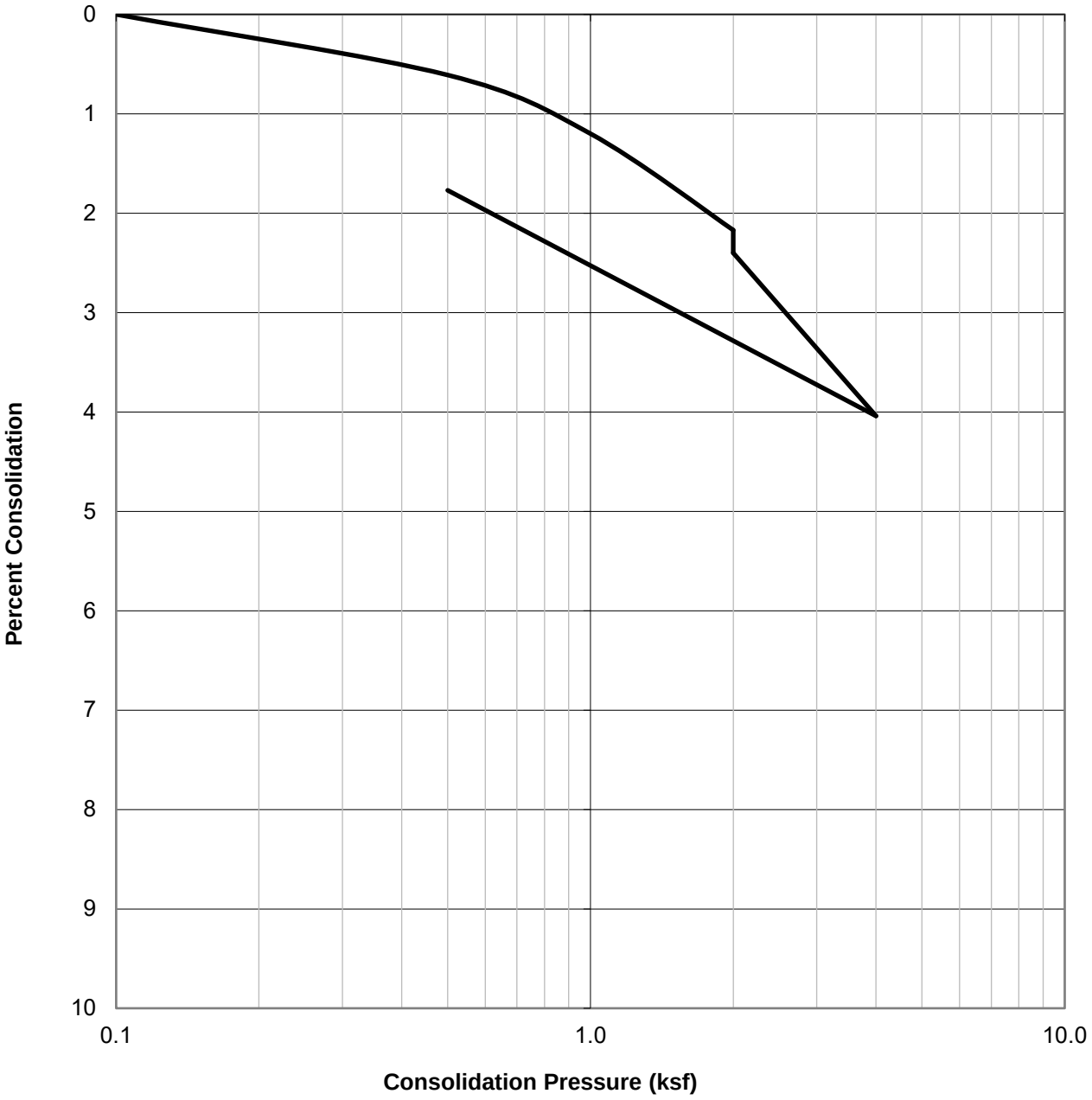
Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-11

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2@10	Poorly Graded SAND with Silt (SP-SM), light grayish brown	85.0	26.8	37.0

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
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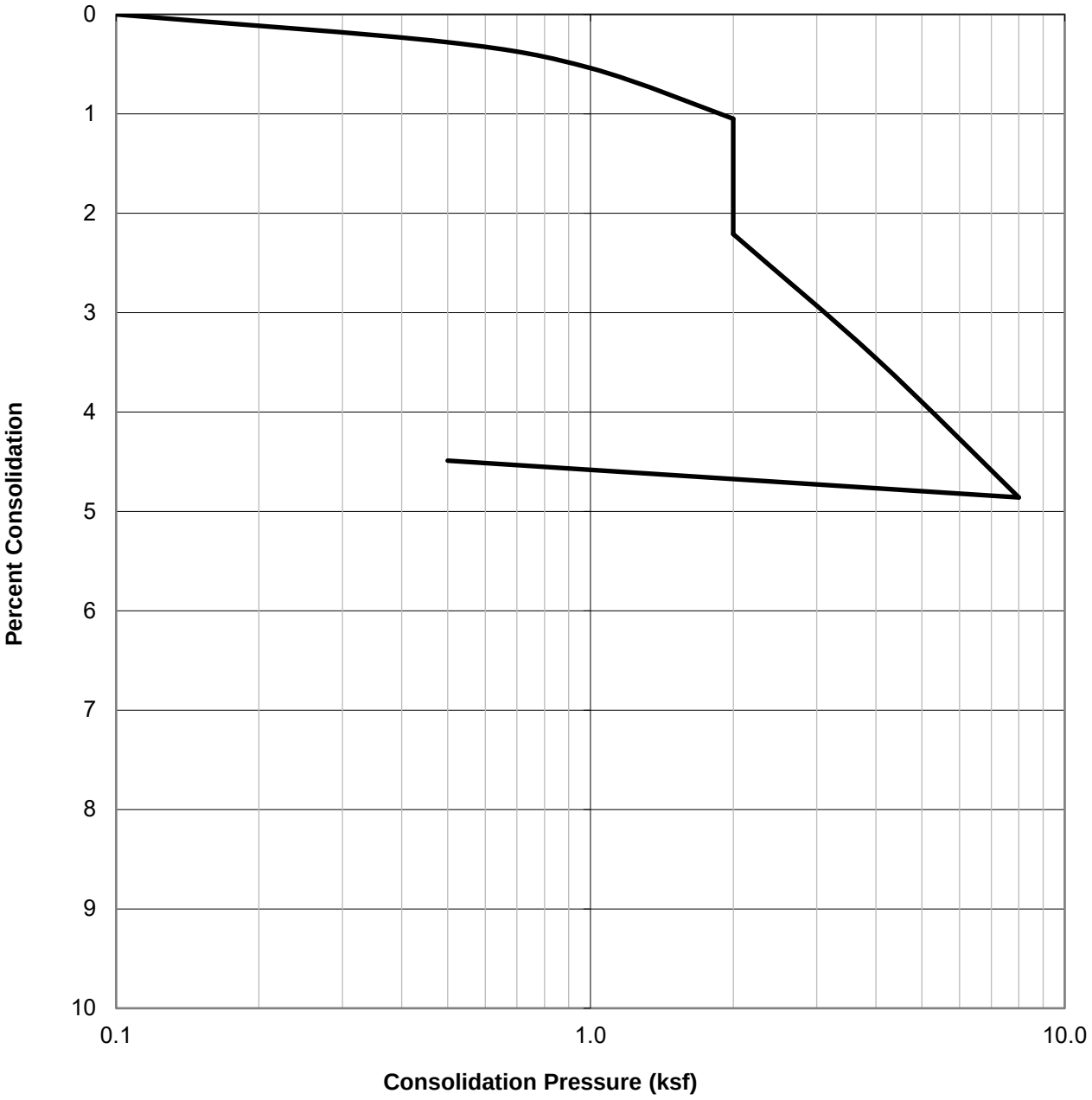
April 2024 Figure B-12

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2@15	Poorly Graded SAND with Silt (SP-SM), light gravish brown	109.1	2.7	14.3

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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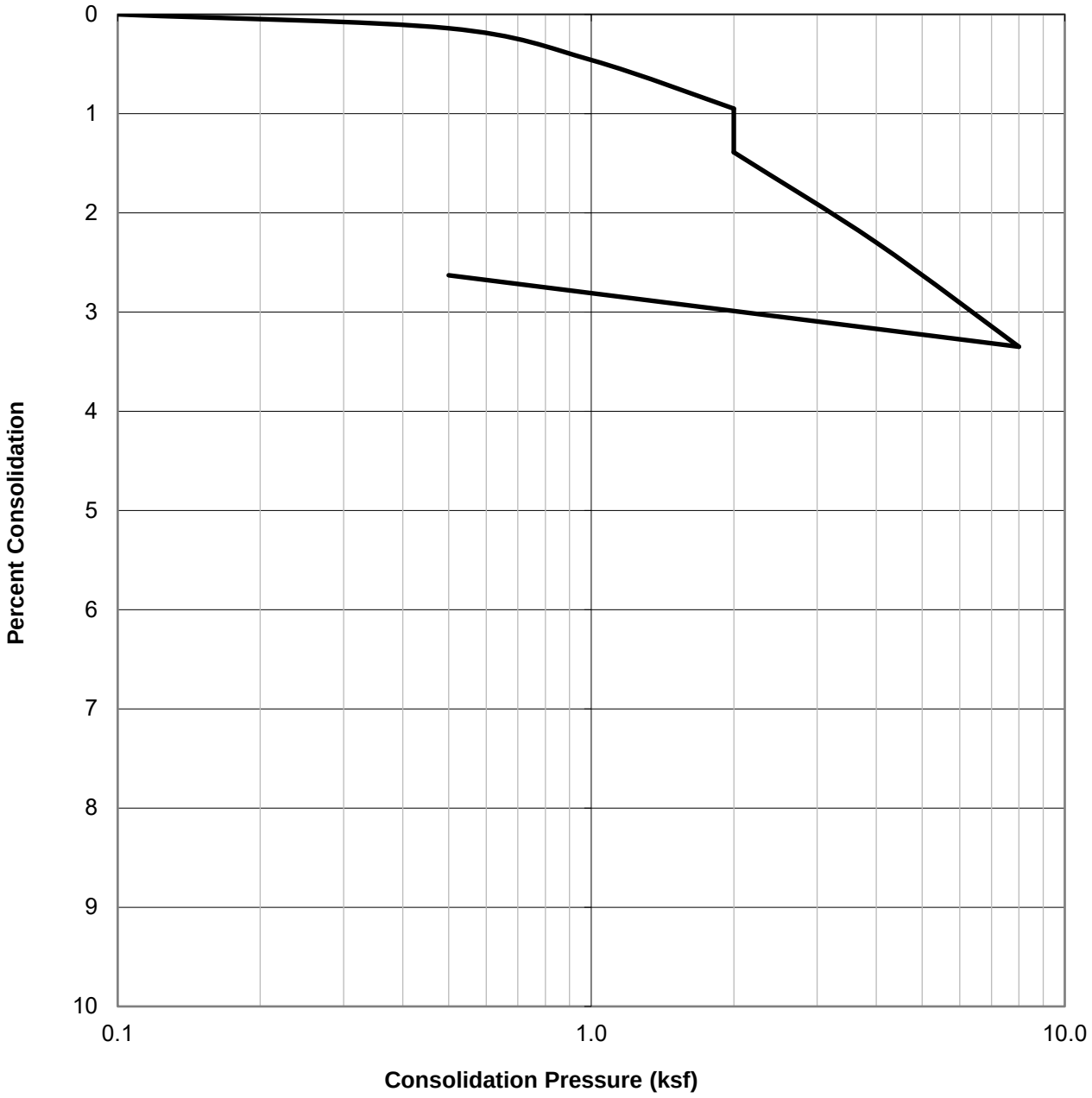
Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-13

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2@25	Poorly Graded SAND with Silt (SP-SM), yellowish gray brown	91.9	3.8	26.7

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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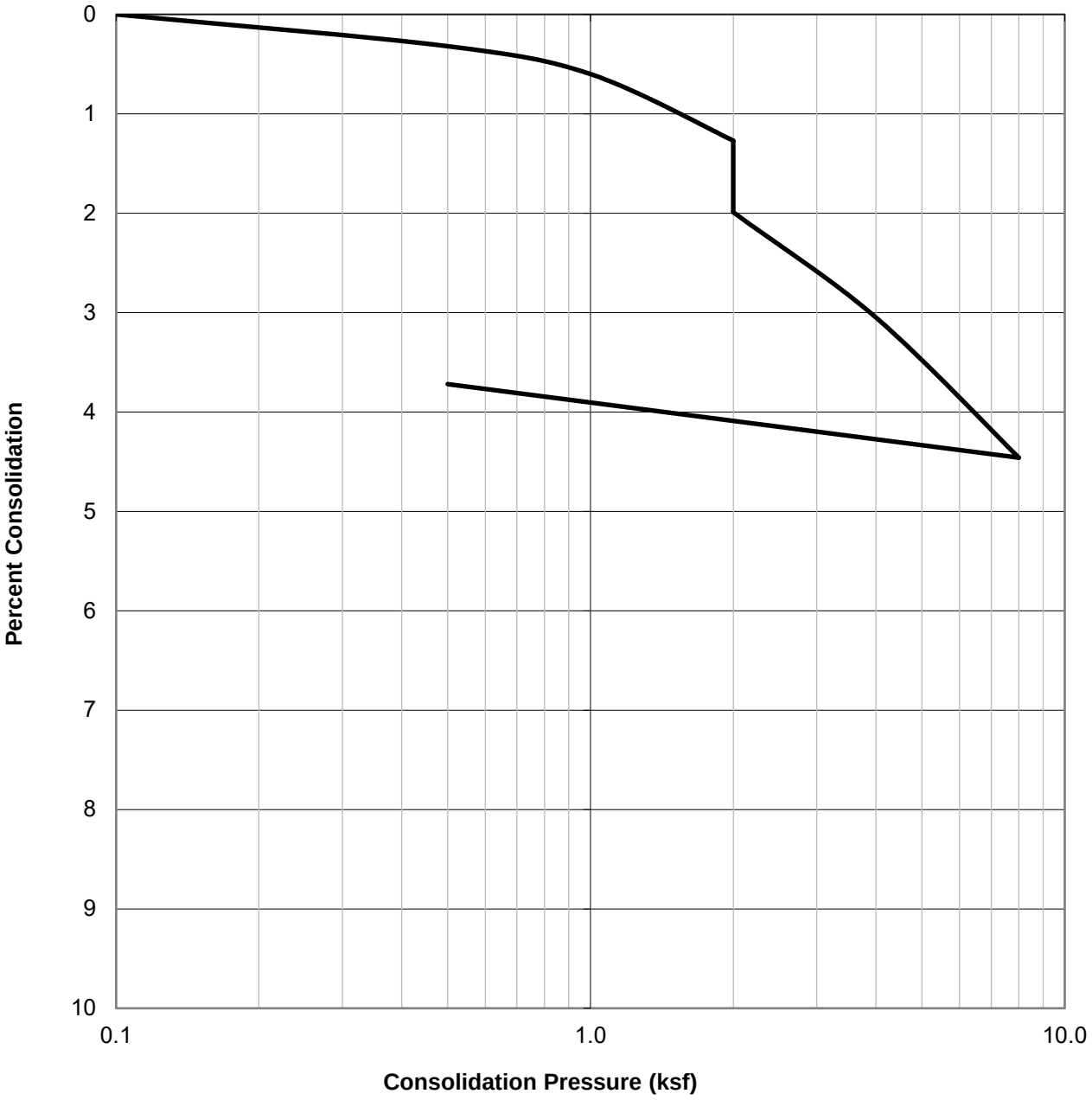
Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-14

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-5@20	Poorly Graded SAND with Silt (SP-SM), light gray	98.7	2.6	20.6

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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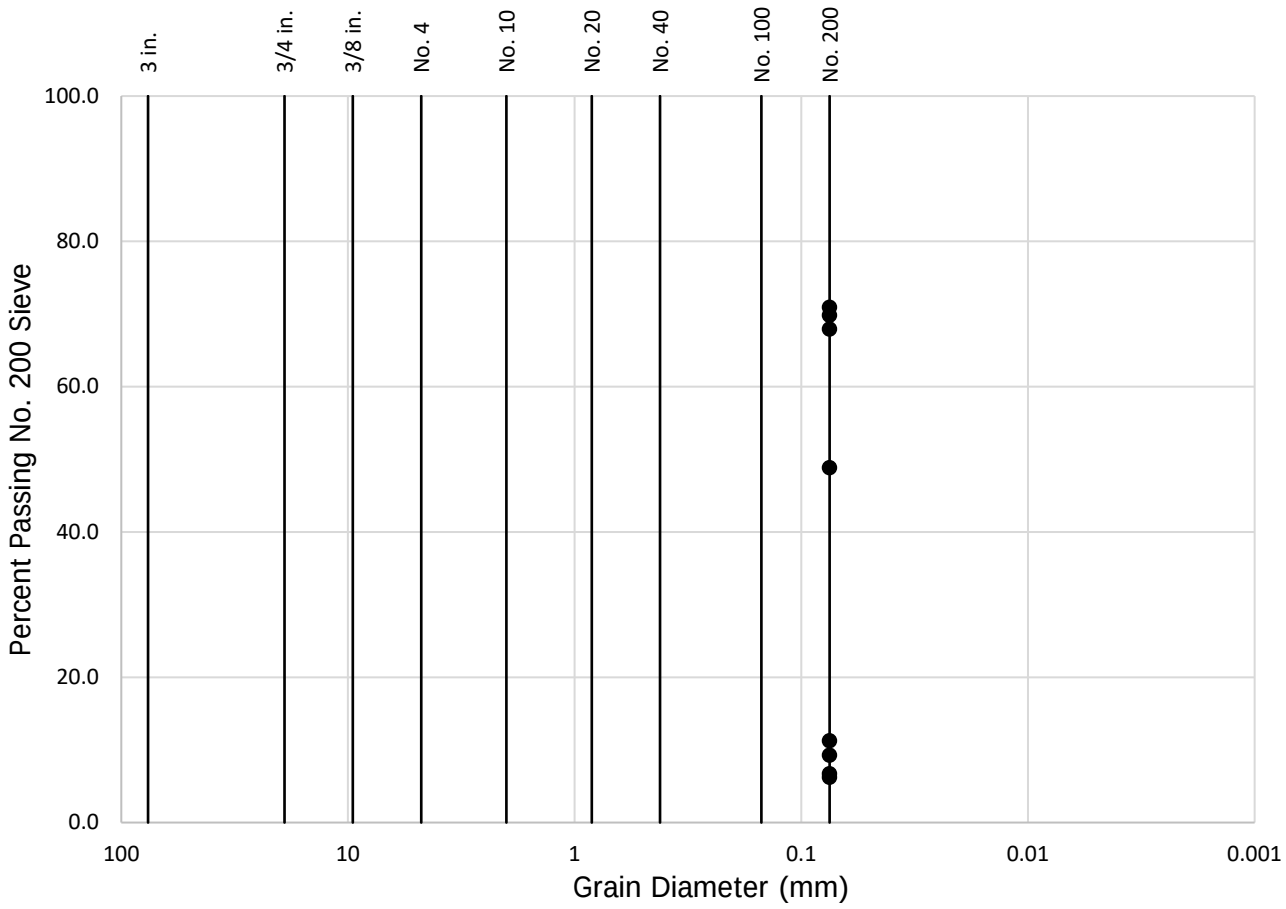
MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-15

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



Sample No.	Percent Passing No. 200 Sieve
B-1 @ 7.5'	68.0
B-3 @ 5'	70.9
B-3 @ 7.5'	69.8
B-3 @ 10'	48.9
B-3 @ 15'	11.3
B-3 @ 25'	9.3
B-3 @ 30'	6.7
B-3 @ 35'	6.2

GEOCON

GRAIN SIZE ANALYSIS

ASTM D-1140

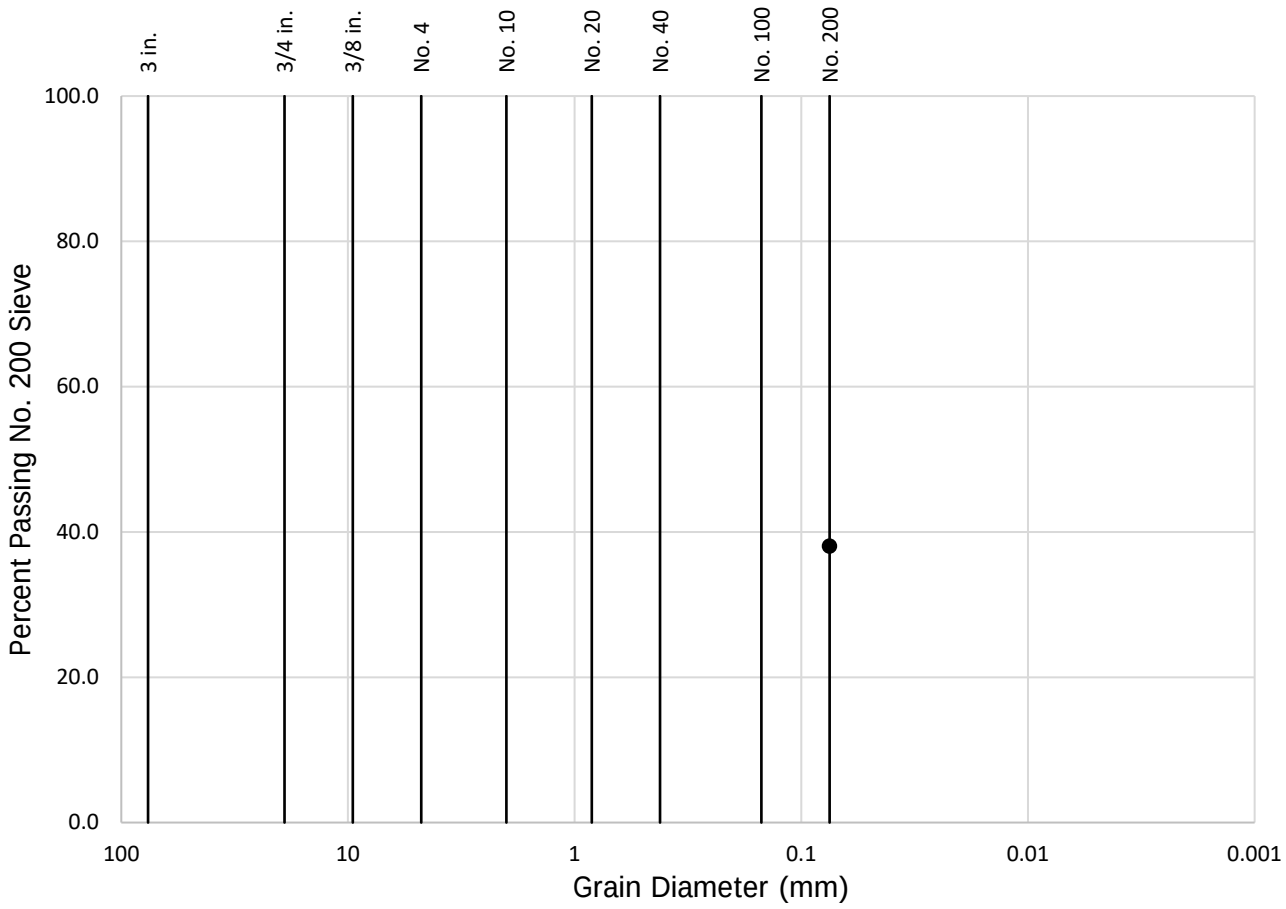
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-16

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



Sample No.	Percent Passing No. 200 Sieve
B-3 @ 50'	38.0

GEOCON

GRAIN SIZE ANALYSIS

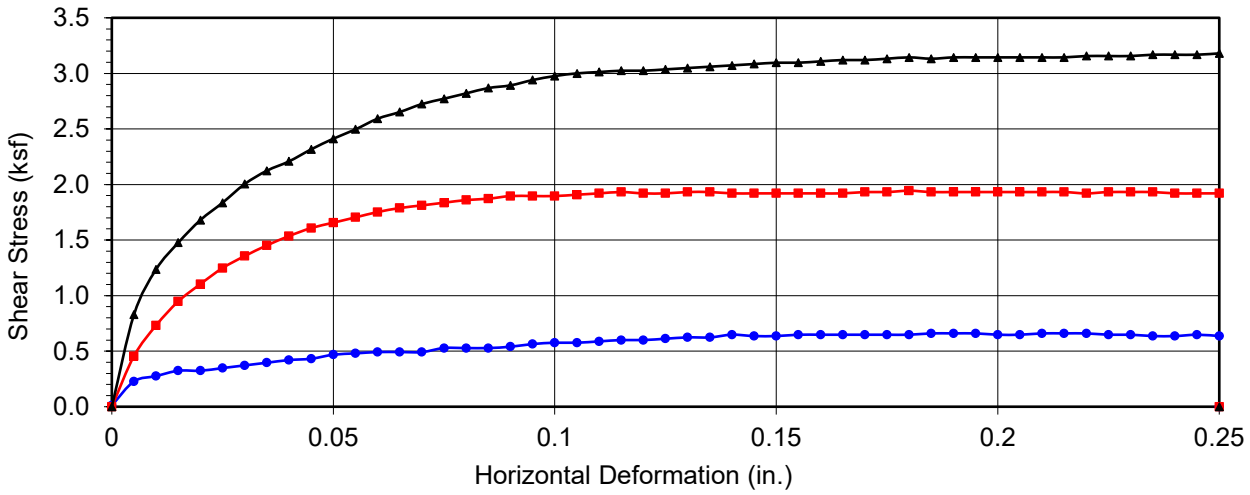
ASTM D-1140

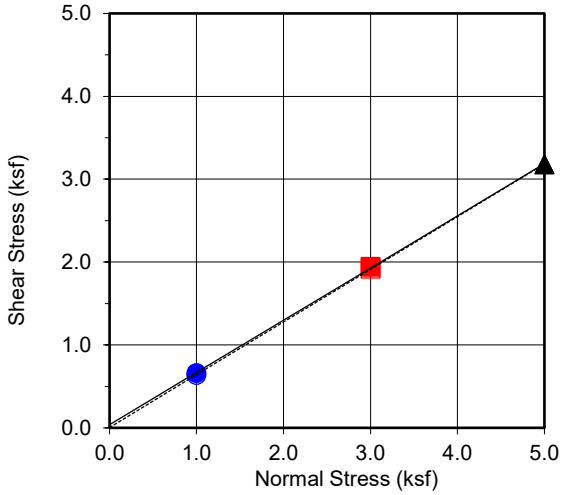
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-17





Boring No.	**B-1**
Sample No.	**B-1@1-5**
Depth (ft)	**1-5**
Sample Type:	Bulk

Soil Identification:

Poorly Graded SAND with Silt (SP-SM), yellow brown to grayish brown

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	38	32
Ultimate	4	32

Normal Stress (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.66	■ 1.94	▲ 3.18
Shear Stress @ End of Test (ksf)	○ 0.64	□ 1.92	△ 3.18
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	12.9	12.9	13.0
Initial Dry Density (pcf)	100.1	100.0	100.1
Initial Degree of Saturation (%)	51.1	50.6	51.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	15.8	18.1	14.8

GEOCON

DIRECT SHEAR TEST RESULTS

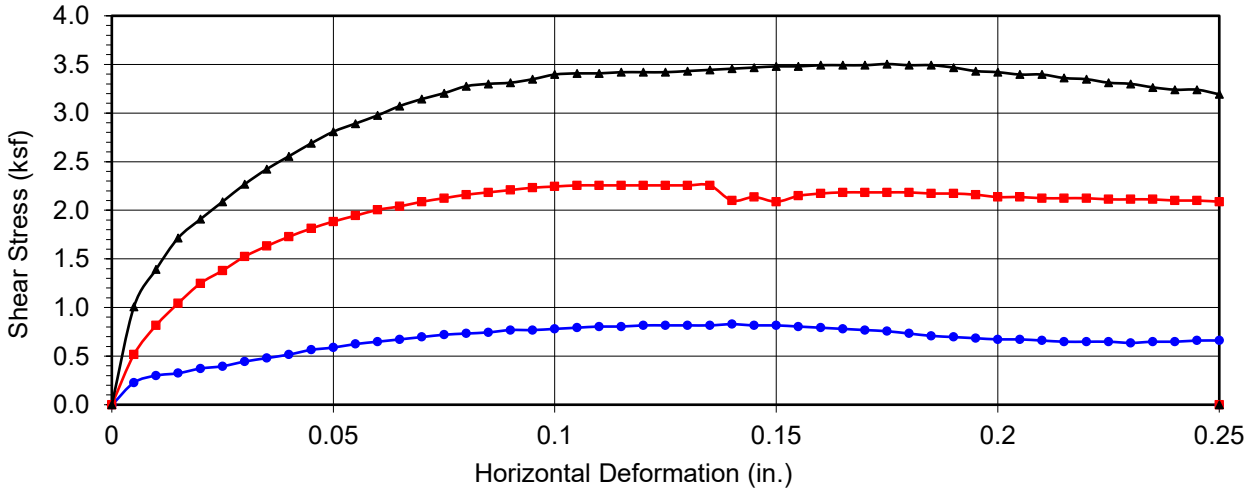
Consolidated Drained ASTM D-3080

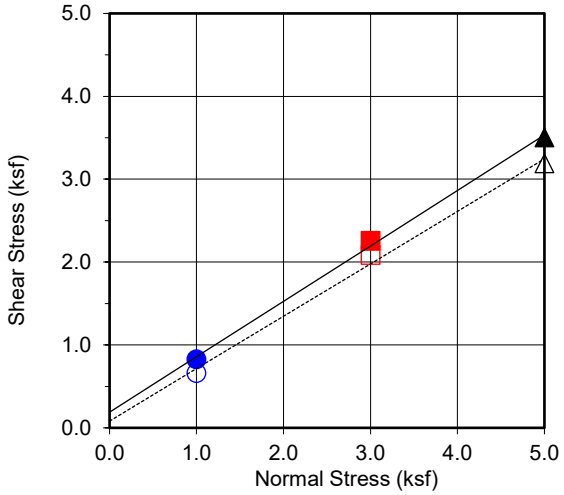
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-18





Boring No.	**B-1**
Sample No.	**B-1@5**
Depth (ft)	**5**
Sample Type:	5

Soil Identification:
Poorly Graded sand with Silt (SP-SM), gray

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	189	34
Ultimate	81	32

Normal Stress (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.83	■ 2.26	▲ 3.50
Shear Stress @ End of Test (ksf)	○ 0.66	□ 2.09	△ 3.19
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.4	7.2	7.9
Initial Dry Density (pcf)	89.7	92.0	91.8
Initial Degree of Saturation (%)	28.8	23.4	25.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	26.6	26.3	23.4

GEOCON

DIRECT SHEAR TEST RESULTS

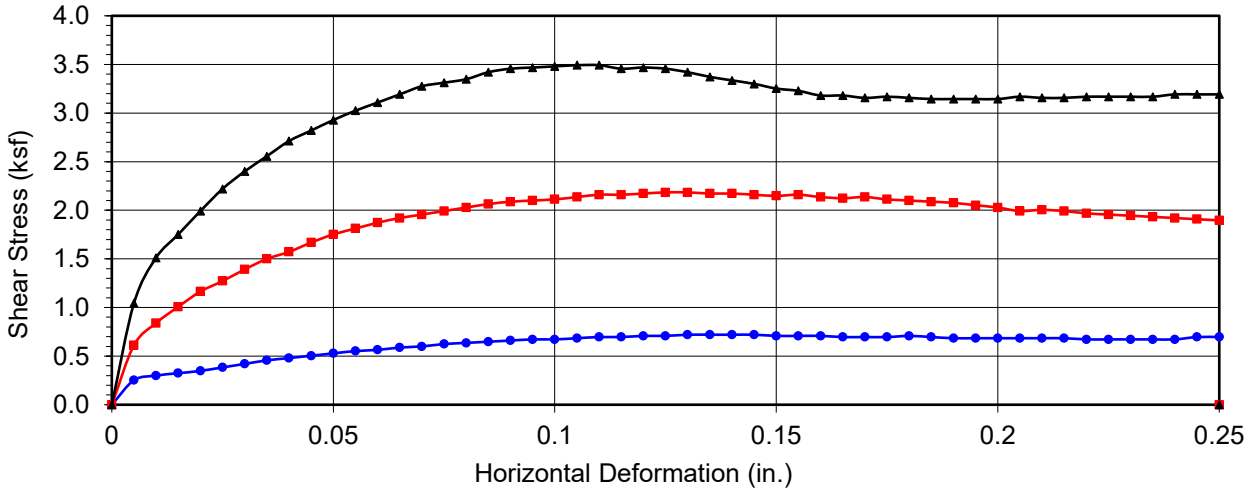
Consolidated Drained ASTM D-3080

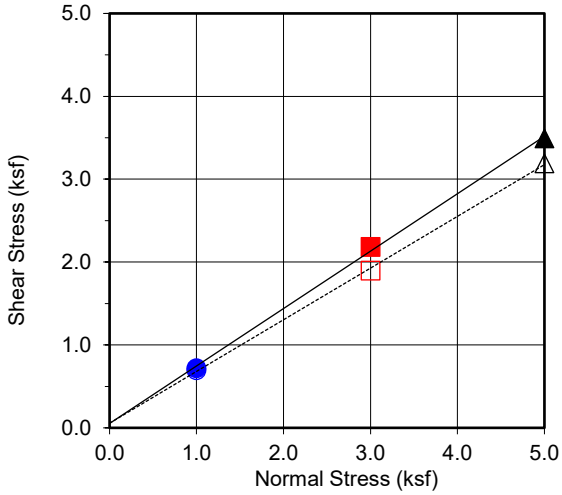
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-19





Boring No.	**B-1**
Sample No.	**B-1@10**
Depth (ft)	**10**
Sample Type:	Ring

Soil Identification:

Sandy SILT (ML), laminated with silty sand, gray to olive brown

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	53	35
Ultimate	56	32

Normal Stress (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.72	■ 2.18	▲ 3.49
Shear Stress @ End of Test (ksf)	○ 0.70	□ 1.90	△ 3.19
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.0	8.9	10.4
Initial Dry Density (pcf)	91.6	93.7	89.2
Initial Degree of Saturation (%)	32.1	30.0	31.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	27.4	26.6	29.0

GEOCON

DIRECT SHEAR TEST RESULTS

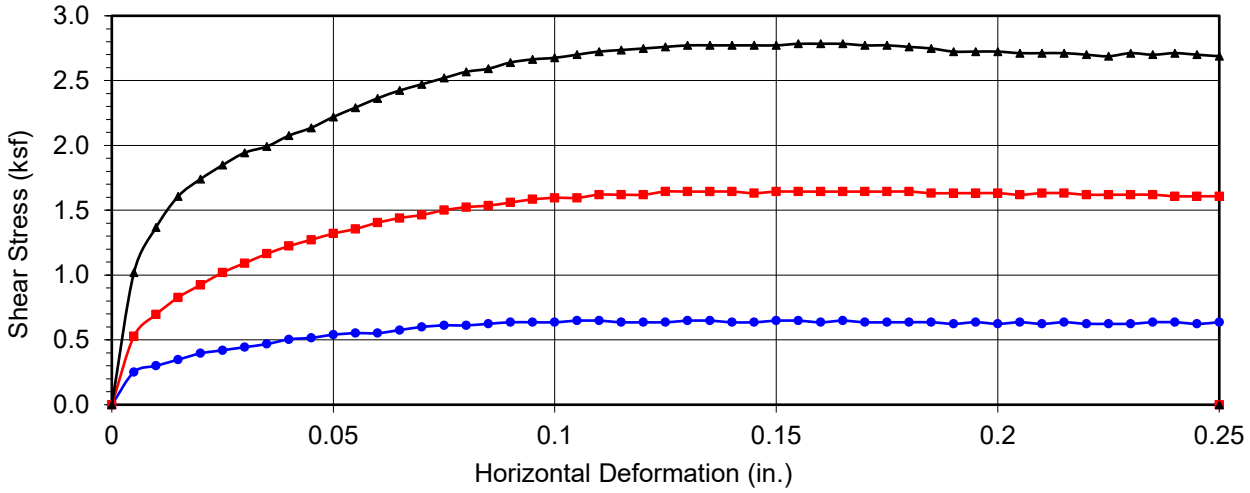
Consolidated Drained ASTM D-3080

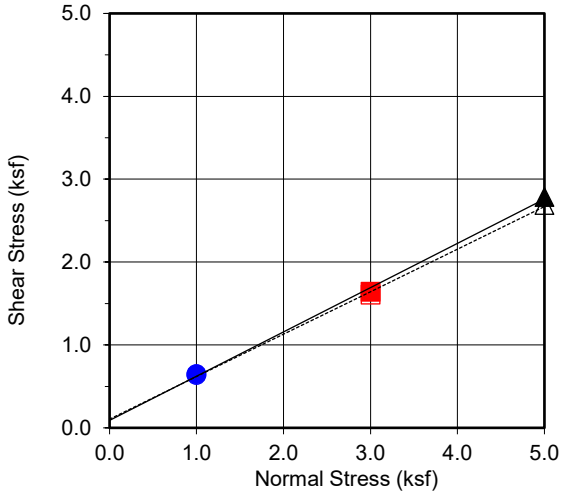
Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-20





Boring No.	**B-2**
Sample No.	**B-2@7.5**
Depth (ft)	**7.5**
Sample Type:	Ring

Soil Identification:
Sandy SILT (ML), gray

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	90	28
Ultimate	105	27

Normal Stress (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.65	■ 1.64	▲ 2.78
Shear Stress @ End of Test (ksf)	○ 0.64	□ 1.61	△ 2.69
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	16.0	18.0	25.8
Initial Dry Density (pcf)	82.8	74.6	76.9
Initial Degree of Saturation (%)	41.7	38.7	58.3
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	33.5	37.4	35.3

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T3065-22-01

MULTIFAMILY APARTMENT COMMUNITY
Peterson Road
Rancho Mirage, California

April 2024 Figure B-21

APPENDIX C

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

MULTIFAMILY APARTMENT COMMUNITY
PETERSON ROAD
RANCHO MIRAGE, CALIFORNIA

PROJECT NO. T3065-22-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

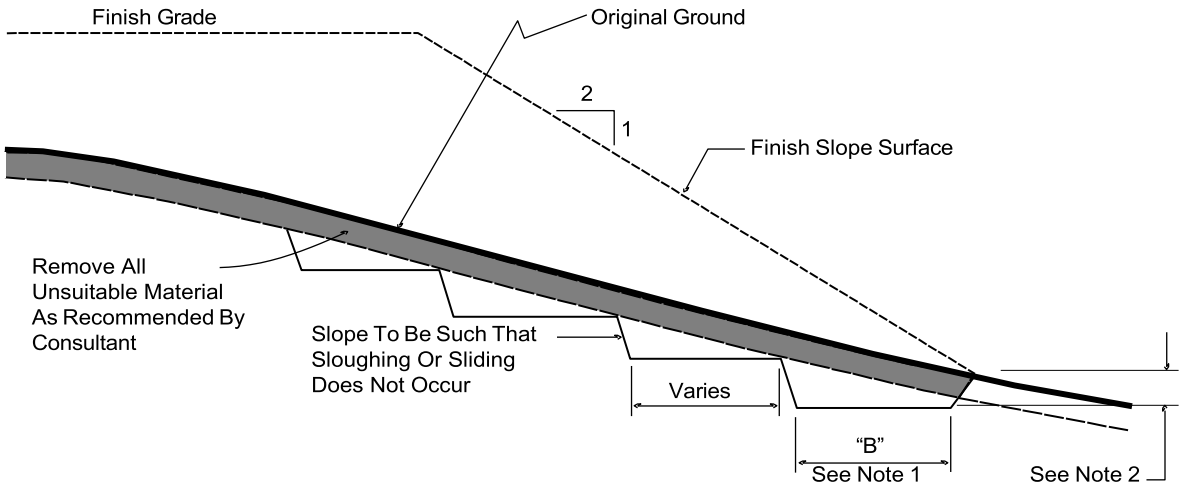
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

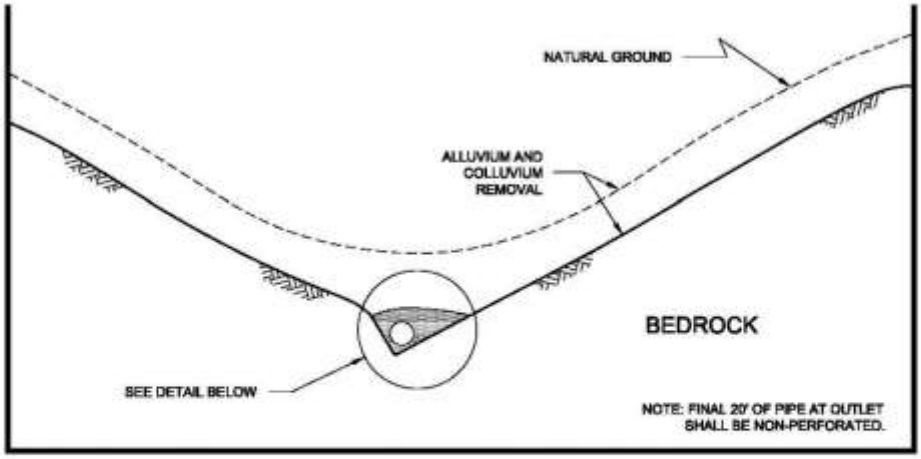
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

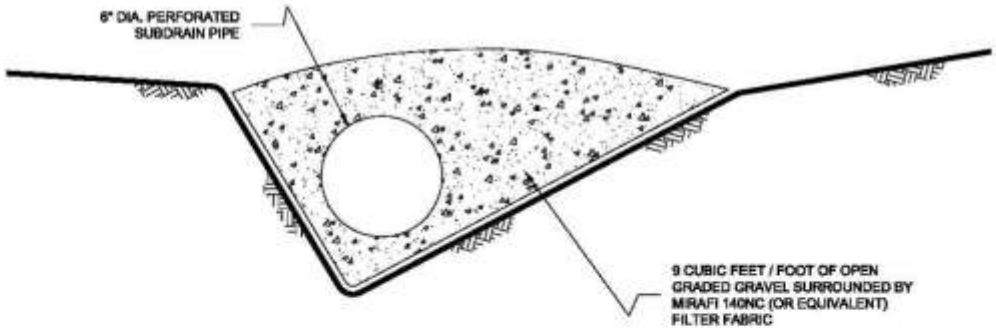
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

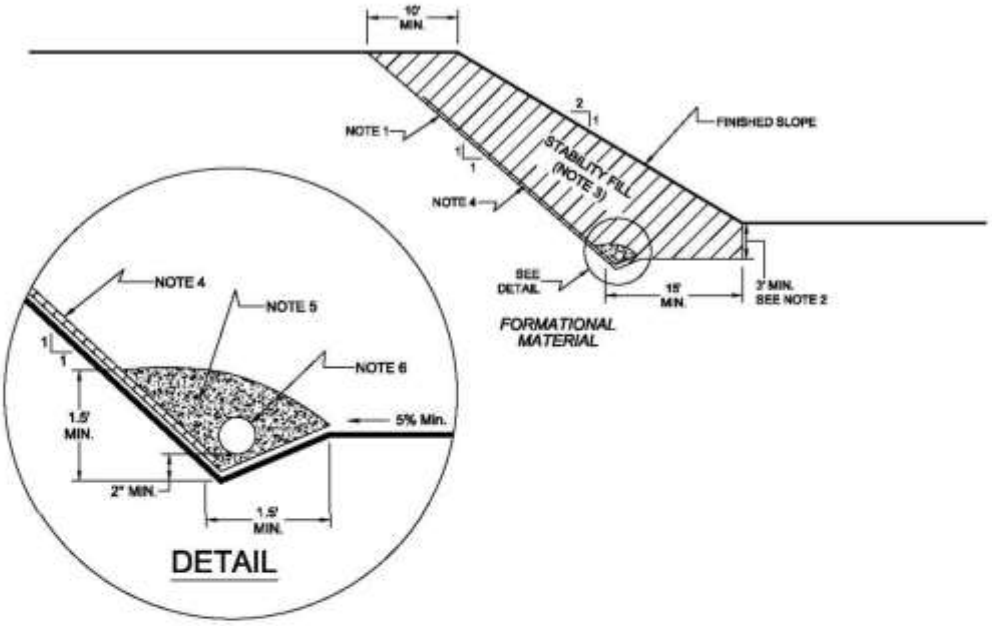
1.....8-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

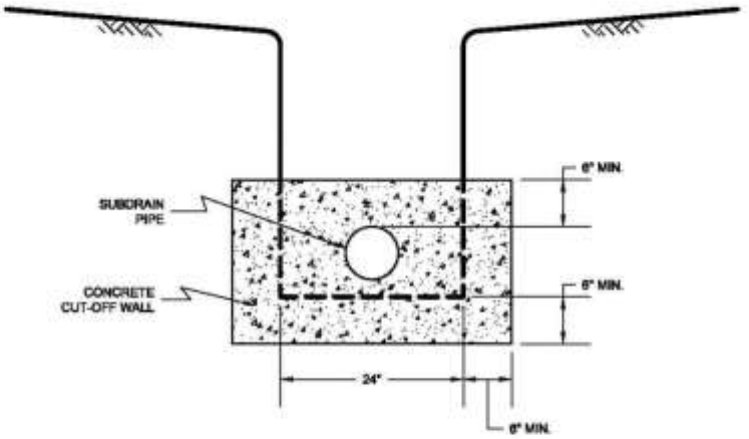
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

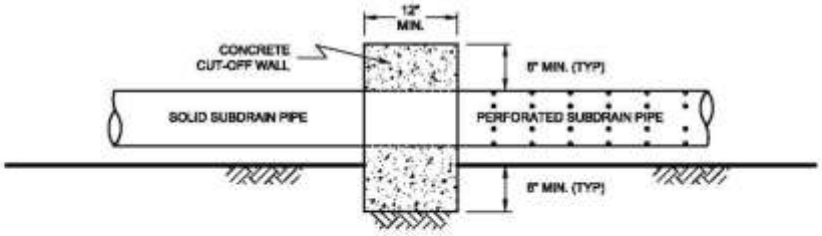
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

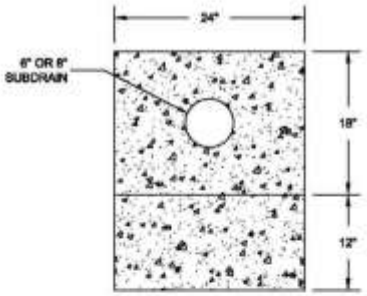


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

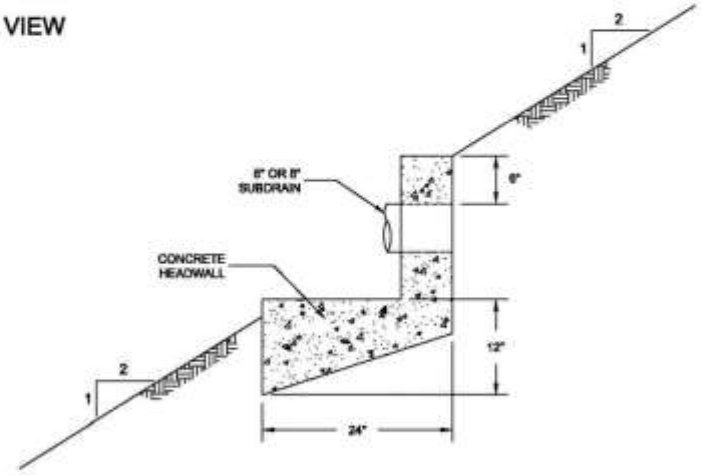
TYPICAL HEADWALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an “as-built” map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 **Soil and Soil-Rock Fills:**

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4 Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

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PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix E
Paleontological Report

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April 2024

MATERIAL CULTURE
CONSULTING

Submitted to:

Blieu Companies, LLC
2000 E. 4th Street #205
Santa Ana, CA 92705

PALEONTOLOGICAL RESOURCES ASSESSMENT
PETERSON ROAD PROJECT
CITY OF RANCHO MIRAGE, RIVERSIDE COUNTY, CALIFORNIA

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PALEONTOLOGICAL RESOURCES ASSESSMENT:
PETERSON ROAD PROJECT
CITY OF RANCHO MIRAGE, CALIFORNIA

Prepared for:

Blieu Companies, LLC
2000 E 4th St. #205
Santa Ana, CA 92705

Principal Investigators/Authors:

Jennifer Ritz, M.S.
Erika McMullin, B.A.
Hannah Johnston, M.Sc.
Zac White, B.A.

Material Culture Consulting, Inc.
2701-B North Towne Avenue
Pomona, CA 91767

April 2024

Type of Study: Paleontological resources assessment
Paleontological Resources within 1-mile of Project Area: None
Geologic Units: Quaternary alluvium with marine deposits (Q), pre-Cenozoic metasedimentary and metavolcanic rocks undivided (m)
USGS 7.5-minute Quadrangle(s): Cathedral City, Section 02 of Township 5 S, Range 5 E
APN(s): 689-180-012
Survey Area: Approx. 12 acres
Date of Fieldwork: March 13, 2024

Key Words: Paleontology, CEQA, Holocene, Pleistocene, Quaternary alluvium with marine deposits (Q), pre-Cenozoic metasedimentary and metavolcanic rocks undivided (m), Low Paleontological Potential, Riverside County

MANAGEMENT SUMMARY

The Peterson Road Project (hereafter referred to as Project or Project Area) proposes the redevelopment of a lot, that currently exists as a defunct trailer park, into a 116 unit multi-family apartment housing complex. The proposed Project encompasses an approximately 12-acre site. The Project is located within the City of Rancho Mirage, Riverside County, California. Material Culture Consulting, Inc. (MCC) was retained by Blieu Companies, LLC (Blieu), to conduct a paleontological assessment of the Project Area. The assessment was conducted in accordance with the California Environmental Quality Act (CEQA) and local regulations and guidelines. This assessment documents the potential for encountering paleontological resources during construction and operation of the Project, and provides recommendations on how to mitigate potential impacts to paleontological resources. The City of Rancho Mirage is the lead agency under CEQA.

The Project Area is mapped as Pliocene- to Holocene-age Quaternary alluvium with marine deposits (Q) (Dibblee and Minch 2008). Additionally, Early Proterozoic- to Cretaceous-age pre-Cenozoic metasedimentary and metavolcanic rocks undivided (m) are mapped within a 1-mile buffer of the Project Area (Dibblee and Minch 2008). The presence of fossil material is unlikely given the young age of the Holocene alluvial units and the adjacent non-fossiliferous metamorphic rocks. The locality search at Western Science Center (WSC) reported no fossil localities within one mile of the Project Area (Stoneburg 2024).

The potential for encountering significant paleontological resources within the Project Area is low throughout the Project, however, there is a potential for sensitive sediments to be reached at an unknown depth. The Riverside County General Plan Multipurpose Open Space (OS) Element indicates that additional paleontological mitigation is not required for projects mapped in Low sensitivity areas, unless an inadvertent discovery is made. MCC recommends no direct paleontological mitigation for this Project unless an unanticipated fossil resource is located during the construction process, in accordance with Riverside County General Plan OS 19.7.

All notes, correspondence, and other materials related to this Project are located at MCC, in Pomona, California.

TABLE OF CONTENTS

List of Figures

INTRODUCTION

The Peterson Road Project (hereafter referred to as Project or Project Area) proposes the redevelopment of a lot, that currently exists as a defunct trailer park, into a 116 unit multi-family apartment housing complex. Material Culture Consulting, Inc. (MCC) was retained by Blieu Companies, LLC (Blieu), to conduct a paleontological assessment of the Project Area. The assessment was conducted in accordance with the California Environmental Quality Act (CEQA) and local regulations and guidelines. This assessment documents the potential for encountering paleontological resources during construction and operation of the Project and provides recommendations on how to mitigate impacts to paleontological resources. The City of Rancho Mirage is the lead agency under CEQA.

PROJECT LOCATION AND DESCRIPTION

The Project is located in the City of Rancho Mirage, in Riverside County (Figure 1). The Project consists of a previously developed lot totaling approximately 12 acres (APN# 689-180-012). The Project Area is situated east of San Jacinto Mountain and adjacent of California State Route 111 (Hwy 111). Specifically, the proposed Project is located within Section 02, Township 05 South, Range 05 East on the Cathedral City USGS 7.5-minute quadrangle (San Bernardino Base Meridian) (Figure 2). The Project Area is bound by private residential property to the north, near Desert Cove Ave. and private residential property to the south, near Juniper Lane, with a golf course to the east, near Butler Adams Trail, and a privately owned public storage units to the west near Peterson Road (Figure 3). The proposed Project involves the development of a multi-family apartment complex that would consists of 116 units on redeveloped parcels of land.

PROJECT PERSONNEL

Jennifer Ritz, M.S., served as the Staff Paleontologist II for this Project and authored this report. Ms. Ritz has a M.S. in Geology from California State University, Long Beach and over 14 years experience in all aspects of paleontology, including 12 years in California paleontological mitigation. She is the Qualified Paleontological Resource Consultant for MCC on the County of Riverside's Paleontological Consultant List, under Jennifer Kelly.

MCC Cultural Resource Project Manager and cross-trained Paleontologist Erika McMullin, B.A. oversaw the Project and provided peer technical review of the review. MCC Archaeologist and cross-trained Paleontologist, Hannah Johnston, M.Sc., provided authorship of this report and GIS support. MCC Archaeologist and cross-trained Paleontologist Zac White, B.A. conducted the field survey and provided co-authorship of the report.

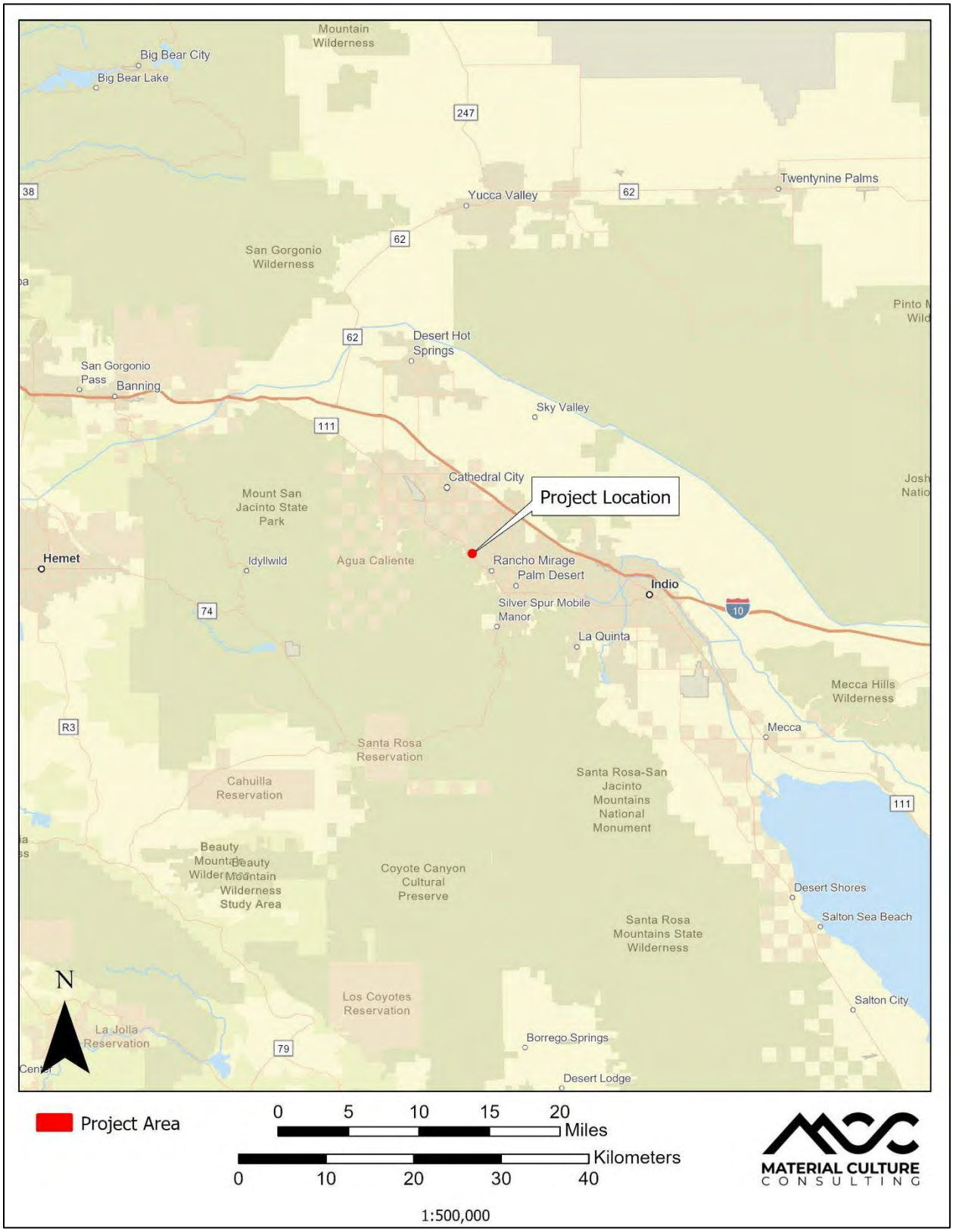

Figure 1. Peterson Road Project Vicinity (1:500,000).

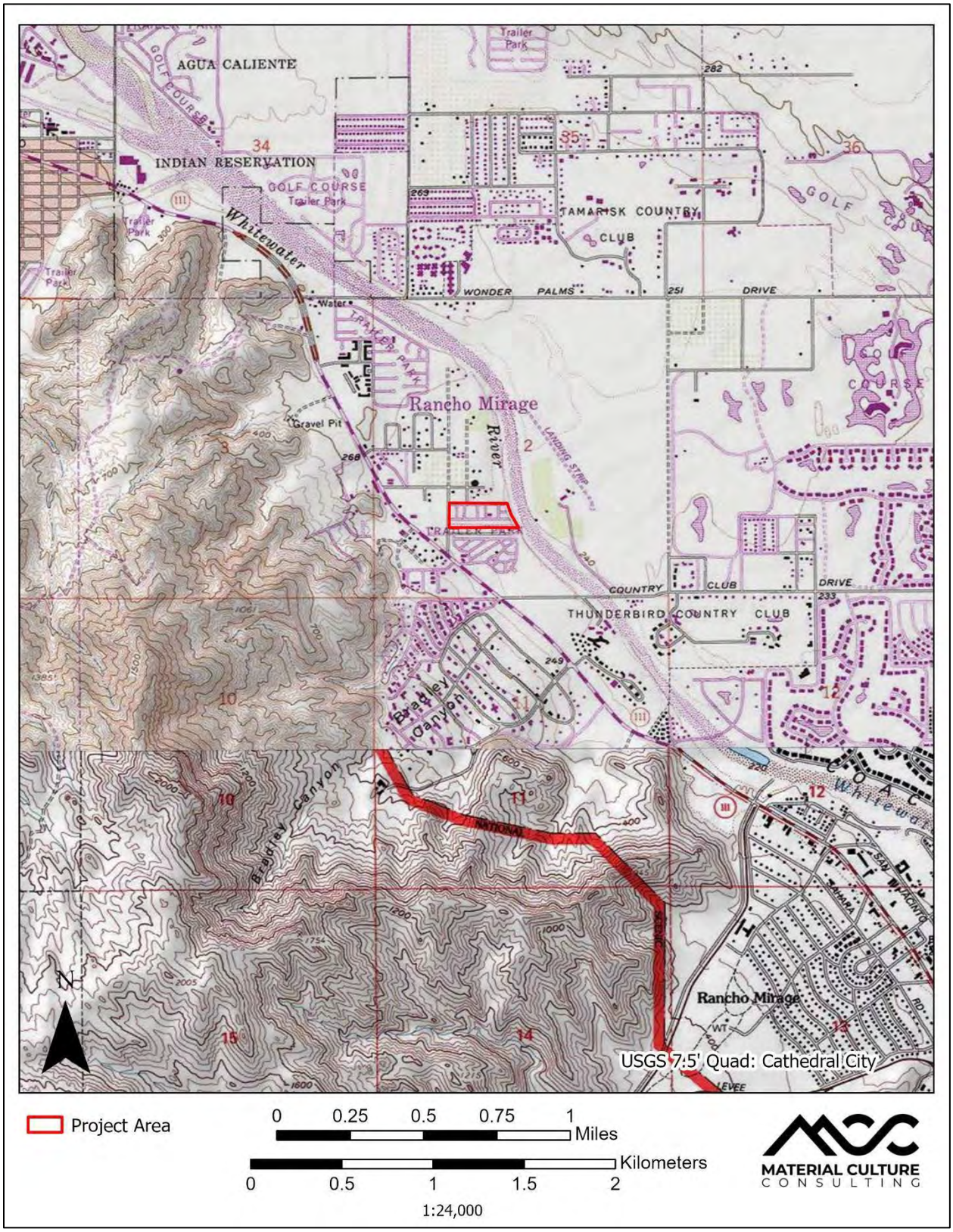

Figure 2. Peterson Road Project Location (as depicted on Cathedral City USGS 7.5-minute Quadrangle, 1:24,000)

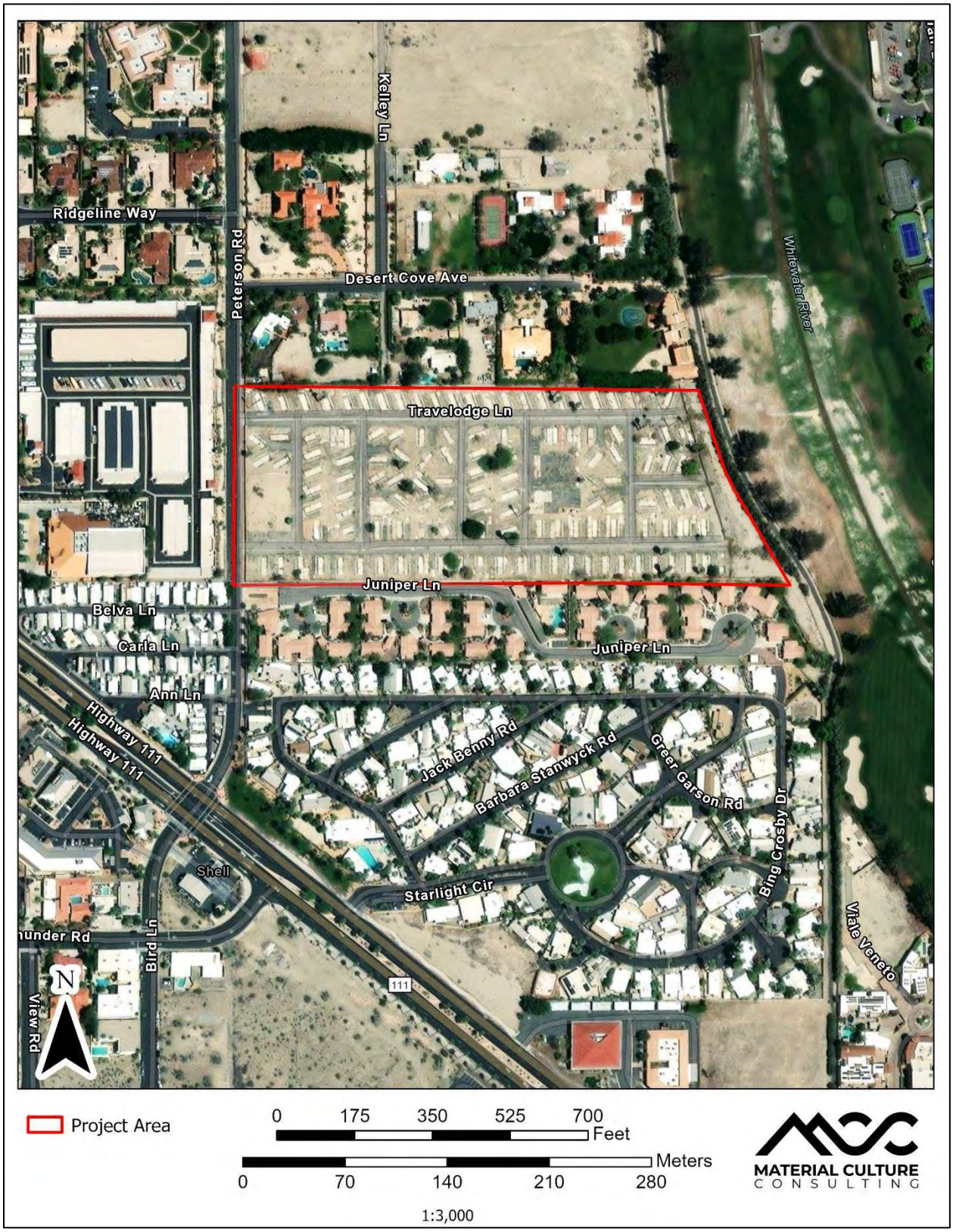

Figure 3. Peterson Road Project Area (as depicted on aerial photograph, 1:3,000).

REGULATORY ENVIRONMENT

The Project is subject to local and state laws and regulations regarding paleontological resources. These regulations require the identification of paleontological resources during the planning stage of new projects; include application review for projects that would potentially involve land disturbance; provide project-level standard conditions of approval that address unanticipated discoveries; and provide requirements to develop specific mitigation measures if resources are encountered during any development activity. Specific governing legislation and regulations include the following:

STATE REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA declares that it is state policy to "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

The CEQA Environmental Checklist includes one question regarding paleontological resources: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” (CEQA Guidelines Appendix G, Section VII, Part F). If paleontological resources are identified as being within a proposed project area, the sponsoring agency must take those resources into consideration when evaluating project impacts. The level of consideration may vary with the importance of the resource.

CEQA does not provide a definition for unique paleontological resources. Therefore, many paleontologists and agencies utilize the Society of Vertebrate Paleontology (SVP) criteria, which define significant (i.e., unique) paleontological resources as:

> “Fossils and fossiliferous deposits…consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information” (SVP 2010).

CALIFORNIA PUBLIC RESOURCES CODE

Public Resources Code (PRC) Division 5, Chapter 1.7, Section 5097.5 includes additional state-level requirements for the assessment and management of paleontological resources. Section 5097.5 states that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure or deface, any historic or precontact ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. As defined in PRC Section 5097.5, public lands include any lands owned by, or under the jurisdiction of the state, county, district, authority, or public corporation, or any agency thereof.

LOCAL REGULATIONS

RIVERSIDE COUNTY GENERAL PLAN

While the City of Rancho Mirage is the Lead Agency, their General Plan does not specify requirements for paleontological resources. The Riverside County General Plan requires consideration of paleontological resources under the Multipurpose Open Space Element of the general plan (County of Riverside, 2015). The Riverside County General Plan recommendations are based on the SVP guidelines (2010) for the mitigation of paleontological

resources. Additionally, the Riverside County General Plan Multipurpose Open Space Element contains a figure of paleontological sensitivity, Figure OS-8. The Multipurpose Open Space Element of the general plan (County of Riverside, 2015) provides the following requirements for paleontological sensitive areas within the county:

- **OS 19.6.** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
- **OS 19.7.** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.
- **OS 19.8.** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.
- **OS 19.9.** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center (WSC) in the City of Hemet.

METHODS

PALEONTOLOGICAL RESEARCH

The literature review included an examination of geologic maps of the Project Area and a review of relevant published and unpublished geological and paleontological literature to determine which geologic units are present within the Project Area and whether fossils have been recovered from those geologic units elsewhere in the region. As geologic units may extend over large geographic areas and contain similar lithologies and fossils, the literature review includes areas well beyond the Project Area.

Riverside County Information Technology (RCIT/RCLIS) also provides a paleontological resource sensitivity map to determine the required impact mitigation used in environmental assessments of development proposals (RCLIS 2021). This map was consulted by MCC staff on March 12, 2024.

The purpose of a locality search is to establish the status and extent of previously recorded paleontological resources within and adjacent to the study area for a given project. On March 6, 2024, a locality search was conducted through the Western Science Center (WSC) for the Project Area.

PALEONTOLOGICAL POTENTIAL ASSESSMENT

The Riverside County General Plan (2015) recommendations are based on the Society of Vertebrate Paleontology guidelines (2010) for the mitigation of paleontological resources. Riverside County classifies paleontological potential three ways:

> **Low Potential**: Previous field surveys and documentation have demonstrated these areas as having a low potential for containing significant paleontological resources. However, it must be noted that surface geology is not always indicative of subsurface geology or the potential for paleontological resources.
>
> **Undetermined Potential**: Areas underlain by sedimentary rocks for which literature or unpublished studies are not available, have undetermined potential for containing significant paleontological resources.
>
> **High Potential**: Sedimentary rocks with high potential for containing significant non-renewable paleontological resources include rock units in which vertebrate or significant invertebrate fossils have been found or determined likely to be present. High sensitivity areas are mapped as either “High A” or “High B” based on the following criteria:
>
> > **High Sensitivity A**: Geologic formations or mapped rock units that are known to contain or have the correct age and depositional conditions to contain significant paleontological resources.
> >
> > **High Sensitivity B**: A sensitivity equivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface. This category indicated fossils that are likely to be encountered at or below 4 feet of depth and may be impacted during construction activities.

The entirety of the Peterson Road Project lies within an area mapped as Low Potential according to County of Riverside GIS

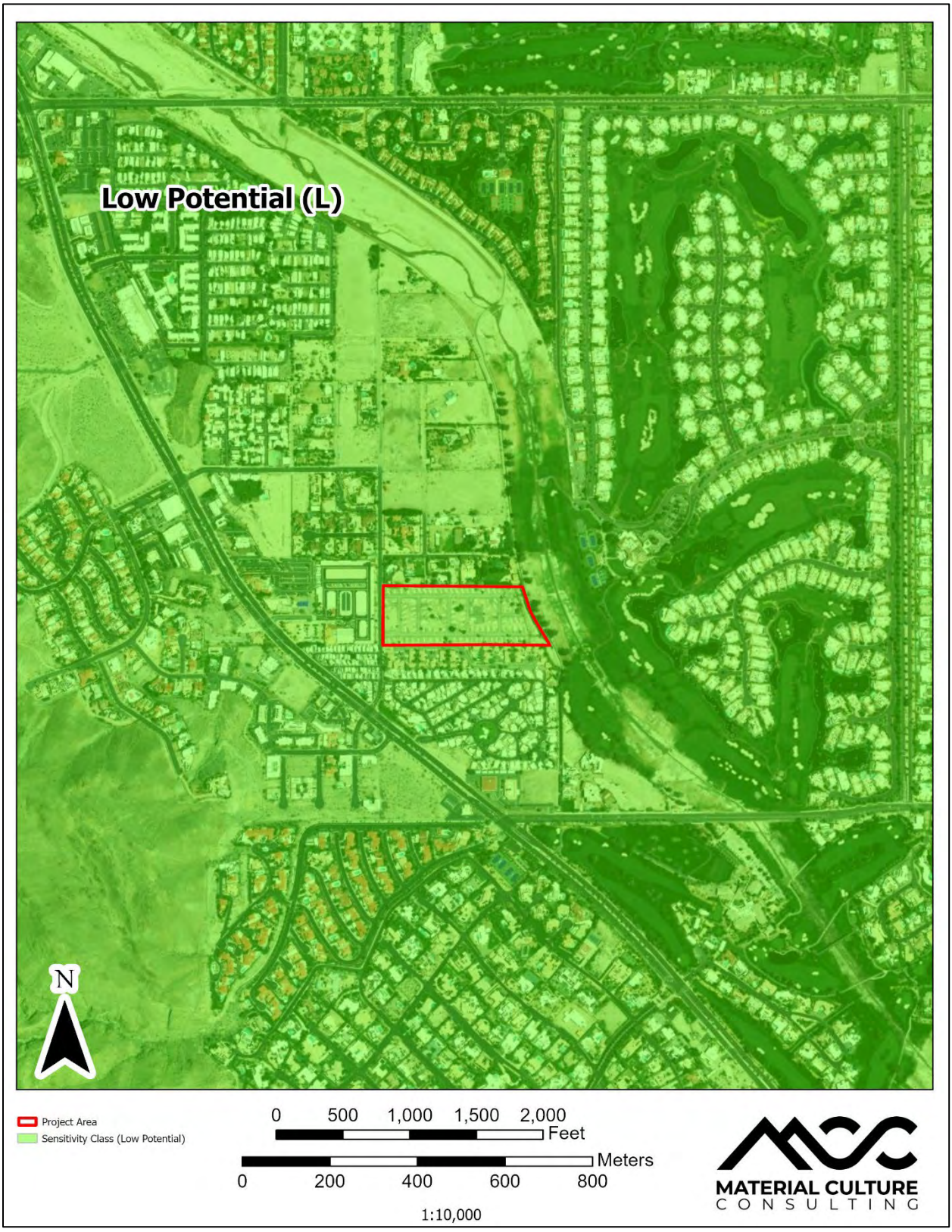

Figure 4. Peterson Road Project Paleontological Sensitivity Map.

BACKGROUND CONTEXT

GEOLOGIC OVERVIEW

The Project Area is located within the Peninsular Ranges Geomorphic Province (California Geological Survey 2002). A geomorphic province is a geographical area of distinct landscape character with related geophysical features, including relief, landforms, orientations of valleys and mountains, type of vegetation, and other geomorphic attributes (Harden 2004). Attributes of the Peninsular Ranges Geomorphic Province consist of northwest-southeast-trending, fault-bounded discrete blocks, with mountain ranges, broad intervening valleys, and low-lying coast plains (Yerkes et al. 1965; Norris and Webb 1990). Within California, the Peninsular Ranges Geomorphic Province extends approximately 125 miles from the Transverse Ranges and the Los Angeles Basin south to the Mexican border, extending southward approximately 775 miles toward to the tip of Baja California, and it is bound on the east by the right-slip San Andreas Fault Zone, the Eastern Transverse Ranges, and the Colorado Desert (Norris and Webb 1990; Hall 2007).

The Project Area is mapped as Pliocene- to Holocene-age Quaternary alluvium with marine deposits (Q) (Stoneburg 2024, Figure 4). Within a 1-mile radius of the Project, to the south and southwest, metasedimentary and metavolcanic rocks are exposed in the foothills; however, these units do not occur within the Project's footprint and thus will not be discussed beyond this section.

Pliocene- to Holocene-age Quaternary alluvium with marine deposits (Q) consists of light brown loose, fine- to medium-grained sand covering alluvial deposits from the Holocene epoch (Dibblee and Minch 2008). This unit is considered to have low paleontological potential.

Early Proterozoic- to Cretaceous-age pre-Cenozoic metasedimentary and metavolcanic rocks undivided (m) consists of brown sand and gravel (Dibblee and Minch 2008). As this geologic unit is an igneous and/or highly altered metamorphic rock, it is considered to have a low paleontological potential, and does not occur within the direct Project area.

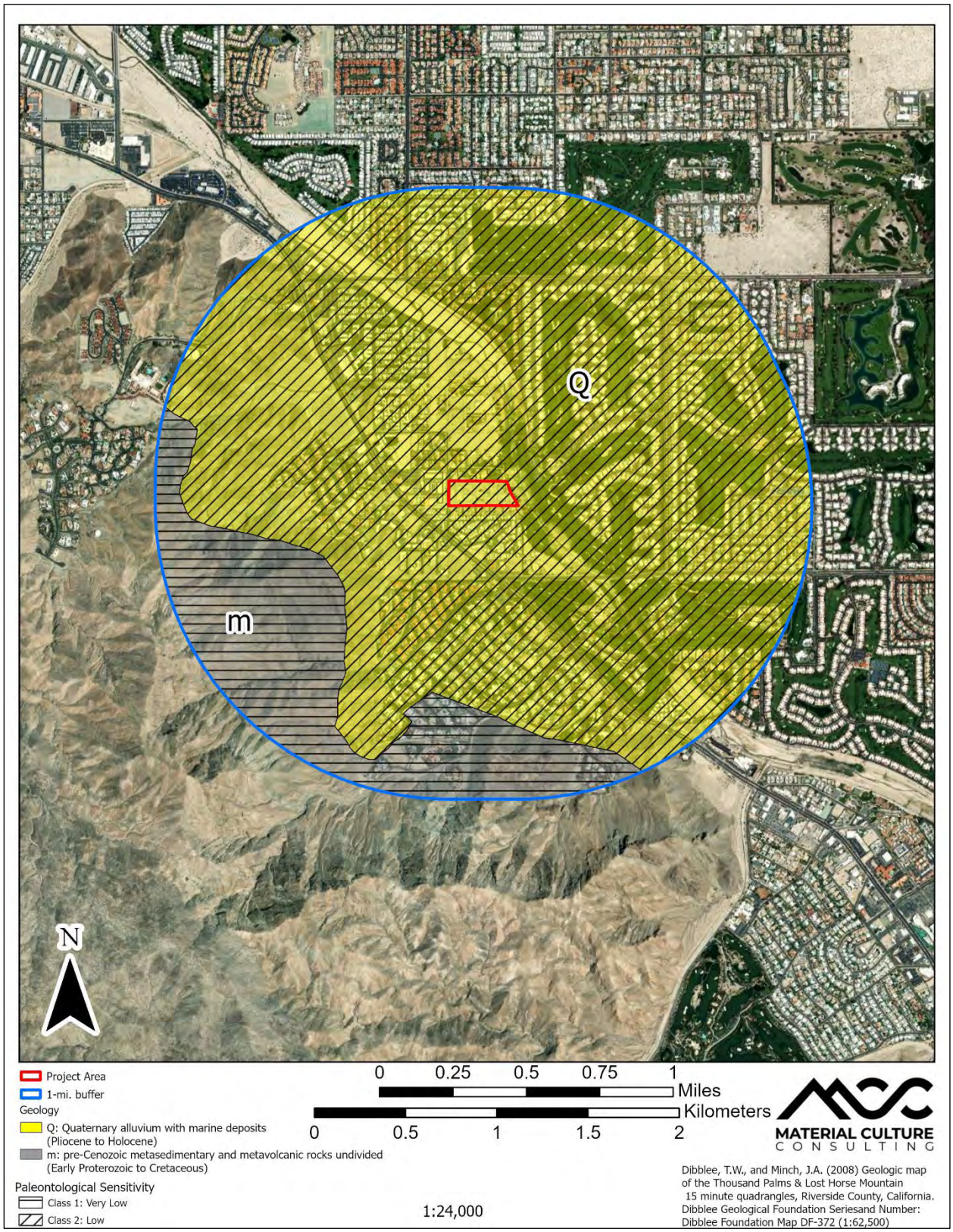

Figure 5. Peterson Road Project Geology (1:24,000).

RESULTS

PALEONTOLOGICAL RECORDS SEARCH

After reviewing the paleontological sensitivity layer on Riverside County Map My County provided by Riverside County Information Technology (RCIT), the Project Area was deemed to have low paleontological potential (Riverside County 2024, Figure 4). No paleontological records from this area or within 1 mile of the Project were discovered in the literature searches.

In March 2024, a locality search was conducted through the Western Science Center of Riverside County (WSC) (Appendix A). This search identified did not identify any vertebrate localities in the WSC records that exist near the Project Area in the same or similar deposits.

PALEONTOLOGICAL FIELD SURVEY RESULTS

During the course of fieldwork, survey conditions were fair due to the Project Area being mostly developed (Figure 5-24). Ground visibility in the entire Project Area ranged from poor to good (20-75%) due to density of overgrown grass and weeds. The average surface visibility was good (75%). The eastern portion of the Project Area had lowered visibility (10-25%) due to denser vegetation. Areas with poorer visibility were surveyed in 5-meter transects instead of 10-meter transects. Presently, the Project Area exists as an empty mobile home community with a gradual west-facing slope of less than 5-degrees. Furthermore, the entire area shows heavy disturbance from previous development.

Overall, the Project Area is highly disturbed. The remnants of 125 individual mobile home lots and 3 parking lots were observed throughout the Project Area. Each mobile home lot consists of a paved structure pad, sidewalk, driveway and underground utilities. Heavy grading and excavation would have taken place to build the lots, utilities and the roads (Travelodge Lane) that connect them. Piles of modern refuse and landscaping material were observed throughout the project area. Evidence of imported landscaping material was observed with the presence of white quartz gravel, red lava rock and decorative clam shell. Soil in the area consisted of brown fine- to medium coarse-grained silty sand with imported quartz and volcanic pebble-sized inclusions. No paleontological resources were observed during the field survey.

Figure 6. Overview of Project Area from Peterson Road, including Travelodge Lane, facing east

Figure 7. Overview of Project Area, including access gate along Peterson Rd., facing south

Figure 8. Representative photo of sediments including red brick tile on Northwest end of Project Area, plan view

Figure 9. Representative photograph of imported white quartz gravel, plan view

Figure 10. Representative photograph of decorative shell, plan view

Figure 11. Overview of project area from north end, facing west

Figure 12. Overview of project area, facing southwest

Figure 13. Representative photograph of red brick and cement mortar landscaping, plan view

Figure 14. Representative photograph of imported volcanic gravel, plan view.

Figure 15. Overview of Project Area, including Travelodge Ln, facing west

Figure 16. Overview of overgrowth on east end of project area, facing south

Figure 17. Overview of modern refuse, facing north

Figure 18. Representative photograph of modern refuse, view west

Figure 19. Overview of Project Area, facing east

Figure 20. Overview of Project Area, facing south

Figure 21. Representative photo of utility connections for mobile home lots, plan view

Figure 22. Overview of parking lot on east end of project area, Facing northeast

Figure 23. Representative photo of vegetation density, facing south

Figure 24. Representative photo of sediments, Plan view

Figure 25. Overview of single mobile home lot, facing west

CONCLUSIONS AND RECOMMENDATIONS

PALEONTOLOGICAL RESOURCES CONCLUSIONS

The paleontological resource assessment of the Project Area included a locality records search, geological map and literature reviews. The records search at the WSC reported no fossil localities within the Project Area or within one mile of the Project Area. Based on the results of the study, Pliocene- to Holocene-age Quaternary alluvium with marine deposits (Q) are considered to have low paleontological potential.

PALEONTOLOGICAL RESOURCES RECOMMENDATIONS

The potential for encountering significant paleontological resources within the Project Area is low due to the presence of Pliocene- to Holocene-age Quaternary alluvium with marine deposits (Q) throughout the Project Area and the highly disturbed nature of the Project surface due to prior development of the site. Based on the low sensitivity of the Project area and the recommendations within the County of Riverside General Plan, no additional

paleontological mitigation measures are necessary unless unanticipated discoveries of paleontological material are encountered during construction.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: March 31, 2024 Signature: _____

Name: Jennifer Ritz (Kelly), M.S., Geology

Riverside County Qualified Paleontologist

REFERENCES

California Geological Survey
2002 California Geomorphic Provinces, Note 36, California Department of Conservation, California Geological Survey. Available online: https://www.contracosta.ca.gov/DocumentCenter/View/34134/CGS-2002-California-Geomorphic-ProvincesNote-36-PDF

County of Riverside
2015 General Plan, Chapter 5, Multipurpose Open Space Element: Paleontological Resources. Available online: https://planning.rctlma.org/General-Plan-Zoning/General-Plan

Dibblee, T.W., and J.A. Minch.
2008 "Geologic Map of the Thousand Palms & Lost Horse Mountain 15 Minute Quadrangles, Riverside County, California." *Ngmdb.Usgs.Gov*, 1 Jan. 1970, ngmdb.usgs.gov/Prodesc/proddesc_83958.htm.

Hall, C.A.H., Jr.
2007 Introduction to the Geology of Southern California and Its Native Plants, University of California Press, Berkeley, 493 p.

Harden, D.R.
2004 California Geology, Second Edition, Pearson Prentice Hall, Upper Saddle River, New Jersey, 552 p.

Morton, D.M. and F.H. Weber, Jr.
2003 Preliminary Geologic Map of the Elsinore 7.5' Quadrangle, Riverside County, California. USGS Open-File Report 2003-281, scale 1:24,000.

Norris, R.M., and Webb, R.W.
1990 Geology of California, Second Edition: John Wiley & Sons, New York, 541 p.

Riverside County
2024 "Riverside Map My County." Geocortex Viewer for HTML5. gis1.countyofriverside.us/Html5Viewer/?viewer=MMC_Public. Accessed 26 March

Society of Vertebrate Paleontology (SVP)
2010 Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Available online: https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_ Mitigation_Guidelines.pdf

Stoneburg, D.
2024 Paleontological resources for Peterson Road Project. Paleontological locality records search completed by the Western Science Center. Letter dated March 6, 2024.

Yerkes, R.F., McCulloh, T.H., Schoellhamer, J.E., and Vedder, J.G.
1965 Geology of the Los Angeles Basin, California: An Introduction: Professional Paper.

Appendix A:
Staff
Qualifications

JENNIFER RITZ, M.SC.

PRINCIPAL PALEONTOLOGIST

PROFILE

Jennifer Ritz has experience in all aspects of paleontology. She has extensive experience with monitoring, salvage, fieldwork, project management, and report writing, as well as volunteer experience from the La Brea Tar Pits/Page Museum and the Cooper Center of Orange County (Paleontology department) and field experience as a Staff Geologist for Leighton Geotechnical. Her expertise is Geology, and she has her M.S. in Geological Sciences, emphasis in Geochemistry. Jennifer has taught lab courses in paleontology and general geology and assisted with field mapping classes. Jennifer is HAZWOPER 40-hour certified and a registered Orange County paleontologist. She has authored and co-authored more than 100 paleontological compliance documents, including PRMPs, EIR, EIS, PEA, treatment plans, final monitoring reports, survey reports, and other compliance documents, in compliance with NEPA, CEQA, Caltrans and city and county laws, ordinances, regulations, and statutes.

PROJECT EXPERIENCE

Ontario Ranch Logistic Center
Ontario Land Ventures, LLC :: City of Ontario, County of San Bernardino, California
Paleontological Principal Investigator and Project Manager. Ms. Ritz coordinated all surveying, preparation of compliance and environmental documentation for this project, and authored the PRIMP for this project. Ms. Ritz also oversaw the paleontological monitoring program for this Project. This was a mass grading project for the construction of two main warehouse buildings for a new industrial park development.
Duration: 2018 – 2021

Rosamond Water Waste Treatment Plant Rehabilitation Project
Rosamond Community Services District Wastewater Treatment Plant :: Rosamond, CA, Kern County
Paleontological Principal Investigator and Project Manager. Ms. Ritz oversaw the paleontological monitoring program when paleontological resources were discovered during construction. The project involved the addition of a wastewater treatment wetland on a 80-acre property owned by the RCSD, located just south of the existing treatment facility. Excavations involved the reconfiguration of the existing pond into three ponds and the conversion of the facultative lagoons to a percolation pond system. Ms. Ritz co-authored the final paleontological mitigation report.
Duration: 2019 - 2020

Saddleback Stadium Improvement Project
South Orange County Community College District :: City of Mission Viejo, Orange County
Paleontological Principal Investigator and Project Manager. Ms. Ritz coordinated all surveying, preparation of compliance and environmental documentation for this project, prepared the Paleontological Resources Impact Mitigation Plan (PRIMP), and oversaw the paleontological monitoring program detailed in the PRIMP. Ms. Ritz co-authored the final paleontological mitigation report. This Project was a renovation to the college's athletic facilities which included the development of a new 8,000 seat stadium.
Duration: 2018 – 2020

EXPERIENCE

15 years

EDUCATION

M.Sc. in Geology
California State University, Long Beach, California, 2012

B.S., Geology (preliminary work for entry to M.S. Geology Program)
California State University, Long Beach, 2005

CERTIFICATIONS

- Orange County Certified Paleontologist
- San Diego County Certified Paleontologist
- 10HR OSHA (in progress)

PROFESSIONAL MEMBERSHIPS

- Society for Vertebrate Paleontologists

Rider Commerce Center Project
Core5 Industrial Partners :: Perris, CA, Unincorporated Riverside County, California
Paleontological Principal Investigator and Project Manager Ms. Ritz coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Ms. Ritz also oversaw the paleontological monitoring program for this Project. This was for the development of a 204,300 sqft commerce building which involved the construction of a light industrial warehouse, two offices, and a parking lot.
Duration: 2018-2020

Harvill Industrial Park Project
KCS West :: City of Perris, Riverside County, California
Paleontological Principal Investigator and Project Manager. Ms. Ritz coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Ms. Ritz also oversaw the paleontological monitoring program for this Project. This was a mass grading project for the development of a new 423,664 sqft warehouse and associated site improvements.
Duration: 2017 – 2020

West of Devers Transmission Line Project
Southern California Edison :: Riverside County, California
Paleontological Project Manager. Ms. Ritz provided all project management and paleontological related services. This included proper BLM authorization and permitting to conduct surveying and a research design for field reconnaissance related to PEA, EIS/EIR documentation for the proposed transmission line. She assisted with managing documentation with laws relating to paleontological resources, among which are CEQA and NEPA compliance.
Duration: 2009 – 2016

Regional Connector
Los Angeles County Metropolitan Transportation Authority :: Los Angeles County, CA
Paleontological Monitor. Ms. Ritz performed paleontological monitoring during construction involving ground disturbance. Metro is constructing a new rail line and associated stations to connect future and existing rail lines in the downtown area into an integrated system. The Regional Connector Transit Corridor Project will directly link the 7th Street/Metro Center Station to the Metro Gold Line near Little Tokyo/Arts District Station. The project will involve construction and operation of a 1.9-mile Light Rail Transit (LRT) connector that would link the Metro Blue Line, Metro Gold Line, and Metro Expo Line into a single consolidated system.
Duration: 2015 – 2016

Crenshaw/LAX Mass-Transit Light Rail Line
Los Angeles County Metropolitan Transportation Authority :: Los Angeles, CA
Project Coordinator and Monitor. Ms. Ritz performed project scheduling, communication with Metro and construction crew staff, and ensuring project compliance for archaeological and paleontological monitoring during the construction of Metro's 8.5-mile mass-transit light rail line through southwest Los Angeles. Ms. Ritz also performed paleontological monitoring during ground disturbing activities and Qa/Qc the paleontological documentation.
Duration: 2015 – 2016

Orange Line Bus Enhancement to North Hollywood Red Line
Los Angeles County Metropolitan Transportation Authority :: Los Angeles, CA
Paleontological Lead and Monitor. Ms. Ritz performed paleontological monitoring during ground disturbance which included trenching and mass-grading for Metro's construction of a pedestrian tunnel connecting the North Hollywood Metro Orange Line and Metro Red Line Stations. Ms. Ritz was also the Lead Paleontologist overseeing the paleontological monitors and Qa/Qc the paleontological documentation.
Duration: 2014 – 2015

Tehachapi Renewable Transmission Project (TRTP) Segments 3 – 11
Southern California Edison :: Kern County, Los Angeles County, San Bernardino County
Paleontological Project Manager. Ms. Ritz conducted and led surveys along this project's right of way. She was also in charge of scheduling monitoring crews during grading in areas of paleontological sensitivity, managing and reviewing log sheets, and tracking data that is incorporated to final reports. Ms. Ritz played a valuable role with scheduling for the project's needs. She monitored, surveyed, and reported on all paleontological facets of this project as the Lead Paleontological Monitor for segment 3B, which was located near Rosamond, and for segments 4-11 which extended into Los Angeles and San Bernardino Counties. She authored more than 10 of the compliance reports for this project. She also performed monitoring on every segment of this Project.
Duration: 2009 - 2015

ERIKA MCMULLIN, B.A.

SENIOR ARCHAEOLOGIST

PROFILE

Erika McMullin is an archaeologist with over seven years of archaeological experience, and over four years of cultural resource management (CRM) experience. Ms. McMullin has worked on projects subject to Federal, State, and local government regulations within California. She has served as a field director for monitoring, survey, site recording, and excavation throughout California and internationally. Ms. McMullin specializes in bioarchaeological techniques, including identifying and exhuming human burials. She has served as a bioarchaeology supervisor at the Blackfriary Archaeology Field School in Co. Meath, Ireland. In addition to field work, she has performed laboratory analysis of human remains on a Maya population in Belize and conducted biological profiles for previously undetermined individuals with varying ancestries. Ms. McMullin earned her GIS Certificate in 2019 and serves as MCC's GIS Specialist where she is responsible for map creation, spatial data analysis and management, and other GIS support services. Recently, Ms. McMullin has been responsible for managing several on-call contracts for Southern California Edison as a subconsultant, including performing project management, authoring various archaeological reports, and managing field staff. She has also completed hundreds of California State Department of Parks and Recreation (DPR) 523 Forms for recording and evaluating sites and individual resources. She has written and provided technical peer review of monitoring and survey reports for various agencies. In addition, she serves as Project Manager for MCC's CEQA projects where she is responsible for conducting California Historical Resources Information System (CHRIS) record searches, Native American correspondence and outreach, background research, managing surveys, writing Phase I Reports, and recommending mitigation measures.

PROJECT EXPERIENCE

Veterans Affairs West Los Angeles Hospital Bldg. 220 Parking Lot Expansion Project
Dept. of Veterans Affairs Greater Los Angeles Healthcare System :: Los Angeles, CA
Project Manager. Ms. McMullin provides project management support for all archaeological resource monitoring services. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing monitoring compliance report, analyzing data and creating maps through GIS, and submitting all deliverables to the client.
Duration**:** September 2023-Present

Windy Fire Restoration Emergency Work
Southern California Edison :: Sequoia National Forest
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. Post-fire restoration work includes line clearing and tree trimming/removal, maintaining and repairing roads, and replacing damaged SCE infrastructure. The work area includes areas in the southern portion of Sequoia National Forest.
Duration: August 2023-Present

French Fire Restoration Emergency Work
Southern California Edison :: Sequoia National Forest
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. Post-fire restoration work includes line clearing and tree trimming/removal, maintaining and repairing roads, and replacing damaged SCE infrastructure. The work area includes areas in the southern portion of Sequoia National Forest.
Duration: August 2023-Present

EXPERIENCE

7 years

EDUCATION

M.A. in Biological Anthropology, emphasis in Bioarchaeology, University of California, Los Angeles, *In Progress (Jan. 2024)*

B.A. Anthropology
University of California, Los Angeles, 2014

CERTIFICATIONS

- GIS Professional Certificate, California State University, Los Angeles 2019

San Jacinto Deteriorated Pole Program
Southern California Edison :: Santa Barbara, Riverside, and San Bernardino County, CA
Project Manager. Ms. McMullin Provides project management support for all archaeological field surveys and monitoring assignments for this program. The work areas include Santa Barbara, Riverside, and San Bernardino Counties. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing DPRs and reports, analyzing data and creating maps through GIS, and submitting all deliverables to the client.
Duration: May 2023-Present

1149 N. Las Palmas Phase I Cultural and Paleontological Assessment Project
Kimley-Horn :: Hollywood, Los Angeles County
Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, co-authored the cultural and tribal sensitivity report, and provided peer review of the paleontological report.
November 2022-May 2023

Veterans Affairs West Los Angeles Hospital Lot 38 Project
Dept. of Veterans Affairs Greater Los Angeles Healthcare System :: Los Angeles, CA
Staff Archaeologist and Co-Project Manager. Ms. McMullin provides archaeological resource monitoring services during ground disturbing phases of the project. This project is relocating utilities to replace abandoned utilities at MacArthur Field on the Veterans Affairs Hospital property. Erika's responsibilities includes maintaining communication with all involved parties, completing and submitting paperwork and photographic records, writing the monitoring report, and evaluating cultural resources.
Duration**:** September 2022 – April 2023

Deteriorated Pole Replace Program MSUP
Southern California Edison :: Inyo, Sierra, Sequoia, Angeles, and San Bernardino National Forest, CA
Project Manager. Ms. McMullin provides project management to support all pedestrian surveys and monitoring assignments for this program. The work areas include Inyo, Sierra, Sequoia, Angeles, and San Bernardino National Forest. Her responsibilities included maintaining communication with all involved parties, fulfilling staffing requests, tracking the project's progress, writing DPRs and reports, analyzing data and creating maps through GIS, provided peer review of deliverables, and submitting all deliverables to the client.
Duration: April 2022 – Present

Ivanpah-Control Site Testing and Laboratory Support
Southern California Edison :: Inyo and Kern Counties, CA
Staff Archaeologist. Ms. McMullin participated in cultural surveying, excavation, and laboratory sorting and cataloging for the demolition and replacement of Southern California Edison's existing 115 kV transmission lines in Lone Pine, Inyo County and Inyokern, Kern County.
Duration: March 1, 2022 – April 12, 2022 (350 hrs.)

Palomino Business Park
Caprocks Partners :: Riverside County, CA
Staff Archaeologist. Ms. McMullin provided cultural and paleontological resource monitoring services during the ground-disturbing phases of the project. The Palomino Business Park Project is redeveloping approximately 110 acres of land within the City of Norco for a new business park that will include industrial, commercial, and office uses. The project includes the construction of approximately 2,050,000 square feet of new building space and related onsite and offsite improvements.
Duration: January 2022 – April 2022

Heavy Tree Removal Program
Southern California Edison :: Sequoia, Sierra, Inyo, San Bernardino, and Los Padres National Forests
Staff Archaeologist. Ms. McMullin performs cultural resources monitoring and survey while coordinating with tree crews, biologists, and SCE lead representatives. This program is a result of the CPUC's mandate that utilities eliminate public hazards associated with dead, dying, and diseased trees within utility corridors, of which the USDA Forest Service found that up to 30% of native and non-native trees within SCE's service territory has been adversely affected by drought conditions and beetle infestations.
Duration: 2021 – Present

Fountain Valley Residential Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Fountain Valley, Orange County
Project Manager and GIS Specialist: Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological report.
Duration: January 2021 – July 2021

Line Clearing and Vegetation Management
Southern California Edison :: National Park Service (NPS) SUP along the Salt Creek 12 kV Transmission Line, Sequoia and Kings (SEKI) National Park, Tulare County.
Field Director. Ms. McMullin managed a crew and conducted archaeological field survey for SCE vegetation management activities located on lands administered by the NPS. Duties include surveying, identifying, and recording historic and prehistoric resources along multiple landscapes and contexts, and completing and submitting paperwork and photographic records daily.
Duration: January 2021, January 2022

Gonzalez Solar Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Reedley, Fresno County
Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological report.
Duration: January 2021 – July 2021

Seaton and Cajalco Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated area near City of Perris, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – October 2021

4200 W Valley Blvd Phase I Cultural and Paleontological Assessment
EPD Solutions :: Pomona, Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – July 2021

Redlands Mall Redevelopment I Cultural and Paleontological Assessment
EPD Solutions :: Redlands, San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS

record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – May 2021

Florence Avenue Townhomes Phase I Cultural and Paleontological Assessment
EPD Solutions :: Santa Fe Springs, Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: April 2021 – June 2021

Rolling Greens Way Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Los Angeles County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: May 2021-August 2021

Pacifica Cottonwood Phase I Cultural and Paleontological Assessment
EPD Solutions :: Moreno Valley, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: May 2021-June 2022

Slover and Adler Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: June 2021-October 2021

5770 Industrial Parkway Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: July 2021-October 2021

Slover and Adler Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: June 2021-October 2021

Santa Ana and Calabash Phase I Cultural and Paleontological Assessment
EPD Solutions :: City of Fontana, San Bernardino County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: July 2021-October 2021

Kings CSG 3 Solar LLCPhase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Kings County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: October 2021- January 2022

Belago Park I Cultural and Paleontological Assessment
EPD Solutions :: Moreno Valley, Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: December 2020-December 2022

Cabazon Residential Phase I Cultural and Paleontological Assessment
EPD Solutions :: Unincorporated Riverside County
Project Manager and GIS Specialist**.** Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, field survey and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the cultural and paleontological reports and DPRs.
Duration: November 2020-October 2021

Redlands Transit Village Specific Plan
City of Redlands :: Redlands, CA, San Bernardino County.
Assistant Project Manager and GIS Specialist. Ms. McMullin provided Project Management support to facilitate the CHRIS record search, NAHC outreach, paleontological record search, and GIS support. She is responsible for conducting the above-mentioned outreach, background research, and co-authored the Specific Plan report.
Duration: November 2020 – February 2021

Creek Fire Restoration Emergency Work
Southern California Edison :: Sierra National Forest, CA
Staff Archaeologist. Ms. McMullin provided archaeological support including field surveys, monitoring support for emergency fire restoration activities, including line clearing and tree work along SCE's right-of-way (ROW) due to recent fires in the Sierra National Forest (SNF). Her duties included maintaining communication with prime consultant and construction crews, performing testing alongside Forest Archaeologists, attendance of project meetings, and completing and submitting paperwork, photographic records, and Survey123 to the client in a timely matter.
Duration: October 2020 – December 2020

CWA L0030 Transmission Line Rating and Remediation (TLRR)/Ivanpah-Coolwater-Kramer-Inyokern Project
Southern California Edison :: BLM and Private Lands, Inyo, LA, and San Bernardino Counties
Staff Archaeologist. Ms. McMullin provided archaeological support to prime contractor's Field Directors for this project. She was lead field archaeologist on her survey crew. Duties included surveying, identifying, and recording historic and prehistoric resources along multiple landscapes and contexts. She used tablets to create in field Series 523 forms and

collect spatial data using Collector and sub meter geodes. Ms. McMullin was responsible for maintaining cultural data for both new and previously recorded resources.
Duration: June 2019 – February 2020

Deteriorated Pole Replace Program
Southern California Edison :: Sequoia, Sierra, Inyo, Kern, and San Bernardino County, Private land, BLM Land
Field Technician. Ms. McMullin provides field support to complete archaeological field surveys, monitoring, and testing for the program. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records. In addition, Ms. McMullin assisted with preparation of California State Department of Parks and Recreation (DPR) forms for the Project.
Duration: 2019 – Present

Blackfriary Archaeological Field School, Trim, County Meath, Ireland.
Bioarchaeology Supervisor. Ms. McMullin supervised and instructed students on methods and techniques during this excavation. Her duties included identifying human remains, identifying faunal remains, identifying grave cuts and grave fill, excavating human burials, mapping burials using Nikon total station, planning burials, and filling out all paperwork including grave fill, grave cut, and burial sheets. Ms. McMullin also assisted in post-excavation efforts of burials, including washing, bagging, and properly storing burials.
Duration: 2021 (200 hrs), 2022 (200 hrs)

Mesoamerican Archaeology Lab, California State University, Los Angeles.
Lab Manager and Graduate Student. Ms. McMullin manages the Lab under the supervision of Dr. James Brady. Her duties include cataloguing, organizing, and identifying bone and bone fragments from the skeletal collection of Midnight Terror Cave excavation. The collection includes over 10,000 bones of disarticulated and commingled remains. Ms. McMullin's thesis research centers around using various long bone measurements to determine probable sex. Ms. McMullin was also in charge of supervising and teaching students the methods and techniques for identification and cataloging of skeletal remains.
Duration: 2018 – Present (300 hrs)

Blackfriary Archaeological Field School, Trim, County Meath, Ireland.
Student Internship. Ms. McMullin was part of a team performing bioarchaeological and landscape archaeological excavations in Ireland. One of her duties involved supervising students and assisting supervisors during these excavations. Ms. McMullin also participated in zooarchaeology and community archaeology workshops. Her duties for the workshops included site planning, artifact cataloging, identify human remains, identify faunal remains, survey, record data, record coordinates, site plans, elevation drawings, total station, post-excavation, clean artifacts, assist students, and community outreach.
Duration: 2018 (240 hrs)

Bioarchaeology Lab, California State University, Los Angeles.
Research Assistant. Ms. McMullin worked under the supervision of Dr. Christine Lee in the Bioarchaeology Lab. Her duties involved determining biological profiles of skeletal remains including age, sex, race, and paleopathologies.
Duration: 2017 (50 hrs)

HANNAH JOHNSTON, MSc

STAFF ARCHAEOLOGIST II

PROFILE

Hannah Johnston is an archaeologist with over four years of academic research and field experience and a year of professional experience in cultural resource management. Ms. Johnston has worked on projects subject to Federal, State, and local government regulations within California. She has participated in monitoring, survey, and excavation efforts as a crew member in California. Ms. Johnston is experienced in field work and osteology. In addition, she has conducted laboratory analysis of artifacts and faunal remains from California's coastal region.

PROJECT EXPERIENCE

Operations and Maintenance Program
Southern California Edison :: Sequoia National Forest, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program. Ms. Johnston's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: August 2023

Operations and Maintenance Program
Southern California Edison :: Inyo National Forest, Bishop, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program for the TROW CEMA Silverpeak-Wyman Canyon Circuit. Ms. Johnston's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: August 2023

Environmental Clearance Program
Southern California Edison :: Angeles National Forrest, CA
Staff Archaeologist. Ms. Johnston was part of a team that surveyed 30 poles within the Angeles National Forest for the SCE Environmental Clearance Program. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: July 2023

MEP040-4 Bishop Survey
Southern California Edison :: Inyo County, CA
Staff Archaeologist. Under the direction of a permitted Field Director, Ms. Johnston was part of a team that conducted two (2) 10-day cultural resources survey across multiple land designations including BLM, CDFW, and Private Lands within the Bishop area. Ms. Johnston's duties included operating GIS applications to record spatial data, complete paperwork and photos, and assist with uploading daily data.
Duration: June – July 2023

EXPERIENCE

2 years CRM
2 years Academia

EDUCATION

M.Sc. Professional Human Osteoarcheology
University of Reading United Kingdom, 2022

B.A. Anthropology
California State University Los Angeles
2020

CERTIFICATIONS

- First Aid and CPR certified
- GIS Basics Training (Esri)
- ArcGIS Online Basics (Esri)
- ArcGIS Pro Basics (Esri)

PROFESSIONAL MEMBERSHIPS

- Association of American Physical Anthropologists (AAPA)
- American Anthropological Association (AAA)
- British Association for Biological Anthropology and Osteoarchaeology (BABAO)
- Western Social Science Association (WSSA)

Operations and Maintenance Program
Southern California Edison :: Ventura and Kern County
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for the SCE Operations and Maintenance Program. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: June 2023 – Present

San Jacinto CCP Program
Southern California Edison :: San Jacinto, CA
Staff Archaeologist. Ms. Johnston provides monitoring and survey support during excavations for pole installation and trenching. Ms. Johntson's responsibilities includes maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: September 2022 – Present

I-15 Logistics Center
City of Fontana :: Fontana, CA
Staff Archaeologist. Ms. Johnston is performing archaeological monitoring during ground-disturbing activities. Ms. Johnstons' responsibilities include maintaining communication with all involved parties and completing and submitting paperwork and photographic records. The Project includes the development and operation of a 1,175,720-square foot logistics facility on approximately 76 acres (Logistics Site); the realignment of a segment of Lytle Creek Road from the western Project boundary eastward to a new intersection with Sierra Avenue; and the annexation of 152 acres (Annexation Area or Project Area), inclusive of the 76-acre Logistics Site.
Duration: May 2023 – Present

Grid Resiliency Project and Plant Betterment Project
Southern California Edison :: Bureau of Land Management, Bishop Field Office and Private Property, CA
Staff Archaeologist. Under the direction of a permitted Field Director, Ms. Johnston was part of a team that conducted cultural resources survey of 17.25 acres and performed site recording for SCE's Grid Resiliency Project and Plant Betterment Project on lands administered by BLM Bishop and Private Property. Ms. Johnston's duties included operating GIS applications to record spatial data, complete paperwork and photos, and assist with uploading daily data.
Duration: October 2022 – November 2022

Rincon Athos Solar Project
Desert City, Riverside County, CA
Staff Archaeologist. Ms. Johnston provided cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities included maintaining communication with all involved parties along with completing and submitting paperwork and photographic records for the client daily.
Duration: 2021

Deteriorated Pole Replace Program
Southern California Edison :: Sequoia, San Bernardino, Angeles, and Los Padres National Forest, CA
Staff Archaeologist. Ms. Johnston provides cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities include maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: 2021 – 2022

Poles and Wires Survey Program
Southern California Edison :: Inyo National Forest, CA
Staff Archaeologist. Ms. Johnston provided survey, monitoring, and site testing support. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: April 2021

San Marcos Bridge Removal Project
City of San Marcos :: San Marcos, CA
Staff Archaeologist. Ms. Johnston provided cultural resource monitoring services during ground disturbing phases of the project. Her responsibilities included maintaining communication with all involved parties and completing and submitting paperwork and photographic records.
Duration: 2021

4200 Valley Blvd.
Pomona, CA
Staff Archaeologist. Ms. Johnston surveyed 13.84 arches for the future development of a new Class-A speculation industrial building. Her duties included survey activities, completing all associated field paperwork, recording new resources, photography, and post-processing of forms.
Duration: July 2021

Cabazon Residential
Core5 Industrial Partners :: City of Cabazon, CA
Staff Archaeologist. Ms. Johnston surveyed 22 acres for a future housing development of 121 homes on a mostly undeveloped parcel. Her duties included survey activities, completing all associated field paperwork, recording new resources, photography, and post-processing of forms.
Duration: May 2021

Santa Monica Mountain Range Excavation
California State University :: Los Angeles, CA
Field Archaeologist. Ms. Johnston's studies and tasks included coastal archaeology, Native American studies, zooarchaeology, landscape archaeology, excavation, analyzing soil composition, site planning, cataloging, survey, total station, recording data and GIS coordinates, sieving, and cleaning artifacts.
Duration: 2018

Spike Island Excavation
Institute of Field Research :: Spike Island off County Cork, Ireland
Field Bioarchaeologist. Ms. Johnston's studies and tasks included bioarchaeology, excavation, site planning, cataloging, recording data, site plans, photogrammetry, point mapping, total station, cleaning bones and artifacts, identifying human remains, and paleopathology.
Duration: 2018

Coastal Archaeology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included sieving, measuring, cataloging, and sorting faunal remains and organic material.
Duration: 2018 - 2020

Forensic Anthropology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included organizing the bone collection, practicing compiling biological profiles, and identification of trauma and disease.
Duration: 2019 - 2020

Mesoamerican Archaeology Lab
California State University :: Los Angeles, CA
Lab Assistant. Ms. Johnston's duties included research of subadult remains from Midnight Terror Cave site to compare to other Mesoamerican sites for an honors thesis on human child sacrifice.
Duration: 2019 – 2020

Appendix B:
Western Science
Center Record Search
Results

WESTERN SCIENCE CENTER

Paleontology Record Search Request

The Western Science requires the following information in order to perform a paleontological record search for upcoming mitigation projects. Please provide the following as well as a .kml, .kmz file, or detailed map of the project location. Western Science Center will be returned ***approximately*** two weeks from the date this form is received and will contain a map and letter indicating paleontological sensitivity and any known Western Science Center fossil localities within the proposed project area. The fee for standard paleontological record searches is $150; the Western Science Center reserves the right to increase fees for large or extensive requests.

Date: 2-2-2024

Contact Information:

Name: Erika McMullin Email: erika@materialcultureconsulting.com

Company & Address: Material Culture Consulting, Inc.

2701-B N. Towne Ave. Pomona, CA 91766

Phone: 909-967-8216

Invoice Should Be Sent To: marianne@materialcultureconsulting.com, erika@materialcultureconsulting.com

Project Information:

Project Name and Number: MCC Peterson Road

Project Location (include City, County, Township, Range, and Sections to the level known):

City of Rancho Mirage, Riverside County.

Quad: Cathedral City; Township 05S Range 05E, Sect. 20

Map Type Included:

☐ .KML file ☑ .KMZ file ☑ Detailed Map

Please send this form and project map to Western Science Center Collections Technician Brittney Elizabeth Stoneburg at bstoneburg@westerncentermuseum.org

WESTERN SCIENCE CENTER

March 6th, 2024

Material Culture Consulting
Erika McMullin
2701-B North Towne Avenue
Pomona, CA 91767

Dear Ms. McMulllin,

This letter presents the results of a record search conducted for the Peterson Road Project in the City of Rancho Mirage, Riverside County, CA. The project area is located on the eastern side of Peterson Road on Township 5 South, Range 5 East, Section 20 of the *Cathedral City, CA* USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped entirely as alluvial sand and gravel from the Holocene epoch (Dibblee and Minch 2008). Holocene alluvial units are considered to be of high preservation value, but material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area or within a 1 mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, or extends beyond the current project bounds into the neighboring Pleistocene units, the material would be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

If you have any questions, or would like further information, please feel free to contact me at bstoneburg@westerncentermuseum.org.

Sincerely,

Brittney Elizabeth Stoneburg, MSc
Collections Manager

Peterson Road Project

project area + 1 mile radius

Legend

- 1 Mile Radius
- m: pre-Cenozoic metasedimentary and metavolcanic rocks undivided (Early Proterozoic to Cretaceous)
- Peterson Road Project
- Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)

Gerald Ford Dr
Cathedral City
Agua Caliente Casino Cathedral City
Da Vall Dr
111
Frank Sinatra Dr
The Ritz-Carlton, Rancho Mirage
Peterson Rd
Country Club Dr
Thunderbird Country Club
Bob Hope Dr
Rancho Mirage
Omni Rancho Las Palmas Resort & Spa
Rancho Las Palmas Country Club
Monterey Country Club
Portola Ave
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PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix F
Phase 1 Environmental Site Assessment

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Phase I Environmental Site Assessment

Crossings at Peterson Road
39360 Peterson Road
Rancho Mirage, California 92270

April 2, 2024

Prepared For:

A0742 Rancho Mirage, L.P.
2000 E Fourth Street #205
Santa Ana, CA 92705

Project Number 24-02-11

Prepared by:

Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008
(760) 585-7070
www.weisenviro.com

1938 Kellogg Avenue, Suite 116, Carlsbad, CA 92008
(760) 585-7070
www.weisenviro.com

April 2, 2024

A0742 Rancho Mirage, L.P.
2000 E Fourth Street #205
Santa Ana, CA 92705

Subject: Phase I Environmental Site Assessment
Crossings at Peterson Road
39360 Peterson Road
Rancho Mirage, California 92270
Project Number 24-02-011

Dear Mr. Irving:

Weis Environmental, LLC has completed the contracted environmental consulting services for the above-referenced project. The services were performed in accordance with our proposal and agreement fully executed by all parties. The Phase I Environmental Site Assessment has been performed in accordance with ASTM International (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation E1527-21 and Title 40 of the Code of Federal Regulations (40 CFR) Part 312. We appreciate the opportunity to be of service to you on this project. Please contact us if you have any questions or comments regarding this report or if we can be of further assistance.

Sincerely,

Weis Environmental, LLC

Daniel Weis. R.E.H.S.
Environmental Manager

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FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the methods and findings of a Phase I Environmental Site Assessment (ESA) of the property identified as Crossings at Peterson Road, located at 39360 Peterson Road, in the City of Rancho Mirage, California (Site) performed in conformance with the contract/agreement for this assignment and the scope and limitations of ASTM Standard Practice E1527-21 and United States Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (AAI) as published in 40 CFR Part 312. EPA promulgated the AAI rule that became effective in November 2006 and the EPA has indicated that the ASTM E1527-21 practice is consistent with the requirements of AAI and may be used to comply with the provisions of the AAI rule.

1.1 Purpose

The purpose of the ASTM E1527-21 practice (framework for this Phase I ESA) is to define good commercial and customary practice in the United States of America for conducting an ESA of a parcel of real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Title 42 United States Code [U.S.C.] Section 9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 U.S.C. Section 9601(35)(B).

In defining a standard of good commercial and customary practice for conducting this Phase I ESA of the Site, the goal of the processes established by the ASTM E1527-21 practice is to identify, to the extent feasible, recognized environmental conditions. The term recognized environmental condition is defined as (1) the presence of hazardous substances or petroleum products in, on, or at a property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at a property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at a subject property under conditions that pose a material threat of a future release to the environment. In addition, controlled recognized environmental conditions, historical recognized environmental conditions and/or de minimis conditions, if identified during the completion of the assessment, are discussed herein. Definitions of these terms and other key terminology relevant to the practice are included in Section 14.0 of this report.

1.2 Scope of the Assessment

In general terms, this Phase I ESA included the acquisition of readily available/accessible and practically reviewable regulatory records and historical information, a subject property reconnaissance, interviews and preparation of this written report of findings. A more detailed description of the four primary components of the Phase I ESA is presented below.

Records Review - A review of Federal, State, Tribal and local standard ASTM and non-ASTM regulatory databases for a myriad of environmental identifiers including but not limited to properties with underground storage tanks (USTs), properties with leaking USTs, properties that have reported spills/releases that did not occur from a leaking UST, businesses that utilize hazardous materials and/or

generate hazardous waste and hazardous waste disposal locations. The regulatory review may also include public records requests with one or more Federal, State, Tribal and/or local agencies. A review of historical sources is also completed to help ascertain previous land uses of the property in question and in the surrounding area.

Site Reconnaissance - A property inspection and viewing of adjacent and surrounding properties for conditions that could be recognized environmental conditions.

Interviews - Interviews with present and past owners, operators and/or occupants of a property and local government officials.

Reporting - Evaluation of the information gathered during the completion of the Phase I ESA and the subsequent preparation of a written report.

1.3 Limitations and Exceptions

Concerns regarding liability under CERCLA and analogous State laws, have been a primary driver for Phase I ESA assignments in commercial real estate transactions. While the ASTM E1527-21 practice can be used in many contexts, familiarity with CERCLA and its potential LLPs is critical in understanding and applying the ASTM E1527-21 practice. We advise consultation with legal counsel if further inquiry or information is desired.

AAI represents the minimum level of inquiry necessary to support the LLPs. However, it is important to understand that additional inquiry ultimately may be necessary or desirable for legal as well as business reasons depending upon the outcome of this inquiry and the particular risk tolerances of a given user. For example, additional inquiry may assist a user of a Phase I ESA in determining whether he or she would have continuing obligations in the event he or she acquires a given property and may also assist the user in defining the scope of future steps to be taken to satisfy such obligations. In addition, a user may be concerned about business environmental risks or non-scope ASTM considerations that do not fall within the definition of a recognized environmental condition. This assessment also excludes subsurface or other invasive exploration, unless specifically documented herein. Users are also cautioned that Federal, State, Tribal and local laws may impose environmental assessment obligations that are beyond the scope of the ASTM E1527-21 practice.

The evaluation, opinion and conclusions presented herein are based solely on visual observations and regulatory, historical and personal knowledge that existed at the time our assessment was completed. The use of the gathered information is exclusively for the purposes outlined in this report and only for the Site. Our firm can make no warranty, either express or implied, except that the services conducted were performed in accordance with generally accepted environmental assessment practices applicable at the time and location of the assessment and that the conclusions of the assessment have been based in part on professional judgment/experience, an interpretation of readily available data and the standard of care normally followed by similar professionals practicing in a similar locale and under similar circumstances. Any opinions presented cannot apply to Site changes, of which our firm is unaware and has not had the opportunity to evaluate. In addition, this report cannot feasibly include any evaluation of undocumented activities at the Site or on adjacent or nearby properties. Lastly, a Phase I ESA meeting or exceeding this practice and completed less than 180 days prior to the date of acquisition of a given property or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid.

1.4 Special Terms and Conditions

This Phase I ESA was prepared in accordance with the terms and conditions of the contract/agreement for the work as executed between our firm and the client. There are no other special terms and conditions established between our firm and the client pertinent to the findings of this ESA or methodology used to complete this assessment. In addition, our firm has no final or other vested interest in the Site or adjacent/surrounding properties, or in any entity that owns or occupies the Site or adjacent/surrounding properties.

1.5 Limiting Conditions and Deviations

There were no significant limiting conditions that would inhibit our ability to identify recognized environmental conditions noted during the completion of this assessment. In addition, there were no deviations from the ASTM E1527-21 standard noted during the completion of this assessment. Any limiting conditions that are not considered to be ones that would inhibit our ability to identify recognized environmental conditions at the Site are referenced in applicable sections of this report.

1.6 Data Failure and Data Gaps

No instances of data failure were encountered during the completion of this assessment. In addition, no data gaps of significance (i.e., those that would inhibit our ability to identify recognized environmental conditions) were identified during the completion of this assessment. Any data gaps that are not considered to be ones that would inhibit our ability to identify recognized environmental conditions at the Site are referenced in applicable sections of this report.

1.7 Reliance

This report has been prepared for the exclusive use of the client. This report may not be relied upon by any other person or entity without the written consent of both our firm and our client. The scope of services performed for this assessment may not be appropriate to satisfy the specific needs of other users, and any use or reuse of this document would be at the sole risk of said users. Any other party seeking liability protection under CERCLA must take independent action to accomplish its objective.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

Location and legal description information is presented in the table below.

Location/Legal Consideration	Details
Legal Physical Address	39360 Peterson Road.
Assessor's Parcel Number (APN)	Riverside County APN 689-180-012.
Property Size	Reported 12.34 acres.
General Orientation Relative to Roadways or Other Landmarks	Generally located north of Juniper Lane, south of Desert Cove Avenue, and east of Peterson Road.

A Vicinity Map is included as Figure 1. A Site Plan is included as Figure 2.

2.2 Site and Vicinity Characteristics

The Site and the surrounding vicinity are situated in the City of Rancho Mirage in an area consisting primarily of commercial and residential development, and public roadways.

2.3 Current Use of the Site

The Site is a vacant mobile home park.

2.4 Description of Site Improvements

Information pertaining to improvements at the Site is presented in the table below.

Improvement Consideration	Details
Access Point(s)	Access via Peterson Road to the west.
Primary Building	Not applicable.
Reported Framing	Not applicable.
Building Exteriors	Not applicable.
Reported Foundation	Not applicable.
Other Improvements	Numerous concrete slabs associated with former mobile homes, concrete and asphalt paving and block walls.
Utilities and Other Features	Indicators of various subsurface features (including utilities) are present at the Site. While some of the features are obviously associated with certain utility systems, the nature of some are unknown and cannot be ascertained by visual evaluation. A higher level of confidence regarding the nature of extent of any subsurface features can be obtained from a utility or geophysical consultant.

2.5 Utilities

Utilities that are reported to be present at the Site or provide service in the surrounding area are noted below along with their municipal provider where applicable.

Utility	Provider (Where Applicable)
Potable Water	Indio Water Authority
Sewage Maintenance	Valley Sanitary District
Electrical	Southern California Edison
Natural Gas	Southern California Gas
Solid Waste Disposal	Burrtec Waste

2.6 Description of Adjoining Properties

Adjoining properties are defined as any real property or properties, the border of which is contiguous or partially contiguous with that of the subject property of a Phase I ESA, or that would be contiguous or partially contiguous with that of a subject property but for a street, road, or other public thoroughfare separating them. To the extent feasible, our firm performed a visual inspection of adjoining properties from the Site boundaries and along public rights-of-way. We did not encroach onto adjoining private property during the completion of this assessment. The following table identifies the adjoining property uses:

Direction	Adjoining Property Use
North	Residential properties.
South	Residential properties.
East	Morningside Golf Course and residential properties (39033 Morningside Dr).
West	Peterson Road, then commercial property (Public Storage - 70170 CA-111).

3.0 PHYSICAL SETTING

3.1 Topography

General topographic information pertaining to the Site is presented in the table below.

Topographic Consideration	Details
Topographic Map Reference	Cathedral City, California 7.5-minute quadrangle dated 2021.
Improvements or Features Depicted on Map	None.
Elevation	Approximately 250 feet above sea level.
Local/Regional Gradient	Generally sloping to the south and east.
Adjoining Improvements or Features Depicted on Map	None.

3.2 Hydrology

General hydrogeologic information pertaining to the Site is presented in the table below.

Hydrologic Consideration	Details
Hydrologic Unit	Indio Hydrologic Subarea.
Substantial Hydrologic Features	None identified.
Precipitation Infiltration Potential	Minimal due to the predominance of existing pavement and improvements.
Surface Water Flows	Any surface water would appear to flow as sheet flow towards a drainage to the east.
Drainage from Nearby and Adjoining Properties	Minimal.

3.3 Geology

General geologic information pertaining to the Site is presented in the table below.

Geologic Consideration	Details
California Geomorphic Province	Colorado Desert.
Mapped Soils or Formation	Pleistocene-age and Holocene-age, marine and non-marine (continental) sedimentary rocks.
Description of Soils or Formation	Extensive marine and non-marine sand deposits, deposited from coastal and desert playas.

3.4 Hydrogeology

General hydrogeologic information pertaining to the Site is presented in the table below.

Hydrogeologic Consideration	Details
Groundwater Basin or Unit	Indio Hydrologic Subarea.
Beneficial Uses	Municipal, industrial and agricultural.
Estimated Depth to Groundwater	Anticipated to be greater than 100 feet below the surface.
Estimated Flow of Groundwater	South to southeast.
Known Site or Regional Groundwater Contamination Issues	None.

3.5 Oil and Gas Exploration

According to online resources provided by the California Department of Conservation, Geologic Energy Management Division (CalGEM), there are no oil, gas or geothermal wells located on the Site or its adjacent properties.

4.0 USER PROVIDED INFORMATION

A representative of the client (i.e., User) of this report was interviewed during the completion of this assessment. The questions posed during the interview are defined by the ASTM E1527-21 practice and were either conveyed verbally or by way of a written questionnaire. If a written questionnaire was completed by the user, a copy will be included in Appendix A of our Phase I ESA.

The user also provided our firm with any land title records and judicial records that may be available for the Site as part of the required evaluation for environmental liens and activity and use limitations (AULs) in connection with the subject property of a Phase I ESA. As stated in the ASTM E1527-21 practice, it is the responsibility of the user of the report to provide any available records pertaining to environmental liens and AULs that may exist in connection with a given property. Any land title and judicial records provided to our firm are discussed below and included in Appendix A. If such information is not discussed in the sections below, it was not provided by the user of the report.

In addition to the contact information obtained, the user of the report was also asked if they are aware of other useful documents that may exist and if so whether copies can be provided to the environmental professional within reasonable time and cost constraints. Typical useful documents are listed in Section 10.8.1 of the ASTM E1527-21 practice and include but are not limited to environmental assessment reports, compliance audits and permits, registrations for tank and other aboveground or underground systems, safety plans, spill prevention and other facility-related plans, geological/geotechnical studies and environmental governmental agency notices and/or correspondence.

4.1 Title Records

We were not provided with title reports pertaining to the Site.

4.2 Environmental Liens

The User is unaware of environmental liens in connection with the Site.

4.3 Activity and Use Limitations

The User is unaware of AULs in connection with the Site.

4.4 Specialized or Actual Knowledge or Experience

The User is unaware of specialized knowledge, actual knowledge or experience that is material to recognized environmental conditions in connection with the Site.

4.5 Commonly Known or Reasonably Ascertainable Information

The User is unaware of commonly known or reasonably ascertainable information within the local community that is material to recognized environmental conditions in connection with the Site.

4.6 Valuation Reduction for Environmental Issues

The User is unaware of information pertaining to an undervalued purchase price of the Site relative to the estimated fair market value of the Site due to the presence of contamination.

4.7 Owner, Property Manager and Occupant Information

The Site is currently owned and managed by the Rancho Mirage Housing Authority. The Site is currently vacant with no known occupants.

4.8 Reason for Performing Phase I ESA

The User has commissioned this Phase I ESA as part of a potential acquisition (residential development). The Phase I ESA is also being completed to assist the client in complying with 40 CFR Part 312.

4.9 Proceedings Involving the Site

The User is unaware of pending, threatened, or past litigation and administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Site. The client is also unaware of notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products in connection with the Site.

4.10 Other Provided Documents

No previous environmental documents were provided to us for review.

5.0 REGULATORY RECORDS REVIEW

Our firm commissioned the preparation of a regulatory database report from Environmental Risk Information Services (ERIS) as part of the regulatory records review. A myriad of Federal, State, Tribal and local government environmental databases are searched during the preparation of their deliverable. Certain databases are specifically required by the ASTM E1527-21 practice and are referenced as "standard ASTM regulatory databases." Such databases are searched to at least the minimum search distance around a given property as defined in the practice. Other regulatory databases are also searched that are not specifically referenced in ASTM E1527-21. Such databases are referenced as "non-ASTM regulatory databases" and are searched as varying radii around a given property as selected by the database provider.

Descriptions of each database searched and the dates that the regulatory databases were last updated by the applicable agencies are included in the report. The extent of historical information varies with each database and current information is determined by what is publicly available at the time of an update. Databases are updated in accordance with ASTM E1527-21, which states that government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public.

Our firm also reviewed unplottable sites listed in the database report by cross-referencing reasonably ascertainable information pertaining to such properties that may include facility names, street names, zip codes or other information. Unplottable sites are ones that cannot be formally mapped or geocoded due to various reasons, including limited geographic information. Any unplottable sites that we identify within the specified search radii have been evaluated as part of the preparation of this report. A copy of the regulatory database report is included in Appendix B.

5.1 Standard ASTM Regulatory Database Search

The tables below present the standard Federal, State, Tribal and local ASTM databases that were searched, including the search distances from the Site. Below the tables are descriptions of any listings for the Site that may appear in the databases. In addition, a discussion of adjoining properties or properties in the Site vicinity that are listed in one or more regulatory databases that in our professional judgment and opinion have the potential to adversely impact the Site due to current or former releases of hazardous substances and/or petroleum products that occurred at said properties is presented. This practice of discussing only properties of anticipated environmental concern to the Site is noted in ASTM E1527-21, which states that the environmental professional may make statements applicable to multiple properties listed in regulatory databases that are not likely to have current or former releases of hazardous substances and/or petroleum products with the potential to migrate to a given subject property. Our professional judgment and opinions discussed herein are based on several factors including the nature of the regulatory database listings, distance of the off-site listed properties from the Site, orientation of the listed properties relative to the Site, interpreted direction of groundwater flow and/or regulatory case status information for the various properties as described in the databases.

The following Federal standard ASTM databases were searched:

Standard Environmental Record Source Name	Regulatory Database Identification	Search Distance from Site (Miles)
Lists of Federal National Priorities List (NPL) (Superfund) sites	NPL – Proposed NPL – Superfund Record of Decision (ROD)	1.0
Lists of Federal Delisted NPL sites	Deleted NPL	0.5
Lists of Federal sites subject to CERCLA removals and CERCLA orders	CERCLIS - SEMS – SEMS Archive – ODI – IODI	0.5
Lists of Federal CERCLA sites with No Further Remedial Action Planned (NFRAP)	CERCLIS NFRAP	0.5
Lists of Federal Resource Conservation and Recovery Act (RCRA) facilities undergoing Corrective Action	RCRA CORRACTS – Department of Energy (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP)	1.0
Lists of Federal RCRA Treatment, Storage and Disposal (TSD) facilities	RCRA TSD	0.5
Lists of Federal RCRA generators	RCRA LQG – RCRA SQG – RCRA VSQG – RCRA NON GEN – FEMA UST – HIST GAS STATIONS – FRP – DELISTED FRP – REFN – BULK TERMINAL	0.25
Federal institutional control/engineering control registries	LUCIS – FED ENG – FED INST – RCRA CONTROLS – NPL IC	0.5
Federal Emergency Response Notification System (ERNS) List	ERNS	Site Only
Lists of Federal brownfield sites	FED BROWNFIELDS	0.5
Lists of sites with Federal environmental liens	CERCLIS LIENS – SEMS LIENS	Site Only

Site – The Site is not listed on the standard Federal ASTM regulatory databases.

Adjoining Properties – No adjoining properties are listed on the standard Federal ASTM regulatory databases.

Other Properties – There are several listings pertaining to properties in the surrounding area that are identified on the RCRA SQG and RCRA NON GEN standard Federal ASTM databases. None of these listings are indicative of releases of hazardous substances or petroleum products to the subsurface that are considered to have the potential to adversely impact the Site. These properties are not considered to be significant environmental concerns to the Site.

The following State, Tribal and local standard ASTM databases were searched:

Standard Environmental Record Sources Name	Regulatory Database Identification	Search Distance from Site (Miles)
Lists of state-and tribal "Superfund" equivalent sites	RESPONSE – HWP	1.0
Lists of state-and tribal hazardous waste facilities	ENVIROSTOR – DELISTED ENVS	0.5
Lists of state and tribal landfills and solid waste disposal facilities	SWF/LF – LDS – SWAT – WMUD – SWRCB SWF – Construction and Demolition (C & D) DEBRIS RECY – CONTAINER RECY – RECYCLING – PROCESSORS	0.5

Standard Environmental Record Sources Name	Regulatory Database Identification	Search Distance from Site (Miles)
Lists of state and tribal leaking storage tanks	LUST – DELISTED LST – UST CLOSURE – CLEANUP SITES – DELISTED CLEANUP – INDIAN LUST – DELISTED ILST	0.5
Lists of state and tribal registered storage tanks	UST – HHSS – AST – AST SWRCB – TANK OIL GAS – DELISTED TNK – CERS TANK – DELISTED CTNK – HIST TANK – UST SWEEPS – INDIAN UST – DELISTED IUST – DELISTED COUNTY	0.25
State and tribal institutional control/engineering control registries	LUR – HLUR - DEED	0.5
Lists of state and tribal voluntary cleanup sites	VCP	0.5
Lists of state and tribal brownfield sites	CALSITES	0.5
Local Agency Databases	LOP RIVERSIDE-UST RIVERSIDE – HWG RIVERSIDE – HZH RIVERSIDE	0.25 to 0.5

Site – The Site is not listed on the standard State, Tribal and local ASTM regulatory databases.

Adjoining Properties – No adjoining properties are listed on the State, Tribal and local standard ASTM databases.

Other Properties – There are several listings pertaining to properties in the surrounding area that are identified on the LUST, UST, HHSS, UST SWEEPS, DELISTED TNK, CERS TANK, HIST TANK, DELISTED COUNTY, LOP RIVERSIDE, HZH RIVERSIDE and UST RIVERSIDE standard State, Tribal and local ASTM databases. None of these listings are indicative of releases of hazardous substances or petroleum products to the subsurface that have the potential to adversely impact the Site. These properties are not considered to be significant environmental concerns to the Site.

5.2 Non-ASTM Regulatory Database Search

A myriad of non-ASTM regulatory databases was searched by ERIS as noted in the regulatory database report.

Site – The Site is not listed on any of the non-ASTM regulatory databases.

Adjoining and Surrounding Properties – Several adjoining and surrounding properties listed on the ASTM databases are also listed on various non-ASTM databases. There are also other properties that are listed on non-ASTM databases but not ASTM databases. Database listings include FED DRYCLEANERS, MRDS, DRYCLEANERS, DELISTED DRYCLEANERS, CERS HAZ, EMISSIONS, and CDL. None of these listings are indicative of releases of hazardous substances or petroleum products to the subsurface that have the potential to adversely impact the Site. These properties are not considered to be significant environmental concerns to the Site.

5.3 Regulatory Agency File Reviews

If a property being assessed under a Phase I ESA or any of the adjoining properties are identified on one or more of the above-referenced standard environmental record sources, pertinent regulatory files and/or records associated with such listings should be reviewed to assist the environmental professional

in evaluating if recognized environmental conditions exist at a given subject property in connection with any listings. However, if in the environmental professional's opinion, such a review is not warranted, file reviews need not be conducted if the environmental professional provides justification for not doing so.

Agency file reviews for the Site and select adjoining properties (if deemed warranted) completed during this assessment are noted below. If no adjoining properties are discussed, this indicates that the environmental professional did not require a review of any such records in order to provide a professional opinion regarding recognized environmental conditions that have impacted the Site. The agency inquiries were performed by way of on-line searches/queries of published databases and/or direct inquiries with public records clerks at one or more agencies. Dan Weis conducted the agency file reviews during the completion of this assessment. Copies of regulatory agency records (if applicable) are included in Appendix C.

Regulatory Agency	Jurisdiction	Date of Inquiry or Request	Contact	Response or Information from Agency
United States EPA Envirofacts/ECHO/ TRIS	Federal	03/19/2024	Online https://enviro.epa.gov/ https://echo.epa.gov/facilities/facility-search https://www.epa.gov/toxics-release-inventory-tri-program	No Records Identified
California DTSC	State	03/19/2024	Online https://www.envirostor.dtsc.ca.gov/public https://hwts.dtsc.ca.gov/report_list.cfm	No Records Identified
State Water Resources Control Board/Regional Water Quality Control Board	State	03/19/2024	Online https://geotracker.waterboards.ca.gov/ https://geotracker.waterboards.ca.gov/historical_ust_facilities	No Records Identified
Riverside County	Local	03/19/2024	Public Records Clerk	No Records Identified

As shown in the table above, there are no records on file with the various agencies.

6.0 HISTORICAL RESOURCE REVIEW

The objective of consulting historical sources is to develop a history of the previous uses of a property, its adjoining properties and the surrounding area, in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with a given property. The goal of the historical research is to identify all obvious uses of a subject property from the present, back to the property's first developed use, or back to 1940, whichever is earlier.

It is stated in ASTM E1527-21, the following standard historical resources shall be reviewed if, based on the judgment of the environmental professional, they are reasonably ascertainable, likely to be useful and applicable to the subject property: (1) aerial photographs (2) fire insurance maps (3) local street/city directories and (4) historical topographic maps. There are numerous other potential historical sources one can consider during a historical evaluation including zoning/land use records, property tax files records, building department records, miscellaneous maps, news articles, books about the history of an area being researched, imagery, land title records and a variety of other resources that may provide information about past land uses. These other resources may be found in sources such as prior assessments, newspaper archives, internet sites, community organizations, local libraries, historical societies, government agencies, from current owners or occupants of surrounding properties, or records in the files and/or personal knowledge of owners and/or occupants.

Relative to a final decision on which sources are to be consulted, under ASTM E1527-21, the environmental professional is afforded the ability to exercise professional judgment and consider the possible releases that might have occurred at a property, adjoining properties and surrounding area in light of the historical uses and, in concert with other relevant information gathered as part of the Phase I process, use this information to assist in selecting historical resources that will be beneficial in identifying recognized environmental conditions in connection with a property.

Historical resources reviewed during the completion of this assessment are referenced below. This may include those obtained from prior Phase I ESA reports pertaining to the Site. It is stated in ASTM E1527-21 that environmental professionals may use information in prior environmental reports provided such information was generated as a result of procedures that meet or exceed the requirements of the current practice.

If certain potential sources of information noted above are not referenced in the sections below, they were not deemed necessary by the environmental professional in order to meet the objective of the historical research consultation. Copies of historical resources that are able to be reproduced and included as appendices in our Phase I ESA are included in Appendix. If any historical resources are not included as appendices, it is due to copyright considerations precluding us from such reproduction.

6.1 Aerial Photographs

We reviewed historical aerial photographs from the years 1940, 1954, 1959, 1967, 1978, 1984, 1996, 2005, 2009, 2010, 2012, 2014, 2016, 2018, 2020 and 2023 provided by ERIS. The table below presents the results of the photograph review.

Photograph Year	Site Observations	Adjoining Property Observations
1940	Appears to be vacant land.	Adjoining properties appear to be vacant land.
1954-1959	Similar to prior photographs.	Adjoining properties appear to be vacant land and scattered residential properties.

Photograph Year	Site Observations	Adjoining Property Observations
1967-1996	Appears to be a mobile home park.	Similar to prior photographs with additional residential development.
1996-2002	Similar to prior photographs.	Similar to prior photographs.
2005-2016	Similar to prior photographs. Decreased numbers of mobile home trailers are visible throughout the years.	West adjoining property appears to be commercial development. The east adjoining property appears to be a golf course. Vacant land is visible to the south until 2009; then residential development.
2018-2023	Similar to prior photographs except for the mobile home park is vacant.	Adjoining properties appear similar to their current configurations

6.3 City Directories

Our firm reviewed city directories ranging in date from 1956 to 2022 provided by ERIS. The following listings for the Site were noted in the directories:

- 39360 Peterson Road: Not listed (1974), Mobile home park (personal names) (1977-2022)

Adjoining and nearby properties in the surrounding area are referenced as being used for residential and general commercial/retail purposes of no obvious environmental concern to the Site.

6.4 Topographic Maps

We reviewed topographic maps from the years 1941, 1944, 1958, 1972, 1975, 1981, 2015, 2018 and 2021 provided by ERIS. The table below presents the results of the photograph review.

Topographic Map Year	Site Observations	Adjoining Property Observations
1941, 1944	Depicted as vacant land.	Adjoining properties are depicted as vacant and agricultural land.
1958	Scattered residential structures are depicted.	Similar to prior maps with additional residential structures and roadways.
1972	Depicted as "Trailer Park" with internal roadways.	Roadways and scattered residential structures. Whitewater River is depicted east of the Site.
1975	Photograph	Photograph
1981	Similar to prior maps.	Similar to prior maps.
2015, 2018, 2021	Roadways interior of the trailer park are depicted.	Roadways and Whitewater River are depicted.

6.5 Other Historical Sources

Other historical sources are referenced in the ASTM E1527 practice as any source or sources other than the standard historical sources referenced in the practice that are credible to a reasonable person and that identify past uses of a subject property. This category includes, but is not limited to miscellaneous maps, newspaper archives, internet sites, community organizations, local libraries, historical societies, current owners or occupants of neighboring properties, or records in the files and/or

personal knowledge of the property owner and/or occupants. No historical sources other than the standard sources described above were deemed necessary and useful to assist in identifying recognized environmental conditions.

7.0 SITE RECONAISSANCE

The objective of the Site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with a subject property. The Site visit for our assessment was completed by Dan Weis of our firm. We were unaccompanied during the site reconnaissance.

7.1 Methodology and Limiting Conditions

The Site reconnaissance consisted of observing the Site on foot walking the periphery of the Site, various transects throughout the Site, and publicly accessible areas surrounding the Site for viewing from accessible adjacent public thoroughfares. If structures are present, the periphery of structures are visually and/or physically observed along with building interiors. Adjoining properties and the surrounding area were also observed during observation of the periphery of the Site, from public thoroughfares adjacent to or traveled on the way to the Site, and if applicable from buildings and structures otherwise accessed during the inspection. No significant limiting conditions of the Site inspection were noted. Select photographs of the Site obtained during the Site reconnaissance are included in Appendix E.

7.2 Current General Site and Vicinity Characteristics

The Site and the surrounding vicinity are situated in the City of Rancho Mirage in an area consisting primarily of commercial and residential development, and public roadways. The Site is a vacant mobile home park. The current use of the Site and adjoining properties are not ones that are indicative of the use, treatment, storage, disposal, or generation of hazardous substances or petroleum products that may have significantly impacted the Site.

7.3 Indications of Past Site and Vicinity Uses

There are no material differences between the current and past uses of the Site, adjoining properties and the surrounding area that were visually and/or physically observed during the Site reconnaissance that pertain to recognized environmental conditions.

7.4 Site-Specific Observations

We examined the Site for the features and conditions noted in the table below.

Feature or Condition	Details
Drains and Sumps	Area drains and features indicative of drains associated with former mobile home use are visible. No staining, odors or other suspect conditions were noted.
Drums, Totes and Intermediate Bulk Containers	None observed.
Hazardous Substances and Petroleum Products in Connection with Identified Uses	None observed.

Feature or Condition	Details
Hazardous Substances and Petroleum Products Not in Connection with Identified Uses	None observed.
Heating/Cooling	None observed.
PCB Containing Items	None observed.
Pits, Ponds, or Lagoons	None observed.
Potable Water Supply/Source	Indio Water Authority.
Roads	Access via Peterson Road.
Septic Systems or Cesspools.	None observed.
Sewage Disposal System	Valley Sanitary District.
Solid Waste (Areas that are apparently graded by non-natural causes or filled with fill of unknown origin)	None observed.
Stained Soil or Pavement	None observed.
Stains or Corrosion on Floors, Walls, or Ceilings (except for staining from water).	None observed.
Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products	None observed.
Storage Tanks	None observed.
Stressed Vegetation (from something other than insufficient water).	None observed.
Strong, Pungent, or Noxious Odors and Their Sources	None noted.
Structures and Other Improvements	Please refer to Section 2.4.
Water/Wastewater or other liquid (including stormwater)	None observed.
Wells	None observed.

8.0 INTERVIEWS

8.1 Site Owner

The Site owner was interviewed during the completion of this assessment and is unaware of environmental concerns in connection with the Site. If a questionnaire was completed, it is included in Appendix F.

8.2 Key Site Manager

The Site owner is also considered to be the Key Site Manager. Please refer to Section 8.1 above.

8.3 Current Occupants

The Site is vacant with no known occupants.

8.4 Local Government Official

Public records requests were completed by our firm as described in Section 5.3. No formal interviews with other personnel at agencies were deemed warranted during the preparation of our Phase I ESA.

8.5 Other Parties

Interviews with other people were not conducted during the preparation of this assessment. As stated in the ASTM E1527-21 practice, interviews with past owners, operators and occupants of a subject property who are likely to have material information regarding the potential for contamination at a given property shall be conducted to the extent that they have been identified and that the information likely to be obtained is not duplicative of information already obtained from other sources. Interviews with people with past association with the Site were not deemed warranted during the completion of this assessment. In addition, for abandoned properties where there is evidence of potential unauthorized uses of the abandoned property or evidence of uncontrolled access to the abandoned property, interviews with one or more owners or occupants of neighboring adjoining properties or nearby properties should be conducted. Neither the Site nor its adjoining properties are considered to fall within these criteria.

9.0 ADDITIONAL SERVICES – NON-SCOPE ASTM CONSIDERATIONS

Several non-scope ASTM considerations are referenced in the ASTM E1527-21 practice that a user of a report may wish to evaluate. Listed considerations in the practice include asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality (unrelated to releases of hazardous substances or petroleum products into the environment), industrial hygiene, lead-based paint (unrelated to releases into the environment), lead in drinking water, mold or microbial growth conditions, PCB-containing building materials, naturally-occurring radon, regulatory compliance, wetlands and substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance

No implication is intended by the practice as to the relative importance of inquiry into such non-scope considerations, and the list of considerations is not intended to be all-inclusive. An evaluation of one or more of the non-scope considerations was not requested of our firm as part of the scope of services for the assessment. Therefore, no findings, opinions and conclusions of this assessment are based on said non-scope ASTM considerations.

10.0 FINDINGS AND OPINIONS

No features, activities, uses and/or conditions that, in our professional judgment, may indicate the presence or likely presence of hazardous substances or petroleum products at the Site were identified during the completion of this assessment.

11.0 CONCLUSIONS AND RECOMMENDATIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM International Practice E1527-21 of the property identified as the Crossings at Peterson Road, located at 39360 Peterson Road, (Riverside County APN 689-180-012), in the City of Rancho Mirage, California. This assessment has revealed no evidence of recognized environmental conditions, historical recognized environmental conditions or controlled recognized environmental conditions in connection with the Site. In addition, no significant data gaps were identified during the completion of this assessment. Additional assessment at the Site is not considered to be warranted at this time.

12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in Section 312.10 of 40 CFR. I have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the Site. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Qualifications of personnel involved with the completion of this report are included in Appendix G.

Daniel Weis, R.E.H.S.
Environmental Manager

13.0 ASSUMPTIONS

No Phase I ESA effort can eliminate uncertainty regarding the potential for recognized environmental conditions to exist in connection with a given property. Performance of the ASTM E1527-21 practice may reduce such uncertainty but in no way should the findings and report be misconstrued as insurance or a guarantee regarding the potential for recognized environmental conditions in connection with a given property. The ASTM E1527-21 practice recognizes reasonable limits of time and cost relative to the completion of a Phase I ESA.

During the completion of this ESA, our firm relied on certain information obtained from secondary sources, including but not limited to the user of the report, government agencies, historical research business entities, environmental databases and interviews with one or more persons. The sources obtained and/or consulted are assumed to be reliable. However, our firm cannot warranty or guarantee that the information provided by these other sources is wholly accurate or complete. Our firm is not responsible for any misrepresentations or false statements that may be provided by others or the lack of pertinent/relevant information that should have been provided/disclosed by others, and we assume no responsibility for any consequence as a result of such omissions or withheld information.

Accuracy and completeness of records varies among information sources, including from governmental agencies. As a result, there is a possibility that even with the proper application of the methodologies presented in ASTM E1527-21, conditions may exist that could not be identified within the scope of this assessment, or which were not reasonably identifiable from the available information. In addition, any responses received from Federal, State, Tribal and local regulatory agency secondary sources of information after the issuance of this report may change certain findings and conclusions of this report.

Estimations and opinions regarding the potential for off-site properties to adversely impact a given subject property is one of the key components of a Phase I ESA. In most cases, recent property-specific or adjacent-property specific measured groundwater data or other hydrogeological information is not reasonably ascertainable. In the absence of such data, reasonable assumptions regarding the depth and flow of groundwater are made based on various sources including comparisons to surface elevations, land topography and available hydrogeological on the State of California GeoTracker database. In addition, estimations and opinions regarding potential impacts from off-site locations may be based on certain assumptions that a hazardous substance or petroleum product may not migrate laterally within unsaturated soil for a substantial distance and that contaminants that have reached saturated soil and groundwater may attenuate over time and/or may decrease in concentration relative to distance from its source. While any interpretations presented herein may be effective in reducing uncertainty regarding potential impacts to a subject property from off-site locations, in no way should the findings and report be misconstrued as insurance or a guarantee regarding the potential for such impacts to occur. Greater certainty regarding subsurface conditions at a given property can only be achieved by way of a subsurface sampling effort of one or more media.

14.0 DEFINITIONS

Definitions of key terminology relevant to the ASTM E1527-21 practice are presented below.

Recognized Environmental Condition – (1) the presence of hazardous substances or petroleum products in, on, or at a property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at a property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at a subject property under conditions that pose a material threat of a future release to the environment.

Historical Recognized Environmental Condition – A previous release of hazardous substances or petroleum products affecting a property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting a property to any controls (for example, activity and use limitations or other property use limitations).

Controlled Recognized Environmental Condition – A recognized environmental condition affecting a property that has been addressed to the satisfaction of an applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

All Appropriate Inquiries – That inquiry constituting all appropriate inquiries into the previous ownership and uses of a property consistent with good commercial and customary practice as defined in CERCLA, 42 U.S.C. § 9601(35)(B) and 40 C.F.R. Part 312, that will qualify a party to a commercial real estate transaction for one of the threshold criteria for satisfying the LLPs to CERCLA liability (42 U.S.C. §§ 9601(35)(A) & (B), § 9607(b)(3), § 9607(q), and § 9607(r)), assuming compliance with other elements of the defense.

Data Failure – A failure to achieve the historical research objective as outlined in the ASTM E1527-21 practice even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. The research objective is compiling and analyzing historical property information and developing a history of the previous uses of a property, adjoining properties and surrounding area to help identify the likelihood of past uses having led to recognized environmental conditions in connection with a property.

Data Gap – A lack of or inability to obtain information required by the ASTM E1527-21 practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by the ASTM E1527-21 practice, including, but not limited to site reconnaissance (for example, an inability to conduct a site visit) and interviews (for example, an inability to interview a key site manager, regulatory officials, etc.). Data gaps are only considered to be significant if they affect the ability of the environmental professional to identify recognized environmental conditions.

De Minimis Condition – A condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. De minimis conditions are not recognized environmental conditions.

Engineering Controls – Physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or groundwater on a property. Engineering controls are a type of AUL.

Environment – (A) the navigable waters, the waters of the contiguous zone and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson-Stevens Fishery Conservation and Management Act [16 U.S.C. §§ 1801 et seq.], and (B) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

Good Faith – The absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one's obligations in the conduct or transaction concerned.

Hazardous Substance – (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1321(b)(2)(A)], (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. 1317(a)], (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412] and (F) any imminently hazardous chemical substance or mixture with respect to which the administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606]. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Institutional Controls – A legal or administrative mechanism (for example, deed restrictions, restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on a property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An institutional control is a type of AUL.

Petroleum Exclusion – While the definition of a CERCLA hazardous substance specifically excludes petroleum products and crude oil, the EPA has determined that the petroleum exclusion applies to petroleum products such as gasoline and other fuels containing lead, benzene or other hazardous substances that are normally added during the refining process. Notwithstanding the existence of the petroleum exclusion, petroleum products are included within the scope of the ASTM E1527-21 practice for multiple reasons. Petroleum products have historically been widely used at commercial properties. In addition, other federal and state laws may impose liability for releases or spills of petroleum products.

Petroleum Products – Those substances included within the meaning of the petroleum exclusion to CERCLA, 42 U.S.C. § 9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). The word fraction refers to certain distillates of crude oil, including gasoline, kerosine, diesel oil, jet fuels and fuel oil.

Reasonably Ascertainable Information – Information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints and (3) practically reviewable.

Release or Threatened Release – Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance, or pollutant or contaminant).

15.0 REFERENCES

Sources of information consulted during the completion of our Phase I ESA are noted in the sections below.

15.1 Documents, Plans and Reports

- All Appropriate Inquiry" as necessary to satisfy the defenses available under 42 U.S.C. §§ 9607(b)(3), 9607(r)(1), and 9607(q), relying on definitions provided at 42 U.S.C. §§ 9601(35)(B); and as further explained in 40 CFR §§ 312.1 – 312.31.
- ASTM International, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-21, 2021.
- California Geological Survey, 2002, California Geomorphic Provinces Note 36, Electronic Copy, Revised December.
- California State Water Resources Control Board, Water Quality Control Plan, Santa Ana River Basin, Region (8), California, Published 1995, Updated 2008.
- ERIS Regulatory Database Report dated February 28, 2024.
- ERIS Topographic Maps Report dated February 28, 2024.
- ERIS Aerial Map Report dated February 28, 2024.
- USGS Topographic Map, Cathedral City, California Quadrangle (2021).

15.2 Personal Communications

- Designated Client Representative – Mark Irving
- Designated Site Owner Representative – Marcus Aleman
- Key Site Manager – Marcus Aleman
- Public Records Clerk –County of Riverside

15.3 Agencies Consulted

- California Department of Conservation, Geologic Energy Management Division (CalGEM)
- California Department of Toxic Substances Control
- California State Water Resources Control Board
- County of Riverside
- United States EPA

FIGURES

FIGURE 1
VICINITY MAP

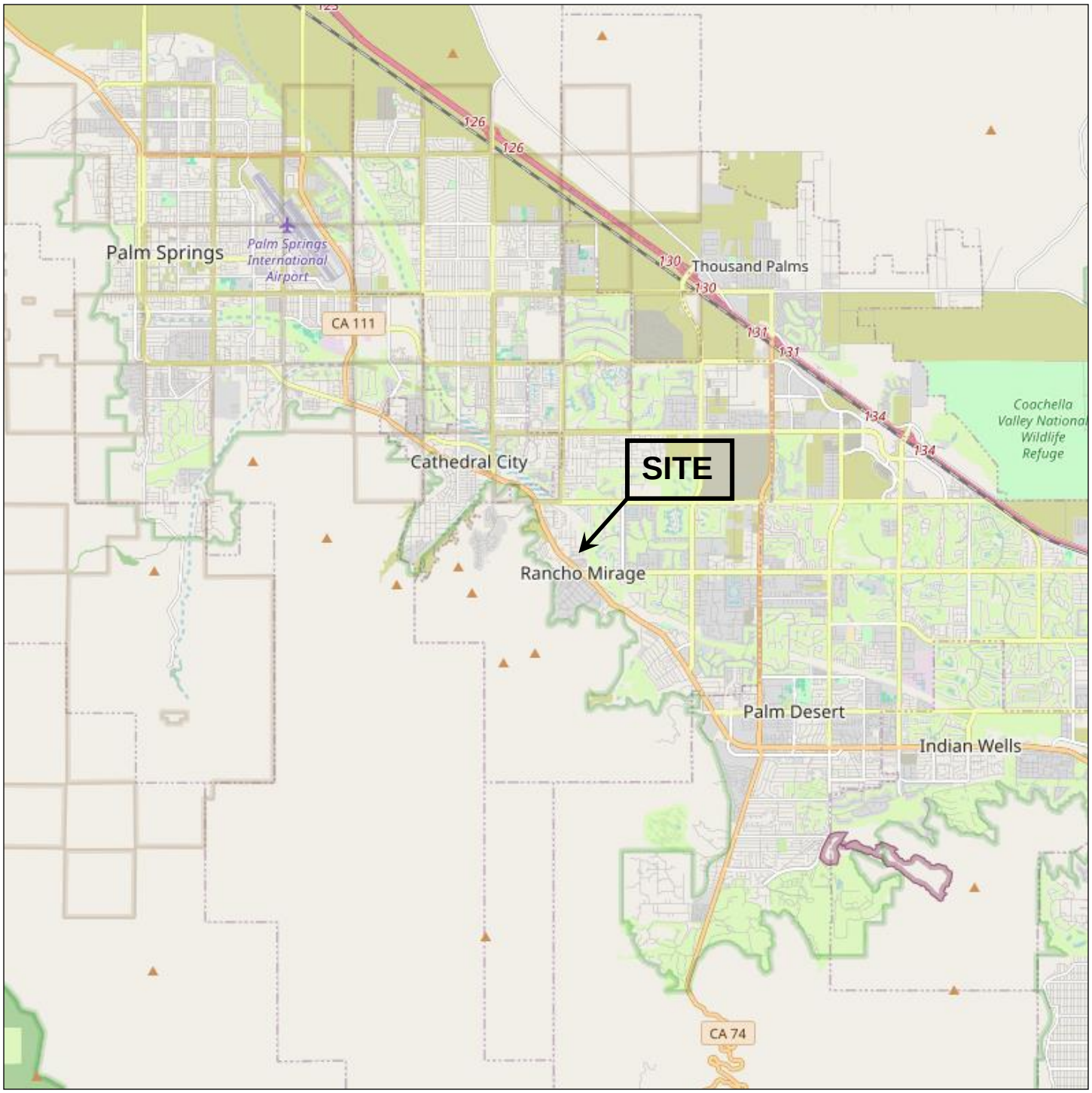

Figure 1 - Vicinity Map

Crossings at Peterson Road
Rancho Mirage, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

FIGURE 2
SITE PLAN

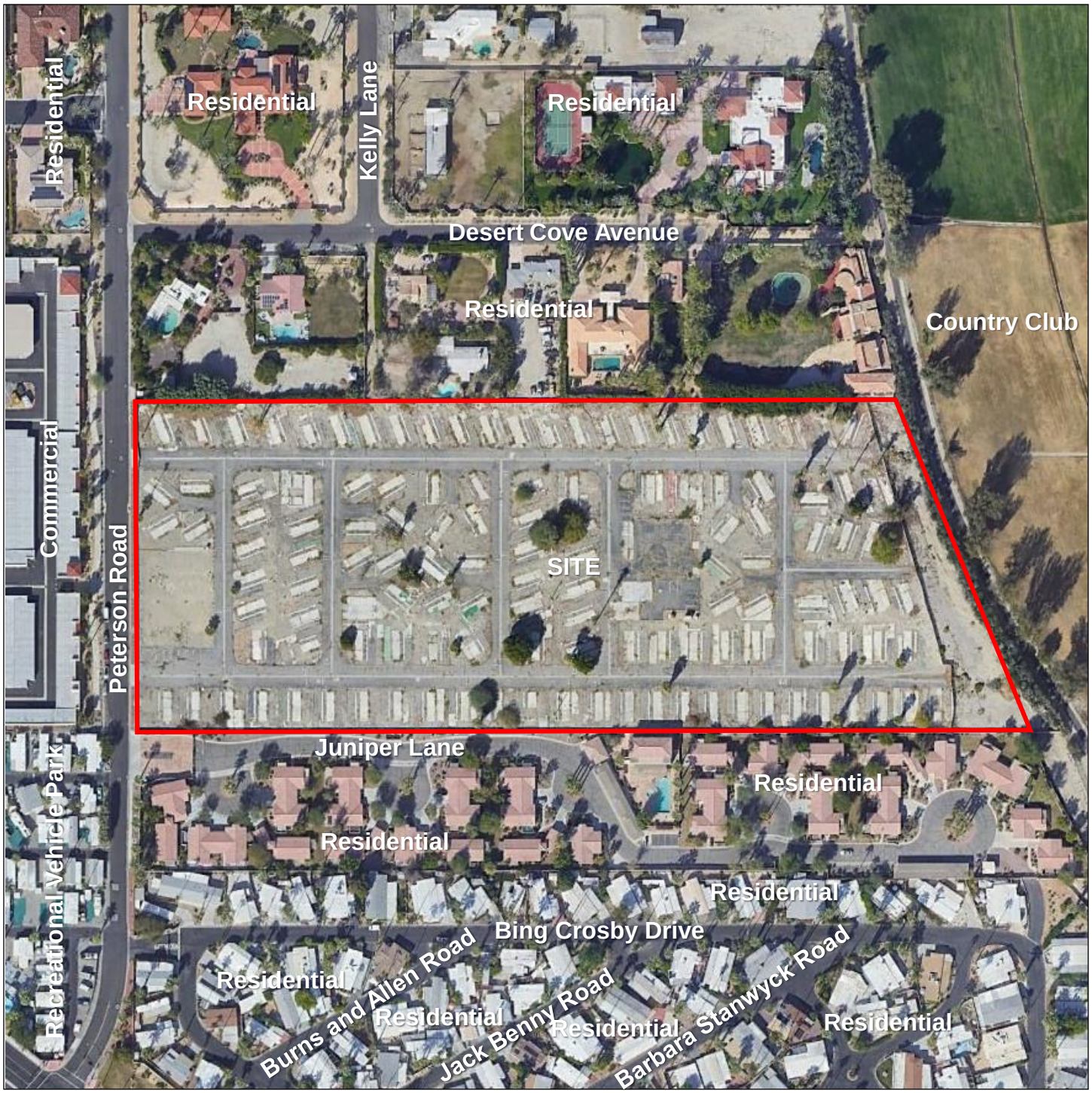

Figure 2 - Site Plan

Crossings at Peterson Road
Rancho Mirage, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

FIGURE 3
TOPOGRAPHIC MAP

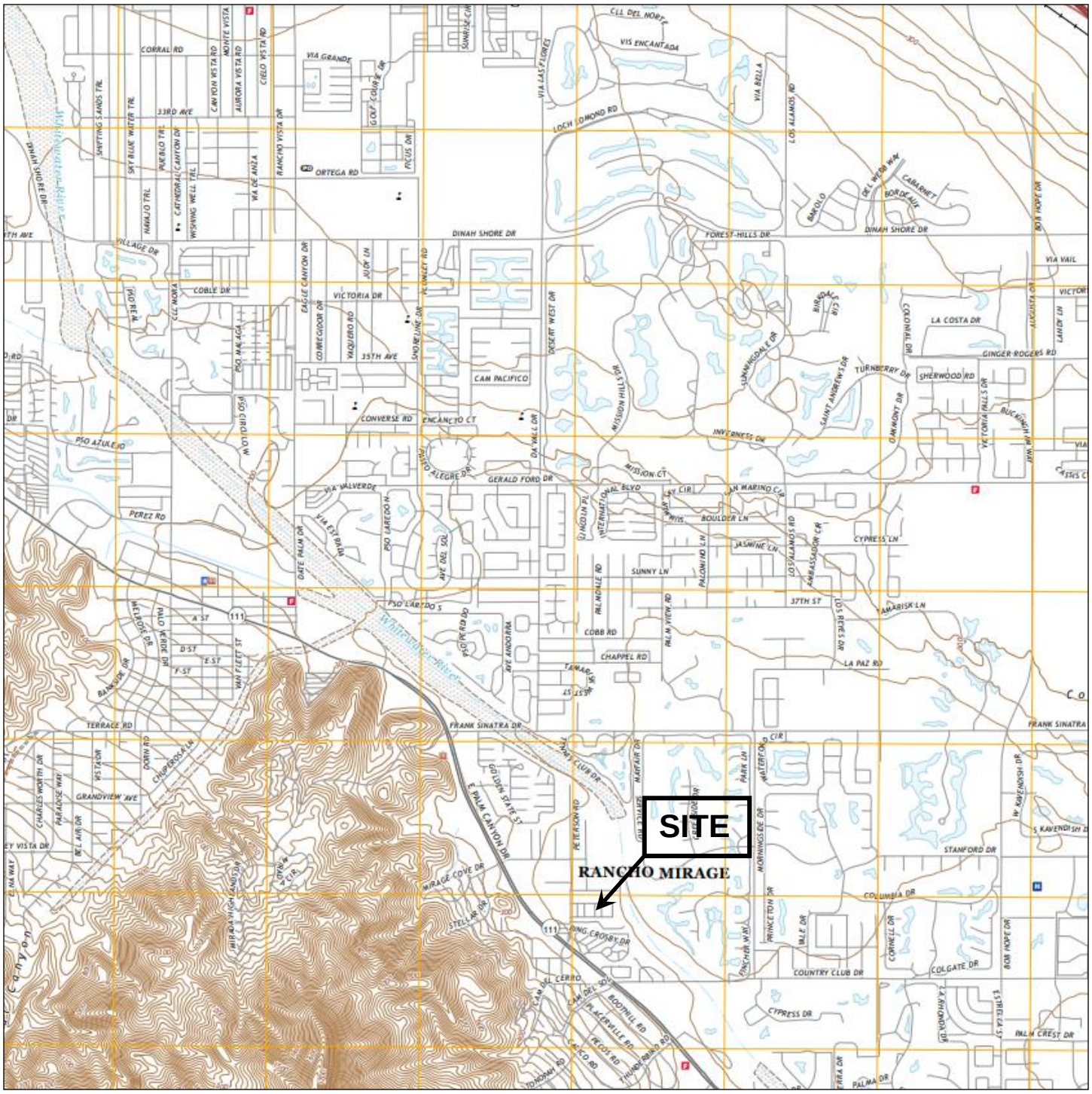

Figure 3 - Topographic Map

39360 Peterson Road
Rancho Mirage, California

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

APPENDICES

APPENDIX A

USER PROVIDED INFORMATION (NOT USED)

APPENDIX B
REGULATORY DATABASE REPORT

DATABASE REPORT

Project Property:	*39360 Peterson Road* *39360 Peterson Road* *Rancho Mirage CA 92270*
Project No:	
Report Type:	*Database Report*
Order No:	*24022701207*
Requested by:	*Weis Environmental, LLC*
Date Completed:	*February 28, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

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Executive Summary

Property Information:

Project Property:		*39360 Peterson Road* *39360 Peterson Road Rancho Mirage CA 92270*
Project No:		
Coordinates:		
	Latitude:	*33.76185499*
	Longitude:	*-116.43672123*
	UTM Northing:	*3,735,893.94*
	UTM Easting:	*552,162.61*
	UTM Zone:	*11S*
Elevation:		*250 FT*

Order Information:

Order No:	*24022701207*
Date Requested:	*February 27, 2024*
Requested by:	*Weis Environmental, LLC*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials Photographs*
City Directory Search	*CD - 1 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Topographic Map	*Topographic Maps*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	**1**	0	-	-	**1**
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	**3**	**2**	-	-	**5**
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	0	0	0	0
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
SWRCB SWF	Y	0.5	0	0	0	0	-	0
WMUD	Y	0.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0
SWAT	Y	0.5	0	0	0	0	-	0
C&D DEBRIS RECY	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
PROCESSORS	Y	0.5	0	0	0	0	-	0
CONTAINER RECY	Y	0.5	0	0	0	0	-	0
LDS	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	**1**	0	**2**	-	**3**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	**1**	0	-	-	**1**
UST CLOSURE	Y	0.5	0	0	0	0	-	0
HHSS	Y	0.25	0	**1**	0	-	-	**1**
UST SWEEPS	Y	0.25	0	**1**	0	-	-	**1**
AST	Y	0.25	0	0	0	-	-	0
AST SWRCB	Y	0.25	0	0	0	-	-	0
TANK OIL GAS	Y	0.25	0	0	0	-	-	0
DELISTED TNK	Y	0.25	0	**1**	**1**	-	-	**2**
CERS TANK	Y	0.25	0	**1**	**1**	-	-	**2**
DELISTED CTNK	Y	0.25	0	0	0	-	-	0
HIST TANK	Y	0.25	0	**1**	0	-	-	**1**

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
LUR	Y	0.5	0	0	0	0	-	0
CALSITES	Y	0.5	0	0	0	0	-	0
HLUR	Y	0.5	0	0	0	0	-	0
DEED	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
CLEANUP SITES	Y	0.5	0	0	0	0	-	0
DELISTED CLEANUP	Y	0.5	0	0	0	0	-	0
DELISTED COUNTY	Y	0.25	0	0	**1**	-	-	**1**
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County								
LOP RIVERSIDE	Y	0.5	0	**1**	0	**1**	-	**2**
UST RIVERSIDE	Y	0.25	0	**1**	0	-	-	**1**
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	**1**	0	-	-	**1**
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	**1**	**1**
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
PFAS SAMPLING	Y	0.5	0	0	0	0	-	0
DRYCLEANERS	Y	0.25	0	**1**	0	-	-	**1**
DELISTED DRYCLEANERS	Y	0.25	0	**1**	0	-	-	**1**
DRYC GRANT	Y	0.25	0	0	0	-	-	0
PFAS GT CLEANUPS	Y	0.5	0	0	0	0	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0
PFAS INVEST	Y	0.5	0	0	0	0	-	0
HWSS CLEANUP	Y	0.5	0	0	0	0	-	0
TOXIC PITS	Y	1	0	0	0	0	0	0
DTSC HWF	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
INSP COMP ENF	Y	1	0	0	0	0	0	0
SCH	Y	1	0	0	0	0	0	0
CHMIRS	Y	PO	0	-	-	-	-	0
HIST CHMIRS	Y	PO	0	-	-	-	-	0
HAZNET	Y	PO	0	-	-	-	-	0
HAZ GEN	Y	PO	0	-	-	-	-	0
HAZ TSD	Y	0.5	0	0	0	0	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HW TRANSPORT	Y	0.125	0	0	-	-	-	0
WASTE TIRE	Y	PO	0	-	-	-	-	0
MEDICAL WASTE	Y	0.25	0	0	0	-	-	0
HIST CORTESE	Y	0.5	0	0	0	0	-	0
CDO/CAO	Y	0.5	0	0	0	0	-	0
CERS HAZ	Y	0.125	0	**1**	-	-	-	**1**
DELISTED HAZ	Y	0.5	0	0	0	0	-	0
GEOTRACKER	Y	0.125	0	0	-	-	-	0
MINE	Y	1	0	0	0	0	0	0
LIEN	Y	PO	0	-	-	-	-	0
WASTE DISCHG	Y	0.25	0	0	0	-	-	0
EMISSIONS	Y	0.25	0	**2**	0	-	-	**2**
CDL	Y	0.125	0	**1**	-	-	-	**1**
Tribal	***No Tribal additional environmental record sources available for this State.***							
County								
HWG RIVERSIDE	Y	0.125	0	0	-	-	-	0
HZH RIVERSIDE	Y	0.125	0	**1**	-	-	-	**1**
MED WST RIVERSIDE	Y	0.25	0	0	0	-	-	0
RMP RIVERSIDE	Y	PO	0	-	-	-	-	0
	Total:		0	**21**	**5**	**3**	**1**	**30**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	CERS HAZ	AT&T Mobility - USID115950	70170 HIGHWAY 111 RANCHO MIRAGE CA 92270	W	0.05 / 270.10	8	24
1	HZH RIVERSIDE	AT&T Mobility-USID115950	70170 Highway 111 Rancho Mirage CA 92270	W	0.05 / 270.10	8	25
2	CDL		70210 HIGHWAY 111, #65 RANCHO MIRAGE CA 92270	WSW	0.08 / 405.99	11	25
3	DRYCLEANERS	RANCHO MIRAGE CLEANERS	70223 HWY 111 STE A RANCHO MIRAGE CA	SW	0.11 / 583.12	19	26
3	EMISSIONS	RANCHO MIRAGE CLEANERS	70223 HIGHWAY 111 # A RANCHO MIRAGE CA 92270	SW	0.11 / 583.12	19	26
3	RCRA NON GEN	RANCHO MIRAGE CLEANERS	70223 HWY 111 STE A RANCHO MIRAGE CA 92270 ***EPA Handler ID:*** CAL000272263	SW	0.11 / 583.12	19	27
3	FED DRYCLEANERS	RANCHO MIRAGE CLEANERS	70223 HWY 111 #A RANCHO MIRAGE CA 92270 ***FRS Facility ID:*** 110065724265	SW	0.11 / 583.12	19	28
3	DELISTED DRYCLEANERS	Rancho Mirage Cleaners	70-223 Hwy 111 Suite A Rancho Mirage CA 92270	SW	0.11 / 583.12	19	28
4	RCRA SQG	PALM SPRINGS OIL #7	70255 HWY 111 RANCHO MIRAGE CA 92270 ***EPA Handler ID:*** CAD981660657	SW	0.12 / 659.76	16	28
4	LOP RIVERSIDE	Palm Springs Oil/Express Oil	70255 Hwy 111 Rancho Mirage CA ***Site ID | Status Desc:*** 96740 | CLOSED/ACTION COMPLETED	SW	0.12 / 659.76	16	30
4	UST RIVERSIDE	7-Eleven 37979	70255 Hwy 111 Rancho Mirage CA 92270 ***No of Tanks:*** 3	SW	0.12 / 659.76	16	30
4	LUST	PALM SPRINGS OIL/EXPRESS OIL	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Global ID:*** T0606501067	SW	0.12 / 659.76	16	30

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
4	DELISTED TNK	ULTRAMAR #769	70255 HWY 111 Rancho Mirage CA 92270	SW	0.12 / 659.76	16	33
4	HHSS	PS 7	70255 HWY 111 RANCHO MIRAGE CA 92260	SW	0.12 / 659.76	16	33
4	UST	7-ELEVEN INC. #37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Facility ID:*** FA0047239 ***Tank ID No. | Tank Status | Tank Closure Date:*** 3769-1 | Confirmed/Updated Information | , 3769-3 | Confirmed/Updated Information | , 3769-2 | Confirmed/Updated Information |	SW	0.12 / 659.76	16	33
4	CERS TANK	7-ELEVEN INC. #37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Site ID:*** 165500	SW	0.12 / 659.76	16	35
4	HIST TANK	PS #7	70255 HWY 111 RANCHO MIRAGE CA	SW	0.12 / 659.76	16	47
4	EMISSIONS	7-ELEVEN INC #37979	70255 HWY 111 RANCHO MIRAGE CA 92270	SW	0.12 / 659.76	16	47
4	RCRA NON GEN	7 ELEVEN 37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***EPA Handler ID:*** CAL000418957	SW	0.12 / 659.76	16	48
4	RCRA NON GEN	VALERO CORNER STORE 3769	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270-2917 ***EPA Handler ID:*** CAL000384016	SW	0.12 / 659.76	16	49
4	UST SWEEPS	EXPRESS OIL #67	70255 HIGHWAY 111 RANCHO MIRAGE CA ***C C | Status:*** A33-000-9085 | ACTIVE ***Tank ID:*** 000002, 000001, 000003, 000004	SW	0.12 / 659.76	16	50
5	DELISTED COUNTY	The Crab Pot Restaurant and Bar	70030 Highway 111 Rancho Mirage CA 92270	WNW	0.21 / 1,095.11	11	51
6	DELISTED TNK	CLUB AT MORNINGSIDE, THE	84 MAYFAIR DR Rancho Mirage CA 92270	NE	0.24 / 1,263.95	3	51
6	CERS TANK	Club At Morningside, The	84 MAYFAIR DR RANCHO MIRAGE CA 92270 ***Site ID:*** 20494	NE	0.24 / 1,263.95	3	51
6	RCRA NON GEN	CLUB AT MORNINGSIDE	84 MAYFAIR DR RANCHO MIRAGE CA 92270-2562 ***EPA Handler ID:*** CAL000023026	NE	0.24 / 1,263.95	3	61

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	RCRA NON GEN	MARCI WOOD	38988 CAL IDAHO DR RANCHO MIRAGE CA 92270 ***EPA Handler ID:*** CAC003120778	NW	0.24 / 1,286.03	11	62
8	LUST	CVWD 80 06 LIFT STATION	COUNTRY CLUB DRIVE RANCHO MIRAGE CA 92270 ***Global ID:*** T0606501064	SE	0.29 / 1,529.28	-7	63
9	LOP RIVERSIDE	Thunderbird Country Club	70612 Hwy 111 Rancho Mirage CA ***Site ID*** **|** ***Status Desc:*** 200219064 | CLOSED/ACTION COMPLETED	SSE	0.29 / 1,545.39	8	66
9	LUST	THUNDERBIRD COUNTRY CLUB	70612 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Global ID:*** T0606591755	SSE	0.29 / 1,545.39	8	67
10	MRDS	GRAVEL PIT	RIVERSIDE COUNTY RANCHO MIRAGE CA 92270 ***Dep ID:*** 10213119	WNW	0.61 / 3,213.48	50	70

Executive Summary: Summary by Data Source

Standard

Federal

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Oct 2, 2023 has found that there are 1 RCRA SQG site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
PALM SPRINGS OIL #7	70255 HWY 111 RANCHO MIRAGE CA 92270 ***EPA Handler ID**: CAD981660657*	SW	0.12 / 659.76	4

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Oct 2, 2023 has found that there are 5 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
RANCHO MIRAGE CLEANERS	70223 HWY 111 STE A RANCHO MIRAGE CA 92270 ***EPA Handler ID**: CAL000272263*	SW	0.11 / 583.12	3
VALERO CORNER STORE 3769	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270-2917 ***EPA Handler ID**: CAL000384016*	SW	0.12 / 659.76	4
7 ELEVEN 37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***EPA Handler ID**: CAL000418957*	SW	0.12 / 659.76	4
CLUB AT MORNINGSIDE	84 MAYFAIR DR RANCHO MIRAGE CA 92270-2562 ***EPA Handler ID**: CAL000023026*	NE	0.24 / 1,263.95	6
MARCI WOOD	38988 CAL IDAHO DR RANCHO MIRAGE CA 92270 ***EPA Handler ID**: CAC003120778*	NW	0.24 / 1,286.03	7

State

LUST - Leaking Underground Fuel Tank Reports

A search of the LUST database, dated Nov 30, 2023 has found that there are 3 LUST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
PALM SPRINGS OIL/EXPRESS OIL	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Global ID***: *T0606501067*	SW	0.12 / 659.76	4
THUNDERBIRD COUNTRY CLUB	70612 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Global ID***: *T0606591755*	SSE	0.29 / 1,545.39	9

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CVWD 80 06 LIFT STATION	COUNTRY CLUB DRIVE RANCHO MIRAGE CA 92270 ***Global ID***: *T0606501064*	SE	0.29 / 1,529.28	8

UST - Permitted Underground Storage Tank (UST) in GeoTracker

A search of the UST database, dated Feb 15, 2024 has found that there are 1 UST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
7-ELEVEN INC. #37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Facility ID***: *FA0047239* ***Tank ID No. | Tank Status | Tank Closure Date***: *3769-1 | Confirmed/Updated Information | , 3769-3 | Confirmed/Updated Information | , 3769-2 | Confirmed/Updated Information |*	SW	0.12 / 659.76	4

HHSS - Historical Hazardous Substance Storage Information Database

A search of the HHSS database, dated Aug 27, 2015 has found that there are 1 HHSS site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
PS 7	70255 HWY 111 RANCHO MIRAGE CA 92260	SW	0.12 / 659.76	4

UST SWEEPS - Statewide Environmental Evaluation and Planning System

A search of the UST SWEEPS database, dated Oct 1, 1994 has found that there are 1 UST SWEEPS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
EXPRESS OIL #67	70255 HIGHWAY 111 RANCHO MIRAGE CA ***C C | Status***: *A33-000-9085 | ACTIVE* ***Tank ID***: *000002, 000001, 000003, 000004*	SW	0.12 / 659.76	4

DELISTED TNK - Delisted Storage Tanks

A search of the DELISTED TNK database, dated Feb 15, 2024 has found that there are 2 DELISTED TNK site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ULTRAMAR #769	70255 HWY 111 Rancho Mirage CA 92270	SW	0.12 / 659.76	4
CLUB AT MORNINGSIDE, THE	84 MAYFAIR DR Rancho Mirage CA 92270	NE	0.24 / 1,263.95	6

CERS TANK - California Environmental Reporting System (CERS) Tanks

A search of the CERS TANK database, dated Jan 17, 2024 has found that there are 2 CERS TANK site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
7-ELEVEN INC. #37979	70255 HIGHWAY 111 RANCHO MIRAGE CA 92270 ***Site ID**: 165500*	SW	0.12 / 659.76	4
Club At Morningside, The	84 MAYFAIR DR RANCHO MIRAGE CA 92270 ***Site ID**: 20494*	NE	0.24 / 1,263.95	6

HIST TANK - Historical Hazardous Substance Storage Container Information - Facility Summary

A search of the HIST TANK database, dated May 27, 1988 has found that there are 1 HIST TANK site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
PS #7	70255 HWY 111 RANCHO MIRAGE CA	SW	0.12 / 659.76	4

DELISTED COUNTY - Delisted County Records

A search of the DELISTED COUNTY database, dated Feb 6, 2024 has found that there are 1 DELISTED COUNTY site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
The Crab Pot Restaurant and Bar	70030 Highway 111 Rancho Mirage CA 92270	WNW	0.21 / 1,095.11	5

County

LOP RIVERSIDE - Riverside County - Local Oversight Program List

A search of the LOP RIVERSIDE database, dated Feb 6, 2024 has found that there are 2 LOP RIVERSIDE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Palm Springs Oil/Express Oil	70255 Hwy 111 Rancho Mirage CA	SW	0.12 / 659.76	4
	Site ID* | *Status Desc: *96740* | *CLOSED/ACTION COMPLETED*			
Thunderbird Country Club	70612 Hwy 111 Rancho Mirage CA	SSE	0.29 / 1,545.39	9
	Site ID* | *Status Desc: *200219064* | *CLOSED/ACTION COMPLETED*			

UST RIVERSIDE - Riverside County - Underground Storage Tanks List

A search of the UST RIVERSIDE database, dated Sep 27, 2023 has found that there are 1 UST RIVERSIDE site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
7-Eleven 37979	70255 Hwy 111 Rancho Mirage CA 92270	SW	0.12 / 659.76	4
	No of Tanks: *3*			

Non Standard

Federal

FED DRYCLEANERS - Drycleaner Facilities

A search of the FED DRYCLEANERS database, dated Jul 23, 2023 has found that there are 1 FED DRYCLEANERS site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
RANCHO MIRAGE CLEANERS	70223 HWY 111 #A RANCHO MIRAGE CA 92270	SW	0.11 / 583.12	3
	FRS Facility ID: *110065724265*			

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
GRAVEL PIT	RIVERSIDE COUNTY RANCHO MIRAGE CA 92270	WNW	0.61 / 3,213.48	10
	Dep ID: *10213119*			

State

DRYCLEANERS - Dry Cleaning Facilities

A search of the DRYCLEANERS database, dated Dec 20, 2021 has found that there are 1 DRYCLEANERS site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
RANCHO MIRAGE CLEANERS	70223 HWY 111 STE A RANCHO MIRAGE CA	SW	0.11 / 583.12	3

DELISTED DRYCLEANERS - Delisted Drycleaners

A search of the DELISTED DRYCLEANERS database, dated Jan 31, 2022 has found that there are 1 DELISTED DRYCLEANERS site (s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Rancho Mirage Cleaners	70-223 Hwy 111 Suite A Rancho Mirage CA 92270	SW	0.11 / 583.12	3

CERS HAZ - California Environmental Reporting System (CERS) Hazardous Waste Sites

A search of the CERS HAZ database, dated Jan 17, 2024 has found that there are 1 CERS HAZ site(s) within approximately 0.12miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
AT&T Mobility - USID115950	70170 HIGHWAY 111 RANCHO MIRAGE CA 92270	W	0.05 / 270.10	1

EMISSIONS - Toxic Pollutant Emissions Facilities

A search of the EMISSIONS database, dated Dec 31, 2020 has found that there are 2 EMISSIONS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
RANCHO MIRAGE CLEANERS	70223 HIGHWAY 111 # A RANCHO MIRAGE CA 92270	SW	0.11 / 583.12	3
7-ELEVEN INC #37979	70255 HWY 111 RANCHO MIRAGE CA 92270	SW	0.12 / 659.76	4

CDL - Clandestine Drug Lab Sites

A search of the CDL database, dated Jan 19, 2021 has found that there are 1 CDL site(s) within approximately 0.12miles of the project property.

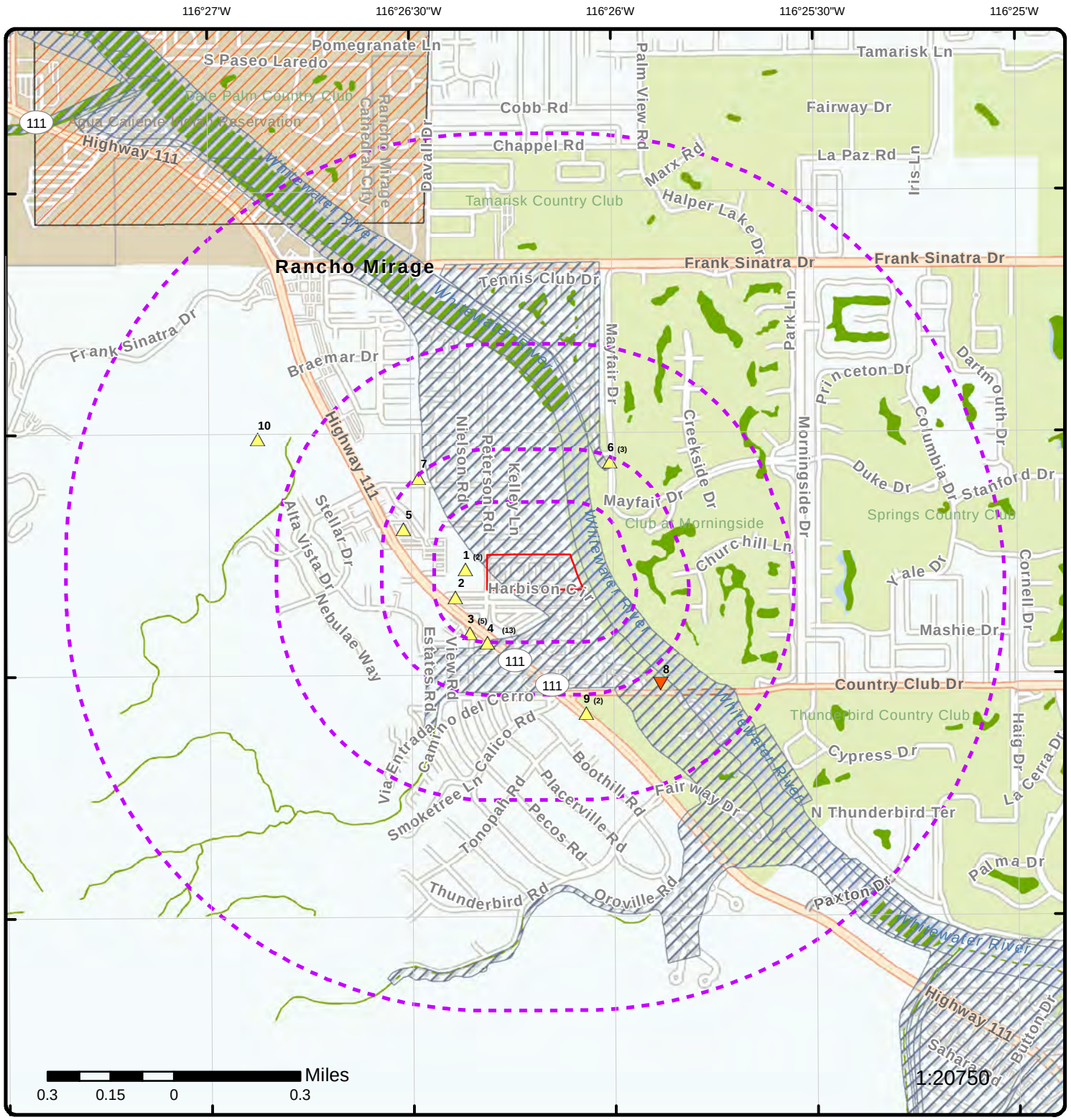
Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	70210 HIGHWAY 111, #65 RANCHO MIRAGE CA 92270	WSW	0.08 / 405.99	2

County

HZH RIVERSIDE - Riverside County - Disclosure Facility List

A search of the HZH RIVERSIDE database, dated Sep 27, 2023 has found that there are 1 HZH RIVERSIDE site(s) within approximately 0.12miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
AT&T Mobility-USID115950	70170 Highway 111 Rancho Mirage CA 92270	W	0.05 / 270.10	1



Map: 1.0 Mile Radius

Order Number: 24022701207

Address: 39360 Peterson Road, Rancho Mirage, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.

Map: 0.5 Mile Radius

Order Number: 24022701207

Address: 39360 Peterson Road, Rancho Mirage, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.

Map: 0.25 Mile Radius

Order Number: 24022701207

Address: 39360 Peterson Road, Rancho Mirage, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.

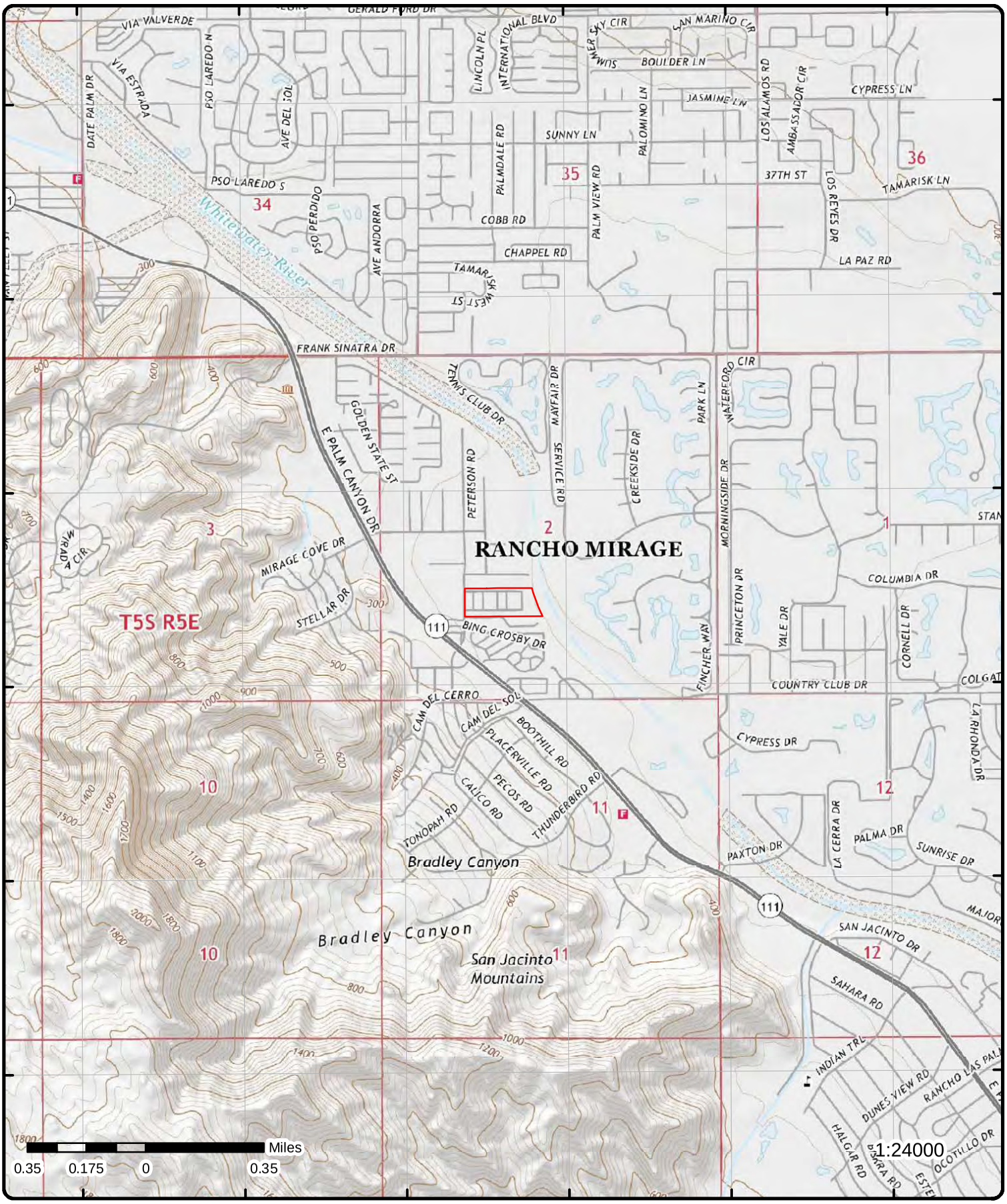
Aerial **Year: 2023**

Order Number: 24022701207

Address: 39360 Peterson Road, Rancho Mirage, CA

Source: ESRI World Imagery

© ERIS Information Inc.



Topographic Map

Year: 2021

Order Number: 24022701207

Address: 39360 Peterson Road, CA

Quadrangle(s): Rancho Mirage CA, Cathedral City CA

Source: USGS Topographic Map

© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of2	W	0.05 / 270.10	257.67 / 8	AT&T Mobility - USID115950 70170 HIGHWAY 111 RANCHO MIRAGE CA 92270	CERS HAZ

Site ID: 565458
Latitude: 33.762200
Longitude: -116.439820

Regulated Programs

EI ID: 10840849 **EI Description:** Chemical Storage Facilities

Evaluations

Eval Date: 07/29/2020
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Facility is a cell tower site. Hazardous material onsite: lead acid batteries. Owner/operator not required to sign inspection report because of safety measure in place to prevent COVID 19.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Affiliations

Affil Type Desc: Environmental Contact
Entity Name: AT&T EH&S Hotline - Option #1
Entity Title:
Address: 311 S. Akard Street, Floor 12
City: Dallas
State: TX
Country:
Zip Code: 75202
Phone:

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: 311 S. Akard Street, Floor 12
City: Dallas
State: TX
Country:
Zip Code: 75202
Phone:

Affil Type Desc: Legal Owner
Entity Name: New Cingular Wireless PCS, LLC dba AT&T Mobility
Entity Title:
Address: 311 S. Akard Street, Floor 12
City: Dallas
State: TX
Country: United States

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Zip Code: 75202
Phone: (469) 295-2319

Affil Type Desc: Parent Corporation
Entity Name: AT&T Mobility
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Identification Signer
Entity Name: Jeremy McGrue
Entity Title: National EPCRA Manager
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title:
Address: 4065 County Circle Drive, Room 104
City: Riverside
State: CA
Country:
Zip Code: 92503
Phone: (951) 358-5055

Affil Type Desc: Document Preparer
Entity Name: Peter Burnell, Sigma Consultants, Inc.
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Operator
Entity Name: AT&T Mobility
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (800) 566-9347

1	*2 of2*	*W*	*0.05 / 270.10*	*257.67 / 8*	***AT&T Mobility-USID115950*** ***70170 Highway 111*** ***Rancho Mirage CA 92270***	***HZH*** ***RIVERSIDE***

2	*1 of1*	*WSW*	*0.08 / 405.99*	*260.20 / 11*	***70210 HIGHWAY 111, #65*** ***RANCHO MIRAGE CA 92270***	***CDL***

Clue: 2001-10-038
Date: 10/6/2001
County: RIVERSIDE
Lab Type: A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Lab Type Description: Abandoned Drug Lab Waste - location away from an actual illegal drug lab where drug lab waste and/or equipment were abandoned.

---

3 | **1 of5** | **SW** | **0.11 / 583.12** | **268.99 / 19** | **RANCHO MIRAGE CLEANERS**
70223 HWY 111 STE A
RANCHO MIRAGE CA | **DRYCLEANERS**

EPA ID:	CAL000272263	**Owner City:**	RANCHO MIRAGE
Create Date:	6/24/2003	**Owner State:**	CA
Facility Act Ind:	No	**Owner Zip:**	922700000
Inact Date:	6/30/2020	**Owner Phone:**	7603287056
Reason:	SIC/NAICS	**Owner Fax:**	0
Region Code:	4	**Contact Name:**	SARAB J SINGH
DD Latitude:	33.759875	**Contact Street 1:**	70223 HWY 111 STE A
DD Longitude:	-116.439157	**Contact Street 2:**	
Facility County Code:	(33) RIVERSIDE	**Contact City:**	RANCHO MIRAGE
Mail Name:		**Contact State:**	CA
Owner Name:	SARAB J SINGH	**Contact Zip:**	92270
Owner Street 1:	70223 HWY 111 STE A	**Contact Phone:**	7603287056
Owner Street 2:		**Contact Fax:**	0

NAICS Details

NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial

---

3 | **2 of5** | **SW** | **0.11 / 583.12** | **268.99 / 19** | **RANCHO MIRAGE CLEANERS**
70223 HIGHWAY 111 # A
RANCHO MIRAGE CA 92270 | **EMISSIONS**

2015 Toxic Data

Facility ID:	134624	**COID:**	RIV
Facility SIC Code:	7216	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2016 Toxic Data

Facility ID:	134624	**TS:**	
Facility SIC Code:	7216	**HRA:**	
CERR CODE:		**CH Index:**	
COID:	RIV	**AH Index:**	
CO:	33	**Air Basin:**	SS
DISN:	SOUTH COAST AQMD	**District:**	SC
CHAPIS:			

2017 Toxic Data

Facility ID:	134624	**COID:**	RIV
Facility SIC Code:	7216	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SS	**CERR Code:**	
District:	SC		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2018 Toxic Data

Facility ID:	134624	***COID:***	RIV
Facility SIC Code:	7216	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SS	***CERR Code:***	
District:	SC		

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

3	***3 of5***	***SW***	***0.11 / 583.12***	***268.99 / 19***	***RANCHO MIRAGE CLEANERS 70223 HWY 111 STE A RANCHO MIRAGE CA 92270***	***RCRA NON GEN***

EPA Handler ID:	CAL000272263
Gen Status Universe:	No Report
Contact Name:	SARAB J SINGH
Contact Address:	70223 HWY 111 STE A , , RANCHO MIRAGE , CA, 92270 ,
Contact Phone No and Ext:	760-328-7056
Contact Email:	SARAB.SINGH2@VERIZON.NET
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	20030624
Location Latitude:	33.759875
Location Longitude:	-116.439157

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20030624
Handler Name:	RANCHO MIRAGE CLEANERS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Source Type: Implementer
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	70223 HWY 111 STE A
Name:	SARAB J SINGH	**Street 2:**	
Date Became Current:		**City:**	RANCHO MIRAGE
Date Ended Current:		**State:**	CA
Phone:	760-328-7056	**Country:**	
Source Type:	Implementer	**Zip Code:**	92270

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	70223 HWY 111 STE A
Name:	SARAB J SINGH	**Street 2:**	
Date Became Current:		**City:**	RANCHO MIRAGE
Date Ended Current:		**State:**	CA
Phone:	760-328-7056	**Country:**	
Source Type:	Implementer	**Zip Code:**	92270-0000

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	4 of5	SW	0.11 / 583.12	268.99 / 19	RANCHO MIRAGE CLEANERS 70223 HWY 111 #A RANCHO MIRAGE CA 92270	FED DRYCLEANERS

FRS Facility ID: 110065724265
NPDES IDs:
NAICS Codes: 81232
SIC Codes:
Latitude: 33.759954
Longitude: -116.439162

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	5 of5	SW	0.11 / 583.12	268.99 / 19	Rancho Mirage Cleaners 70-223 Hwy 111 Suite A Rancho Mirage CA 92270	DELISTED DRYCLEANERS

EPA ID:		**Owner Zip:**	
Create Date:	Water-Based Cleaning	**Owner Phone:**	
Facility Act Ind:	Sarab Singh	**Owner Fax:**	
Inactive Date:	Rancho Mirage Cleaners	**Contact Name:**	
County Name:	92270	**Contact Street 1:**	
Latitude:		**Contact Street 2:**	
Longitude:		**Contact City:**	
Region Code:		**Contact State:**	
Reason:		**Contact Zip:**	
Owner Name:		**Contact Phone:**	
Owner Street 1:		**Mail Name:**	
Owner Street 2:		**Original Source:**	NTDC
Owner City:		**Record Date:**	28-FEB-2020
Owner State:			

Delisted Non-Toxic Dry Cleaning Incentive Program

Grant Yr:		**Grant Year:**	2019 GRANT AWARD
Districts:	SCAQMD	**Exec Full:**	Sarab Singh
Technology:	Water-Based Cleaning	**Phone No:**	(760)328-7056

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of13	SW	0.12 / 659.76	265.47 / 16	PALM SPRINGS OIL #7 70255 HWY 111 RANCHO MIRAGE CA 92270	RCRA SQG

EPA Handler ID: CAD981660657

Gen Status Universe:	Small Quantity Generator
Contact Name:	ENVIRONMENTAL MANAGER
Contact Address:	70255 HWY 111 , , RANCHO MIRAGE , CA, 92260 , US
Contact Phone No and Ext:	213-666-4471
Contact Email:	
Contact Country:	US
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	Other
Receive Date:	19861008
Location Latitude:	33.759552
Location Longitude:	-116.438624

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19861008
Handler Name:	PALM SPRINGS OIL #7
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator
Source Type:	Notification

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	NOT REQUIRED
Name:	PALM SPRINGS OIL CO INC	***Street 2:***	
Date Became Current:		***City:***	NOT REQUIRED
Date Ended Current:		***State:***	ME
Phone:	415-555-1212	***Country:***	
Source Type:	Notification	***Zip Code:***	99999
Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	NOT REQUIRED
Name:	NOT REQUIRED	***Street 2:***	
Date Became Current:		***City:***	NOT REQUIRED
Date Ended Current:		***State:***	ME
Phone:	415-555-1212	***Country:***	
Source Type:	Notification	***Zip Code:***	99999

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of13	SW	0.12 / 659.76	265.47 / 16	Palm Springs Oil/Express Oil 70255 Hwy 111 Rancho Mirage CA	LOP RIVERSIDE

Site ID: 96740
Status Code: 9
Status Desc: CLOSED/ACTION COMPLETED
Case Type Code: S
Case Type Desc: SOIL ONLY IS IMPACTED
Closed Code: Y
Closed Desc: CLOSED SITE
Employee: Shurlow-LOP

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	3 of13	SW	0.12 / 659.76	265.47 / 16	7-Eleven 37979 70255 Hwy 111 Rancho Mirage CA 92270	UST RIVERSIDE

No of Tanks: 3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	4 of13	SW	0.12 / 659.76	265.47 / 16	PALM SPRINGS OIL/EXPRESS OIL 70255 HIGHWAY 111 RANCHO MIRAGE CA 92270	LUST

Global ID: T0606501067
Site Facility Type:
Cleanup Status:
Status (SRCH): COMPLETED - CASE CLOSED
Status (DL): Completed - Case Closed
Status Date (DL): 7/14/2000
Case Type (DL): LUST Cleanup Site
Business Name (DL): Palm Springs Oil/Express Oil
Site Facility Name:
Address: 70255 HIGHWAY 111
City: RANCHO MIRAGE
County: RIVERSIDE
State: CA
Zip: 92270
Report Source: LUST Cleanup Sites & Military UST Sites - GeoTracker Search Results (SRCH); GeoTracker Sites Data Download (DL)
Census Tract: 6065045103
Census Tract (SRCH): 6065045103
Oil Field (SRCH):
Oil Field Oper (SRCH):
RWQCB Region (DL): COLORADO RIVER BASIN RWQCB (REGION 7)
Longitude:
Latitude:

GeoTracker Sites Data Download - Site Details

CUF Case: YES
Lead Agency: RIVERSIDE COUNTY LOP
Case Worker: RIV
Local Agency: RIVERSIDE COUNTY LOP
RB Case No: 7T2270009
Local Case No: 96740
File Location: Local Agency Warehouse
Potential COC: Gasoline
Potential Media of Concern: Soil
Begin Date: 7/15/1996
How Discovered: Other Means
How Discovered Description:
Stop Method: Close and Replace Tank
Stop Description:
Calwater Watershed Name: Whitewater - Coachella - Indio (719.47)
DWR GW Subbasin Name: Coachella Valley - Indio (7-021.01)
Disadvantaged Community:
CalEnvScreen Score:
Coordinate Source: Google Map Move
Discharge Cause: Unknown
Discharge Source: Other
EPA Region: 9
Leak Reported Dt: 1996-07-15 00:00:00
Military DoD Site: No

No Further Action Dt: 2000-07-14 00:00:00
Qty Rlsd Gallons:
Facility Project Sub Type:
Calenviroscreen 3 Score: 31-35%
Calenviroscreen 4 Score: 10-15%
Site History:

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type: Regional Board Caseworker
Contact Name: Phan Le
Organization Name: COLORADO RIVER BASIN RWQCB (REGION 7)
Address: 73720 FRED WARING DRIVE SUITE #100
City: PALM DESERT
Email: phan.le@waterboards.ca.gov
Phone No: 7607768974

Contact Type: Local Agency Caseworker - Primary Caseworker
Contact Name: Riverside County LOP
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email:
Phone No: 9519558980

GeoTracker Sites Data Download - Status History

Status: Completed - Case Closed
Status Date: 7/14/2000

Status: Open - Site Assessment
Status Date: 4/25/2000

Status: Open - Site Assessment
Status Date: 11/17/1998

Status: Open - Site Assessment
Status Date: 8/21/1997

Status: Open - Site Assessment
Status Date: 7/15/1996

Status: Open - Case Begin Date
Status Date: 7/15/1996

GeoTracker Search - Regulatory Profile (as of October 16, 2023)

Site Facility Name: PALM SPRINGS OIL/EXPRESS OIL
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Address: 70255 HIGHWAY 111
City: RANCHO MIRAGE
Zip: 92270
County: RIVERSIDE
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0606501067
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 7/14/2000
Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0606501067&tabname=regulatoryhistory
Potential COC: GASOLINE
Potential Media of Concern: SOIL
File Location: LOCAL AGENCY WAREHOUSE
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND
DWR GW Sub Basin: Coachella Valley - Indio (7-021.01)
Calwater Watershed Name: Whitewater - Coachella - Indio (719.47)

Post Closure Site Management: NOTIFY PRIOR TO CHANGE IN LAND USE
Future Land Use:
Cleanup Oversight Agencies: RIVERSIDE COUNTY LOP (LEAD) - CASE #: 96740
CASE MANAGER: Riverside County LOP
COLORADO RIVER BASIN RWQCB (REGION 7) - CASE #: 7T2270009
CASE MANAGER: Phan Le
CUF Claim No: 12245
CUF Priority Assig: C
CUF Amount Paid: $34,913
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply
Site History:

No site history available

GeoTracker Search - Cleanup Status History (as of October 16, 2023)

Status: Completed - Case Closed
Date : 7/14/2000

Status: Open - Site Assessment
Date : 4/25/2000

Status: Open - Site Assessment
Date : 11/17/1998

Status: Open - Site Assessment
Date : 8/21/1997

Status: Open - Site Assessment
Date : 7/15/1996

Status: Open - Case Begin Date
Date : 7/15/1996

GeoTracker Search - Regulatory Activities (as of October 16, 2023)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter - #Site Closure
Action Date: 7/14/2000
Received Issue Date: 7/14/2000
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501067&enforcement_id=6008157&temptable=ENFORCEMENT
Title Description Comments:

RivCo Site Closure

Action Type: Other Regulatory Actions
Action: File review - #RCDEH Upload Site File 9/10/2015
Action Date: 7/13/2000
Received Issue Date: 7/13/2000
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501067&enforcement_id=6059307&temptable=ENFORCEMENT
Title Description Comments:

RCDEH Upload Site File 9/10/2015

Action Type: Leak Action

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Action: Leak Discovery
Action Date: 7/15/1996
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Reported
Action Date: 7/15/1996
Received Issue Date:
Doc Link:
Title Description Comments:

GeoTracker Search - Documents (as of October 16, 2023)

Document Type: Site Documents
Type: CLOSURE/NO FURTHER ACTION LETTER
Document Date: 7/14/2000
Submitted:
Submitted By: RIVERSIDE COUNTY LOP (REGULATOR)
Title: RIVCO SITE CLOSURE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501067&enforcement_id=6008157

Document Type: Site Documents
Type: FILE REVIEW
Document Date: 7/13/2000
Submitted:
Submitted By: LINDA SHURLOW (REGULATOR)
Title: RCDEH UPLOAD SITE FILE 9/10/2015
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501067&enforcement_id=6059307

4	5 of13	SW	0.12 / 659.76	265.47 / 16	ULTRAMAR #769 70255 HWY 111 Rancho Mirage CA 92270	DELISTED TNK

Delisted Storage Tanks

Facility ID: 795
Latitude: 33.75944
Longitude: -116.43834
Permitting Agency: RIVERSIDE COUNTY
County: Riverside
Original Source: UST
Record Date: 30-JAN-2017

4	6 of13	SW	0.12 / 659.76	265.47 / 16	PS 7 70255 HWY 111 RANCHO MIRAGE CA 92260	HHSS

County: Riverside
Tank Details Microfiche: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f862.pdf

4	7 of13	SW	0.12 / 659.76	265.47 / 16	7-ELEVEN INC. #37979 70255 HIGHWAY 111 RANCHO MIRAGE CA 92270	UST

Facility ID: FA0047239
CERS ID: 10318273
County: Riverside
Latitude: 33.75981
Longitude: -116.4398
CalEnviroScrn 4 Pct: 10-15%
Permitting Agency: Riverside County Department of Environmental Health
Site Facility Type: PERMITTED UNDERGROUND STORAGE TANK (UST)
Note: Information related to facilities can be searched on Geo Tracker Website: https://geotracker.waterboards.ca.gov/search

Tank Details

Epa Region:	9	**Tank Closure Date:**	
No. of Closed UST:	0	**Tank Configuration:**	Stand Alone Tank
No. of Inuse UST:		**Tank Contents:**	Regular Unleaded
No. of Oos UST:	0	**Tank Cp Impr Curr:**	No
Owner Type:	Non-Government	**Tank Cp Shutoff:**	Yes
Tank ID No.:	3769-1	**Tank Installatn Dt:**	8/1/1996 12:00:00 AM
Tank Status:	Confirmed/Updated Information	**Tank No of Compart:**	1
Tank Type:	Double Wall	**Tank Pc Constructn:**	Steel
Tank Alarms:	No	**Tank Spill Bucket:**	Yes
Tank Ball Float:	No	**Tribal Lands:**	No

Tank Operator Name: SMD VENTURE INC.
Tank Operator Mail Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Operator Mail City: DALLAS
Tank Operator Mail State: TX
Tank Operator Mail Zip: 75221
Tank Owner Name: 7-ELEVEN INC.
Tank Owner Mailing Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Owner Mailing City: DALLAS
Tank Owner Mailing State: TX
Tank Owner Mailing Zip: 75221
Tank Capacity Gallons: 12000
Tank Piping Construction: Double Walled
Tank Piping Type: Pressure
Tank Pw Piping Construction: Fiberglass
Tank Sacrificial Anode: No

Tank Details

Epa Region:	9	**Tank Closure Date:**	
No. of Closed UST:	0	**Tank Configuration:**	Stand Alone Tank
No. of Inuse UST:		**Tank Contents:**	Diesel
No. of Oos UST:	0	**Tank Cp Impr Curr:**	No
Owner Type:	Non-Government	**Tank Cp Shutoff:**	Yes
Tank ID No.:	3769-3	**Tank Installatn Dt:**	8/1/1996 12:00:00 AM
Tank Status:	Confirmed/Updated Information	**Tank No of Compart:**	1
Tank Type:	Double Wall	**Tank Pc Constructn:**	Steel
Tank Alarms:	No	**Tank Spill Bucket:**	Yes
Tank Ball Float:	No	**Tribal Lands:**	No

Tank Operator Name: SMD VENTURE INC.
Tank Operator Mail Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Operator Mail City: DALLAS
Tank Operator Mail State: TX
Tank Operator Mail Zip: 75221
Tank Owner Name: 7-ELEVEN INC.
Tank Owner Mailing Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Owner Mailing City: DALLAS
Tank Owner Mailing State: TX
Tank Owner Mailing Zip: 75221
Tank Capacity Gallons: 10000
Tank Piping Construction: Double Walled
Tank Piping Type: Pressure
Tank Pw Piping Construction: Fiberglass
Tank Sacrificial Anode: No

Tank Details

Epa Region:	9	**Tank Closure Date:**	
No. of Closed UST:	0	**Tank Configuration:**	Stand Alone Tank
No. of Inuse UST:		**Tank Contents:**	Premium Unleaded
No. of Oos UST:	0	**Tank Cp Impr Curr:**	No
Owner Type:	Non-Government	**Tank Cp Shutoff:**	Yes
Tank ID No.:	3769-2	**Tank Installatn Dt:**	8/1/1996 12:00:00 AM
Tank Status:	Confirmed/Updated Information	**Tank No of Compart:**	1
Tank Type:	Double Wall	**Tank Pc Constructn:**	Steel
Tank Alarms:	No	**Tank Spill Bucket:**	Yes
Tank Ball Float:	No	**Tribal Lands:**	No

Tank Operator Name: SMD VENTURE INC.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Operator Mail Address:	P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Operator Mail City:	DALLAS
Tank Operator Mail State:	TX
Tank Operator Mail Zip:	75221
Tank Owner Name:	7-ELEVEN INC.
Tank Owner Mailing Address:	P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
Tank Owner Mailing City:	DALLAS
Tank Owner Mailing State:	TX
Tank Owner Mailing Zip:	75221
Tank Capacity Gallons:	10000
Tank Piping Construction:	Double Walled
Tank Piping Type:	Pressure
Tank Pw Piping Construction:	Fiberglass
Tank Sacrificial Anode:	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	8 of13	SW	0.12 / 659.76	265.47 / 16	7-ELEVEN INC. #37979 70255 HIGHWAY 111 RANCHO MIRAGE CA 92270	CERS TANK

Site ID:	165500
Latitude:	33.759811
Longitude:	-116.439804

Regulated Programs

EI ID:	10318273
EI Description:	Chemical Storage Facilities
EI ID:	10318273
EI Description:	Underground Storage Tank
EI ID:	10318273
EI Description:	Hazardous Waste Generator

Violations

Violation Date:	08/14/2023	**Violation Source:**	CERS
Violation Program:	UST	**Violation Division:**	Riverside County Department of Env Health
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2		
Violation Notes:			

Returned to compliance on 08/14/2023. OBSERVATION: Observed diesel drain valve to be leaking and would not hold liquid. CORRECTIVE ACTION: Owner/operator shall repair/replace the leaking diesel drain valve so that bucket is able to hold liquid and contain release until detected.

Violation Description:

"Failure to meet one or more of the following requirements:

Install or maintain a liquid-tight spill container.

Have a minimum capacity of five gallons.

Have a functional drain valve or other method for the removal of liquid from the spill container.

Be resistant to galvanic corrosion.

Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container.

Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer.

Tested by a certified UST service technician.

Maintain records of spill containment testing for 36 months.

"

Violations

Violation Date: 11/17/2021 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Notes:

Returned to compliance on 08/04/2022.

Violation Description:

Failure to comply with one or more of the following overfill prevention equipment requirements:
Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or
Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or
Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or
Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.

Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018.

For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter.

For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter.

Inspected within 30 days after a repair to the overfill prevention equipment.

Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer.

Inspected by a certified UST service technician.

Maintain records of overfill prevention equipment inspection for 36 months.

Violations

Violation Date: 08/04/2020 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Notes:

Returned to compliance on 08/07/2020. OBSERVATION: Observed UST tank 1-tank 3 submitted in CERS to contain inaccurate and/or missing information in overfill protection. REFER TO REGULATOR COMMENTS ON CERS FOR CORRECTION. CORRECTIVE ACTION: Ensure to state "NO" for audible/visual alarm in overfill protection for tank 1-3 in CERS.

Violation Description:

Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.

Violations

Violation Date: 08/05/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Notes:

Returned to compliance on 08/05/2019. OBSERVATION: Observed red jacket LLD for regular fail to detect a 3.0 gallon per hour leak and restrict or shut off flow of product when tested. Copper line was pinched; tech replaced copper line (like for like) at time of inspection.

Violation Description:

Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.

Violations

Violation Date: 04/09/2018 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Notes:

Returned to compliance on 05/23/2018. 91 mechanical line leak detector missing the copper line and not operating as it was designed.

Violation Description:

Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.

Violations

Violation Date: 07/24/2014 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Notes:

Returned to compliance on 07/24/2014.

Violation Description:

Failure of the leak detection equipment to be properly programmed or properly operated.

Violations

Violation Date: 04/10/2017 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Notes:

Returned to compliance on 04/10/2017. 5/6 89 grade udc & 7/8 87 grade udc

Violation Description:

Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or stops flow at the dispenser when a leak is detected.

Violations

Violation Date: 08/04/2022 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 25292.1(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25292.1(a)
Violation Notes:

Returned to compliance on 08/04/2022. OBSERVATION: Observed small amount of diesel liquid (confirmed by service technician onsite) in the diesel turbine sump. CORRECTIVE ACTION: Owner/operator shall clean and maintain the diesel turbine sump free of fuel and contaminated debris and record the unauthorized release on the spill log.

Violation Description:

Failure to operate the UST system to prevent unauthorized releases including leaks, spills, and/or overfills.

Violations

Violation Date: 04/10/2017 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Notes:

Returned to compliance on 04/10/2017. 87 grade LLD

Violation Description:

Failure of the leak detection equipment to have an audible and visual alarm as required.

Violations

Violation Date: 05/07/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2715(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)(2)
Violation Notes:

Returned to compliance on 05/23/2019.

Violation Description:

Failure to submit the "Underground Storage Tank Statement of Understanding and Compliance Form."

Violations

Violation Date: 08/04/2020 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Notes:

Returned to compliance on 08/07/2020. OBSERVATION: Observed UST Monitoring Plan(s) for Diesel Tank to be inaccurate and/or missing information. UST Monitoring Plan is not approved as submitted. CORRECTIVE ACTION: Owner/operator shall make the following corrections to the UST Monitoring Plan(s) and submit in CERS. Ensure the mechanical line leak detector for diesel tank states Vaporless LD 2000.

Violation Description:

Failure to have an approved UST Monitoring Plan.

Violations

Violation Date: 08/05/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Notes:

Returned to compliance on 09/30/2019. OBSERVATION: Observed site plot plan to be inaccurate. The plan failed to show upgrade UDC sensors 111; Plot plan still reflects floats and chains. CORRECTIVE ACTION: Owner/operator shall update the facility site plot plan making sure all required information is documented on the map and submit in CERS maintaining a copy on site and available for review.

Violation Description:

Failure to submit or maintain a current facility plot plan.

Violations

Violation Date: 08/05/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Notes:

Returned to compliance on 10/21/2019. OBSERVATION: Observed installed spill bucket at the regular and diesel fill not able to hold a minimum of 5 gallons. Bucket observed to only hold approximately 3 gallons. CORRECTIVE ACTION: Owner/operator shall make the necessary adjustments to the fill tube and riser so that spill bucket is installed so that it is capable of holding a minimum of 5 gallons.

Violation Description:

"Failure to meet one or more of the following requirements:

Install or maintain a liquid-tight spill container.

Have a minimum capacity of five gallons.

Have a functional drain valve or other method for the removal of liquid from the spill container.

Be resistant to galvanic corrosion.

Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container.

Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer.

Tested by a certified UST service technician.

Maintain records of spill containment testing for 36 months.

"

Violations

Violation Date: 07/24/2014 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 29295 - California Health and Safety Code, Chapter 6.7, Section(s) 29295
Violation Notes:

Returned to compliance on 07/24/2014.

Violation Description:

Failure to record and/or report suspected or actual unauthorized release in appropriate time frame.

Violations

Violation Date: 08/05/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Notes:

Returned to compliance on 01/06/2020. OBSERVATION: A complete overfill equipment inspection was not completed by the October 13, 2018 deadline. CORRECTIVE ACTION: Owner/operator shall immediately schedule and complete an overfill equipment inspection providing the required 48 hour notification prior to conducting the inspection. Inspection results and all supporting documentation (inspection procedures used, tank charts, printouts, etc.) must be submitted to this Department within 30 days upon completion of the inspection.

Violation Description:

Failure to comply with one or more of the following overfill prevention equipment requirements:
Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or
Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or
Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or
Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.

Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1, 2018.

For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter.

For USTs installed on and after October 1, 2018, perform an inspection at installation and every 36 months thereafter.

Inspected within 30 days after a repair to the overfill prevention equipment.

Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer.

Inspected by a certified UST service technician.

Maintain records of overfill prevention equipment inspection for 36 months.

Violations

Violation Date: 08/04/2020 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Notes:

Returned to compliance on 08/07/2020. OBSERVATION: Observed site plot plan to be inaccurate and/or incomplete with missing required information. The plan failed to label diesel tank. CORRECTIVE ACTION: Owner/operator shall update the facility site plot plan making sure all required information is documented on the map and submit in CERS maintaining a copy on site and available for review.

Violation Description:

Failure to submit or maintain a current facility plot plan.

Violations

Violation Date: 04/10/2017 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Notes:

Returned to compliance on 04/10/2017. 87 LLD

Violation Description:

Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.

Violations

Violation Date: 07/24/2014 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Notes:

Returned to compliance on 07/24/2014.

Violation Description:

Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs.

Violations

Violation Date: 04/10/2017 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2712 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712
Violation Notes:

Returned to compliance on 04/10/2017.

Violation Description:

Failure to comply with any of the applicable requirements of the permit issued for the operation of the UST system.

Violations

Violation Date: 07/07/2015 ***Violation Source:*** CERS

Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Notes:

Returned to compliance on 07/07/2015.

Violation Description:

Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs.

Violations

Violation Date: 07/07/2015 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 25291 - California Health and Safety Code, Chapter 6.7, Section(s) 25291
Violation Notes:

Returned to compliance on 07/07/2015.

Violation Description:

Failure to maintain under-dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid.

Violations

Violation Date: 07/07/2015 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: 23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Notes:

Returned to compliance on 07/07/2015.

Violation Description:

Failure of the leak detection equipment to be properly programmed or properly operated.

Violations

Violation Date: 08/05/2019 ***Violation Source:*** CERS
Violation Program: UST ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Notes:

Returned to compliance on 09/30/2019. OBSERVATION: Observed UST tank information pages for each tank submitted in CERS to be inaccurate as it has been reported that T1-T3 have fill tube shut off; No Flapper observed. Observed 111 sensors in all UDCs, yet 208 reported in CERS. CORRECTIVE ACTION: Owner/operator shall make the corrections noted above to the UST tank information pages and re-submit updated forms in CERS.

Violation Description:

Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.

Enforcements

Enf Action Date: 07/07/2015 ***Enf Action Program:*** UST
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Enf Action Date: 07/24/2014 ***Enf Action Program:*** UST
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Evaluations

Eval Date: 07/07/2015
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 08/24/2017
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 04/09/2018
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Eval Date: 08/04/2020
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Facility is a gas station with convenience store. Hazardous materials onsite: Diesel, 87 unleaded and 91 premium. The site is owned by 7-Eleven Inc. and the facility is branded as Shell Gas Station. Owner/operator not required to sign inspection report because of safety measure in place of COVID 19.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 05/07/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

paper 002; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/24/2017
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency

Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 04/10/2017
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Eval Date: 11/17/2021
Violations Found: Yes
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Eval Date: 07/25/2013
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Inspection & drive time; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 07/24/2014
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Eval Date: 08/04/2022
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

A 12 month monitoring certification conducted today with Tanknology.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/14/2023
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

On site with ICC certified F. Castro of Tanknology for annual certification of monitoring equipment. All violations were corrected at time of inspection.;

Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/04/2022
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Facility is a gas station with convenience store. Hazardous waste may generate from: sump test water, spent absorbent etc. (empty drum observed onsite).; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 07/07/2015
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Eval Date: 08/04/2020
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Facility is a gas station with convenience store. Hazardous waste onsite may come from sump test water/spent absorbent. The owner of the site is 7-Eleven and the facility is branded as Shell gas station. Owner/operator not required to sign inspection report because of safety measure in place of COVID 19.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/18/2021
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

An annual monitoring certification conducted today with Tanknology.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/04/2020
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

Facility is a gas station with convenience store. The owner of the site is 7-Eleven and the facility is branded as Shell Gas Station. An annual monitoring certification conducted today with Tanknology. Owner/operator not required to sign inspection report because of safety measure in place of COVID 19.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 07/07/2015
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency

Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 08/04/2022
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Facility is a gas station with convenience store: unleaded gasoline, premium unleaded and diesel.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/05/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS
Eval Notes:

NOTE: 7-Eleven advertised as Shell; no 7-Eleven logos present on location. Displayed permit from Riverside County DES department list name of Rancho Mirage Gas & Mart.; NOTE: UST T1 (regular) ATG tested, after placed back in tank, veeder root reading 0.80 inches of water, when set up at start of CMD reflectedd 0 inches of water. ICC certified Jeff C attempted to correct by checking water float on ATG, yet no change; system set up to alarm at 1.5 inches of water and veeder root displat all functions normal; tech declares he will call in for work to be conducted; Note: data in [EVAL Notes] field for some records is truncated from the source.

Affiliations

Affil Type Desc: Parent Corporation
Entity Name: 7-ELEVEN INC.
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Document Preparer
Entity Name: BELSHIRE ENVIRONMENTAL SERVICES, INC.
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Property Owner
Entity Name: 7-ELEVEN INC.
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country: United States
Zip Code: 75221
Phone: (800) 828-0711

Affil Type Desc: UST Permit Applicant
Entity Name: STEPHEN BOYD

Entity Title: REGIONAL GASOLINE ENVIRONMENTAL COMPLIANCE MANAGER
Address:
City:
State:
Country:
Zip Code:
Phone: (714) 771-5484

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country:
Zip Code: 75221
Phone:

Affil Type Desc: Operator
Entity Name: SMD VENTURE INC.
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (760) 202-3406

Affil Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title:
Address: 4065 County Circle Drive, Room 104
City: Riverside
State: CA
Country:
Zip Code: 92503
Phone: (951) 358-5055

Affil Type Desc: Legal Owner
Entity Name: 7-ELEVEN INC.
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country: United States
Zip Code: 75221
Phone: (800) 828-0711

Affil Type Desc: Identification Signer
Entity Name: TERESA MILES
Entity Title: SENIOR MANAGER, ENVIRONMENTAL COMPLIANCE WEST
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Environmental Contact
Entity Name: SEAN AUGUSTINE
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country:
Zip Code: 75221
Phone:

Affil Type Desc: UST Property Owner Name

Entity Name: 7-ELEVEN INC.
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country: United States
Zip Code: 75221
Phone: (800) 828-0711

Affil Type Desc: UST Tank Owner
Entity Name: 7-ELEVEN INC.
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country: United States
Zip Code: 75221
Phone: (800) 828-0711

Affil Type Desc: UST Tank Operator
Entity Name: SMD VENTURE INC.
Entity Title:
Address: P.O. BOX 711 ATTN: GASOLINE COMPLIANCE, LOC 148
City: DALLAS
State: TX
Country: United States
Zip Code: 75221
Phone: (760) 202-3406

Coordinates

Env Int Type Code: HWG
Program ID: 10318273
Latitude: 33.759810
Longitude: -116.439800
Coord Name:
Ref Point Type Desc: Center of a facility or station.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	9 of13	SW	0.12 / 659.76	265.47 / 16	PS #7 70255 HWY 111 RANCHO MIRAGE CA	HIST TANK

Owner Name: PALM SPRINGS OIL CO INC
Owner Street: 5121 SUNSET BLVD.
Owner City: LOS ANGELES
Owner State: CA
Owner Zip: 90027
No of Containers: 4
County: RIVERSIDE
Facility State: CA
Facility Zip: 92260

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	10 of13	SW	0.12 / 659.76	265.47 / 16	7-ELEVEN INC #37979 70255 HWY 111 RANCHO MIRAGE CA 92270	EMISSIONS

2016 Toxic Data

Facility ID: 182900
Facility SIC Code: 5541
CERR CODE:
COID: RIV
CO: 33
DISN: SOUTH COAST AQMD
CHAPIS:
TS:
HRA:
CH Index:
AH Index:
Air Basin: SS
District: SC

2017 Toxic Data

Facility ID: 182900
COID: RIV

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility SIC Code:	9999	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SS	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2018 Toxic Data

Facility ID:	182900	**COID:**	RIV
Facility SIC Code:	9999	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SS	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2019 Toxic Data

CO:	33	**DISN:**	SOUTH COAST AQMD
Air Basin:	SS	**CHAPIS:**	
Faccility ID:	182900	**CERR Code:**	
District:	SC	**TS:**	
Facility SIC Code:	9999	**Health Risk Asmt:**	
COID:	RIV		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

4	***11 of13***	***SW***	***0.12 / 659.76***	***265.47 / 16***	***7 ELEVEN 37979 70255 HIGHWAY 111 RANCHO MIRAGE CA 92270***	***RCRA NON GEN***

EPA Handler ID:	CAL000418957
Gen Status Universe:	No Report
Contact Name:	JOSE RIOS
Contact Address:	1722 ROUTH STREET , SUITE 1000 , DALLAS , TX, 75201 ,
Contact Phone No and Ext:	972-828-6592
Contact Email:	JOSE.RIOS@7-11.COM
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	20160718
Location Latitude:	33.759552
Location Longitude:	-116.438624

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No

Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20160718
Handler Name:	7 ELEVEN 37979
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	1722 ROUTH STREET
Name:	JOSE RIOS	***Street 2:***	SUITE 1000
Date Became Current:		***City:***	DALLAS
Date Ended Current:		***State:***	TX
Phone:	972-828-6592	***Country:***	
Source Type:	Implementer	***Zip Code:***	75201

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	PO BOX 711
Name:	7-ELEVEN INC.	***Street 2:***	
Date Became Current:		***City:***	DALLAS
Date Ended Current:		***State:***	TX
Phone:	714-771-5484	***Country:***	
Source Type:	Implementer	***Zip Code:***	75221

4	***12 of13***	***SW***	***0.12 / 659.76***	***265.47 / 16***	***VALERO CORNER STORE 3769 70255 HIGHWAY 111 RANCHO MIRAGE CA 92270-2917***	***RCRA NON GEN***

EPA Handler ID:	CAL000384016
Gen Status Universe:	No Report
Contact Name:	SANDY HUFF
Contact Address:	19500 BULVERDE ROAD , , SAN ANTONIO , TX, 78259-0000 ,
Contact Phone No and Ext:	210-692-2521
Contact Email:	SANDY.HUFF@CSTBRANDS.COM
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	20130329
Location Latitude:	33.759552
Location Longitude:	-116.438624

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No

Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20130329
Handler Name:	VALERO CORNER STORE 3769
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	19500 BULVERDE ROAD
Name:	CST BRANDS, INC.	***Street 2:***	
Date Became Current:		***City:***	SAN ANTIONO
Date Ended Current:		***State:***	TX
Phone:	210-692-2521	***Country:***	
Source Type:	Implementer	***Zip Code:***	79259-0000

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	19500 BULVERDE ROAD
Name:	SANDY HUFF	***Street 2:***	
Date Became Current:		***City:***	SAN ANTONIO
Date Ended Current:		***State:***	TX
Phone:	210-692-2521	***Country:***	
Source Type:	Implementer	***Zip Code:***	78259-0000

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	13 of13	SW	0.12 / 659.76	265.47 / 16	EXPRESS OIL #67 70255 HIGHWAY 111 RANCHO MIRAGE CA	UST SWEEPS

C C:	A33-000-9085	***D Filename:***	SITE16A
BOE:	44-017922	***Page No:***	90
Comp:	9085	***County:***	RIVERSIDE
Status:	ACTIVE	***State :***	CA
No of Tanks:	4	***Zip:***	92260
Jurisdict:	RIVERSIDE COUNTY	***Latitude:***	0
Agency:	ENVIRONMENTAL HEALTH - U.S.T.	***Longitude:***	0
Phone:		***Georesult:***	N

Tank Details

Tank ID:	000002	***S Contain:***	
O Tank ID:	000801	***Stg:***	P
SWRCB No:	33-000-009085-000002	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	12-29-88	***Content:***	DIESEL
Capac:	8000	***ONA:***	
Tank Use:	M.V. FUEL	***D File Name:***	TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Details

Tank ID:	000001	***S Contain:***	
O Tank ID:	000801	***Stg:***	P
SWRCB No:	33-000-009085-000001	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	12-29-88	***Content:***	REG UNLEADED
Capac:	12000	***ONA:***	
Tank Use:	M.V. FUEL	***D File Name:***	TANK16A

Tank Details

Tank ID:	000003	***S Contain:***	
O Tank ID:	000801	***Stg:***	P
SWRCB No:	33-000-009085-000003	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	12-29-88	***Content:***	REG UNLEADED
Capac:	5000	***ONA:***	
Tank Use:	M.V. FUEL	***D File Name:***	TANK16A

Tank Details

Tank ID:	000004	***S Contain:***	
O Tank ID:	000801	***Stg:***	P
SWRCB No:	33-000-009085-000004	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	12-29-88	***Content:***	REG UNLEADED
Capac:	5000	***ONA:***	
Tank Use:	M.V. FUEL	***D File Name:***	TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	*1 of1*	*WNW*	*0.21 / 1,095.11*	*261.08 / 11*	***The Crab Pot Restaurant and Bar*** ***70030 Highway 111*** ***Rancho Mirage CA 92270***	***DELISTED COUNTY***

Delisted County Records

Original Source Facility ID:	
Original Source Name:	Riverside County Disclosure Facility List
Record Dt:	18-MAY-2016
Record Date:	18-MAY-2016

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	*1 of3*	*NE*	*0.24 / 1,263.95*	*252.84 / 3*	***CLUB AT MORNINGSIDE, THE*** ***84 MAYFAIR DR*** ***Rancho Mirage CA 92270***	***DELISTED TNK***

Delisted Storage Tanks

Facility ID:	231	***County:***	Riverside
Latitude:	33.76472	***Original Source:***	UST
Longitude:	-116.43345	***Record Date:***	30-JAN-2017
Permitting Agency:	RIVERSIDE COUNTY		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	*2 of3*	*NE*	*0.24 / 1,263.95*	*252.84 / 3*	***Club At Morningside, The*** ***84 MAYFAIR DR***	***CERS TANK***

RANCHO MIRAGE CA 92270

Site ID: 20494
Latitude: 33.765616
Longitude: -116.433496

Regulated Programs

EI ID: 10318432
EI Description: Chemical Storage Facilities

EI ID: 10318432
EI Description: Aboveground Petroleum Storage

EI ID: 10318432
EI Description: Hazardous Waste Generator

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 04/29/2016. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.

Violation Description:

Business Plan Program - Administration/Documentation - General

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 18 66268.7(a) - California Code of Regulations, Title 22, Chapter 18, Section(s) 66268.7(a)
Violation Notes:

Returned to compliance on 11/05/2015.

Violation Description:

Failure of the generator to determine if the waste is restricted from land disposal.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Notes:

Returned to compliance on 11/05/2015.

Violation Description:

Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health

Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 04/29/2016. [LOCAL ORDINANCE VIOLATION 101C] Approved HMBP accessible on site and available for review.

Violation Description:

Business Plan Program - Administration/Documentation - General

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Notes:

Returned to compliance on 04/29/2016.

Violation Description:

Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.

Violations

Violation Date: 05/12/2023 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 08/10/2023. OBSERVATION: Observed faded NFPA-704 signs located on the diesel and gasoline tanks. CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Submit photos to this department.

Violation Description:

Business Plan Program - Operations/Maintenance - General Local Ordinance

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Notes:

Returned to compliance on 09/24/2019.

Violation Description:

Failure to comply with one or more of the following requirements:
1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector.
2. Keep written procedures and records of inspections and integrity tests for at least three years.
3. Keep comparison records.

Violations

Violation Date: 05/12/2023 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 09/13/2023. OBSERVATION: Owner/ operator currently only has Material Safety Data Sheets stored on site, but should have updated to Safety Data Sheets. CORRECTIVE ACTION: Owner/operator shall have Safety Data Sheets as defined in Title 8 CCR, readily

accessible or maintained on site for each hazardous material stored/handled at the facility. Replace outdated Material Safety Data Sheets with Safety Data Sheets.

Violation Description:

Business Plan Program - Administration/Documentation - General Local Ordinance

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 04/29/2016. [LOCAL ORDINANCE VIOLATION 105D] Hazardous materials containers have been labeled properly.

Violation Description:

Business Plan Program - Operations/Maintenance - General

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 04/29/2016. [LOCAL ORDINANCE VIOLATION 105A] Hazardous materials are stored in a manner to minimize the possibility of a fire, explosion, or release.

Violation Description:

Business Plan Program - Operations/Maintenance - General

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Notes:

Returned to compliance on 09/13/2019. OBSERVATION: The most recent business plan submission in the statewide information management system (CERS) failed to contain a chemical inventory description page for liquid fertilizer tank (500 gallon tank observed near the wash pad area), Mini Phos 8-30-15 (fertilizer), ST 410-S (Polymer), High Chelated Manganese Combo Chelated micronutrients (1% Mg, 5.75% S, 3.75% Fe and 3.75% of Mn), Motor oil. CORRECTIVE ACTION: Owner/operator shall complete a chemical inventory page for all reportable hazardous materials on site and submit to the statewide information management system at http://cers.calepa.ca.gov.

Violation Description:

Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.5 25250.19(c) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.19(c)
Violation Notes:

Returned to compliance on 04/29/2016.

Violation Description:

Failure to retain paperwork documenting disposal of used oil for three years.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Notes:

Returned to compliance on 11/05/2015.

Violation Description:

Failure to obtain and/or maintain an Active EPA ID.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.5 25160.2 - California Health and Safety Code, Chapter 6.5, Section(s) 25160.2
Violation Notes:

Returned to compliance on 04/29/2016.

Violation Description:

Failure to meet any of the following consolidated manifest requirements:
1) Legible receipts for each quantity of hazardous waste that is received from a generator,
2) The generator's information (name, address, identification number, contact person, telephone number of the generator, the signature of the generator or the generator's representative),
3) Date of the shipment,
4) The manifest number,
5) The volume or quantity of each waste stream received,
6) The name, address, and identification number of the authorized facility to which the hazardous waste will be transported,
7) The transporter's information (name, address, and identification number, the driver's signature),
8) A statement, signed by the generator, certifying that the generator has established a program to reduce the volume or quantity and toxicity of the hazardous waste to the degree economically practicable.
9) The generator shall retain each receipt for at least three years.

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 09/24/2019. OBSERVATION: Observed single liquid fertilizer tank and multiple herbicide containers near the storm drain with no way of preventing a release to the storm drain. Observed multiple compressed gases (i.e. carbon dioxide/oxygen) at the corner of the maintenance shop not secured. CORRECTIVE ACTION: Owner/operator shall store all hazardous materials in a manner which will prevent unauthorized fire, explosion, or release.

Violation Description:

Business Plan Program - Operations/Maintenance - General Local Ordinance

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.40(c) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(c)
Violation Notes:

Returned to compliance on 11/05/2015.

Violation Description:

Failure to determine if the waste generated is a hazardous waste and to maintain analysis results for three years.

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 10/03/2019. OBSERVATION: Observed faded NFPA-704 signs located on the above ground storage tank for diesel and gasoline. Observed the fertilizer storage area is missing a NFPA-704 sign (the NFPA 704 sign is actually located at the part area) CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Owner/operator shall relocate the existing NFPA-704 sign located at the parts area to the fertilizer storage area.

Violation Description:

Business Plan Program - Operations/Maintenance - General Local Ordinance

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Notes:

Returned to compliance on 09/24/2019. OBSERVATION: Observed incomplete labels on used oil tanks. Information missing was the start accumulation date. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.

Violation Description:

Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.

Violations

Violation Date: 05/12/2023 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Notes:

Returned to compliance on 09/13/2023. OBSERVATION: No manifests available during inspection. CORRECTIVE ACTION: Owner/operator shall obtain all manifests for hazardous waste shipments which occurred in the past 3 years. Manifests shall be made available for inspection.

Violation Description:

Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.

Violations

Violation Date: 08/12/2015 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Notes:

Returned to compliance on 11/05/2015.

Violation Description:

Failure to complete and electronically submit a site map with all required content.

Violations

Violation Date: 05/12/2023 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 08/10/2023. OBSERVATION: Observed two oil tanks with faded product labels in the mechanic's shop. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous materials containers are labeled with a product name. Submit photos to this department.

Violation Description:

Business Plan Program - Operations/Maintenance - General Local Ordinance

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 25505(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(c)
Violation Notes:

Returned to compliance on 08/21/2019. OBSERVATION: Facility personnel were unable to access/locate a current copy of the business plan during the inspection. CORRECTIVE ACTION: Owner/operator shall ensure a current copy of the hazardous materials business plan is readily available on site at all times when the facility is staffed. A copy of current business plan was provided to operator.

Violation Description:

Failure to have a business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training.

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Notes:

Returned to compliance on 09/13/2019. OBSERVATION: Observed black oil debris on the ground where the lawnmower stored near the above ground storage tank. Observed pool of black liquid in one of the yellow metal flammable cabinet located in the maintenance shop. CORRECTIVE ACTION: Owner/operator shall clean and manage according to Title 22 hazardous waste regulations. Submit a statement and supporting documentation (photos) explaining how this waste was managed to this department.

Violation Description:

Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Violations

Violation Date: 08/21/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: Un-Specified
Violation Notes:

Returned to compliance on 08/21/2019. OBSERVATION: Observed three motor oil tanks (2-120 gallon each and one-55 gallon) with faded product

labels. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous materials containers are labeled with a product name. Corrected onsite.

Violation Description:

Business Plan Program - Operations/Maintenance - General Local Ordinance

Enforcements

Enf Action Date: 08/12/2015 ***Enf Action Program:*** HMRRP
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Enf Action Date: 08/12/2015 ***Enf Action Program:*** HW
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Evaluations

Eval Date: 05/12/2023
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

A routine inspection was conducted on today's date. Facility is a golf course maintenance shop which stores motor oil, gasoline, diesel, pesticides, fertilizers, and welding gases.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 04/29/2016
Violations Found: No
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 08/12/2015
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 05/12/2023
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

A routine inspection was conducted on today's date. Facility is a golf course with a maintenance shop which generates used oil and used oil filters.

Facility utilizes Safety Kleen for hazardous waste disposal.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/21/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Facility is a golf course maintenance shop. Hazardous waste generated onsite includes: used oil, used antifreeze, used oil filters, spent absorbent and spent lead acid batteries.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 08/21/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 05/12/2023
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 08/12/2015
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 04/29/2016
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 08/21/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Facility is a golf course maintenance shop. Hazardous materials observed onsite: motor oil, gasoline, diesel, pesticide products (below threshold), fertilizer, acetylene and oxygen.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 04/29/2016

Violations Found: No
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Affiliations

Affil Type Desc: Environmental Contact
Entity Name: Tyler Tang
Entity Title:
Address: 84 Mayfair Drive
City: Rancho Mirage
State: CA
Country:
Zip Code: 92270
Phone:

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: 39033 Morningside Dr
City: Rancho Mirage
State: CA
Country:
Zip Code: 92270
Phone:

Affil Type Desc: Parent Corporation
Entity Name: Club At Morningside, The
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Document Preparer
Entity Name: R Shafer, Direct Ed, Inc.
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title:
Address: 4065 County Circle Drive, Room 104
City: Riverside
State: CA
Country:
Zip Code: 92503
Phone: (951) 358-5055

Affil Type Desc: Identification Signer
Entity Name: Tyler Tang
Entity Title: Golf Course Superintendent
Address:
City:
State:
Country:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Zip Code:
Phone:

Affil Type Desc: Operator
Entity Name: Tyler Tang
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (760) 449-0151

Affil Type Desc: Legal Owner
Entity Name: The Club at Morningside
Entity Title:
Address: 39033 Morningside Dr
City: Rancho Mirage
State: CA
Country: United States
Zip Code: 92270
Phone: (760) 324-1234

Affil Type Desc: Property Owner
Entity Name: The Club at Morningside
Entity Title:
Address: 39033 Morningside Drive
City: Rancho Mirage
State: CA
Country: United States
Zip Code: 92270
Phone: (760) 324-1234

Coordinates

Env Int Type Code: HWG
Program ID: 10318432
Latitude: 33.765620
Longitude: -116.433500
Coord Name:
Ref Point Type Desc: Center of a facility or station.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	3 of3	NE	0.24 / 1,263.95	252.84 / 3	CLUB AT MORNINGSIDE 84 MAYFAIR DR RANCHO MIRAGE CA 92270-2562	RCRA NON GEN

EPA Handler ID: CAL000023026
Gen Status Universe: No Report
Contact Name: TYLER TANG
Contact Address: 39033 MORNINGSIDE DR , , RANCHO MIRAGE , CA, 92270 ,
Contact Phone No and Ext: 760-324-4681
Contact Email: TTANG@CLUBATMORNINGSIDE.ORG
Contact Country:
County Name: RIVERSIDE
EPA Region: 09
Land Type:
Receive Date: 19891114
Location Latitude: 33.765684
Location Longitude: -116.4335

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19891114
Handler Name:	CLUB AT MORNINGSIDE
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	39033 MORNINGSIDE DR
Name:	CLUB AT MORNINGSIDE	**Street 2:**	
Date Became Current:		**City:**	RANCHO MIRAGE
Date Ended Current:		**State:**	CA
Phone:	760-324-1234	**Country:**	
Source Type:	Implementer	**Zip Code:**	92270

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	39033 MORNINGSIDE DR
Name:	TYLER TANG	**Street 2:**	
Date Became Current:		**City:**	RANCHO MIRAGE
Date Ended Current:		**State:**	CA
Phone:	760-324-4681	**Country:**	
Source Type:	Implementer	**Zip Code:**	92270

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	1 of1	NW	0.24 / 1,286.03	260.87 / 11	MARCI WOOD 38988 CAL IDAHO DR RANCHO MIRAGE CA 92270	RCRA NON GEN

EPA Handler ID:	CAC003120778
Gen Status Universe:	No Report
Contact Name:	MARCI WOOD
Contact Address:	38988 CAL IDAHO DR , , RANCHO MIRAGE , CA, 92270 ,
Contact Phone No and Ext:	760-625-2151
Contact Email:	FAVILA@BURNS-ENVIRO.COM
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	20210520
Location Latitude:	
Location Longitude:	

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2023, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20210520
Handler Name:	MARCI WOOD
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	38988 CAL IDAHO DR
Name:	MARCI WOOD	***Street 2:***	
Date Became Current:		***City:***	RANCHO MIRAGE
Date Ended Current:		***State:***	CA
Phone:	760-625-2151	***Country:***	
Source Type:	Implementer	***Zip Code:***	92270

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	70130 MIRAGE COVE DR
Name:	MARCI WOOD	***Street 2:***	
Date Became Current:		***City:***	RANCHO MIRAGE
Date Ended Current:		***State:***	CA
Phone:	760-625-2151	***Country:***	
Source Type:	Implementer	***Zip Code:***	92270

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	1 of1	SE	0.29 / 1,529.28	242.59 / -7	CVWD 80 06 LIFT STATION COUNTRY CLUB DRIVE RANCHO MIRAGE CA 92270	LUST

Global ID:	T0606501064	***Census Tract:***	6065045103
Site Facility Type:		***Census Tract (SRCH):***	6065045103
Cleanup Status:		***Oil Field (SRCH):***	
Status (SRCH):	COMPLETED - CASE CLOSED	***Oil Field Oper (SRCH):***	
Status (DL):	Completed - Case Closed	***RWQCB Region (DL):***	COLORADO RIVER BASIN RWQCB (REGION 7)
Status Date (DL):	11/2/1993	***Longitude:***	-116.431416498556
Case Type (DL):	LUST Cleanup Site	***Latitude:***	33.7580008673889
Business Name (DL):	CVWD 80 06 LIFT STATION		
Site Facility Name:			
Address:	COUNTRY CLUB DRIVE		
City:	RANCHO MIRAGE		
County:	Riverside		
State:	CA		
Zip:	92270		
Report Source:	LUST Cleanup Sites & Military UST Sites - GeoTracker Search Results (SRCH); GeoTracker Sites Data Download		

(DL)

GeoTracker Sites Data Download - Site Details

CUF Case:	NO
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	RIV
Local Agency:	RIVERSIDE COUNTY LOP
RB Case No:	7T2270006
Local Case No:	93064
File Location:	Local Agency Warehouse
Potential COC:	Diesel
Potential Media of Concern:	Under Investigation
Begin Date:	7/8/1991
How Discovered:	Tank Closure
How Discovered Description:	Tank Removal
Stop Method:	Close and Remove Tank
Stop Description:	
Calwater Watershed Name:	Whitewater - Coachella - Indio (719.47)
DWR GW Subbasin Name:	Coachella Valley - Indio (7-021.01)
Disadvantaged Community:	
CalEnvScreen Score:	
Coordinate Source:	Google Map Move
Discharge Cause:	Unknown
Discharge Source:	Other
EPA Region:	9
Leak Reported Dt:	1993-02-08 00:00:00
Military DoD Site:	No
No Further Action Dt:	1993-11-02 00:00:00
Qty Rlsd Gallons:	
Facility Project Sub Type:	
Calenviroscreen 3 Score:	31-35%
Calenviroscreen 4 Score:	10-15%
Site History:	

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type:	Local Agency Caseworker - Primary Caseworker
Contact Name:	Riverside County LOP
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	
Phone No:	9519558980

Contact Type:	Regional Board Caseworker
Contact Name:	Phan Le
Organization Name:	COLORADO RIVER BASIN RWQCB (REGION 7)
Address:	73720 FRED WARING DRIVE SUITE #100
City:	PALM DESERT
Email:	phan.le@waterboards.ca.gov
Phone No:	7607768974

GeoTracker Sites Data Download - Status History

Status:	Completed - Case Closed
Status Date:	11/2/1993
Status:	Open - Site Assessment
Status Date:	1/20/1993
Status:	Open - Site Assessment
Status Date:	7/8/1991
Status:	Open - Case Begin Date

Status Date: 7/8/1991

GeoTracker Search - Regulatory Profile (as of October 16, 2023)

Site Facility Name: CVWD 80 06 LIFT STATION
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Address: COUNTRY CLUB DRIVE
City: RANCHO MIRAGE
Zip: 92270
County: RIVERSIDE
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0606501064
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 11/2/1993
Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0606501064&tabname=regulatoryhistory
Potential COC: DIESEL
Potential Media of Concern: UNDER INVESTIGATION
File Location: LOCAL AGENCY WAREHOUSE
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND
DWR GW Sub Basin: Coachella Valley - Indio (7-021.01)
Calwater Watershed Name: Whitewater - Coachella - Indio (719.47)
Post Closure Site Management: NOTIFY PRIOR TO CHANGE IN LAND USE
Future Land Use:
Cleanup Oversight Agencies: RIVERSIDE COUNTY LOP (LEAD) - CASE #: 93064
CASE MANAGER: Riverside County LOP
COLORADO RIVER BASIN RWQCB (REGION 7) - CASE #: 7T2270006
CASE MANAGER: Phan Le
CUF Claim No:
CUF Priority Assig:
CUF Amount Paid:
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply
Site History:

No site history available

GeoTracker Search - Cleanup Status History (as of October 16, 2023)

Status: Completed - Case Closed
Date : 11/2/1993

Status: Open - Site Assessment
Date : 1/20/1993

Status: Open - Case Begin Date
Date : 7/8/1991

Status: Open - Site Assessment
Date : 7/8/1991

GeoTracker Search - Regulatory Activities (as of October 16, 2023)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter - #Site Closure
Action Date: 11/18/2008
Received Issue Date: 11/18/2008
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?

global_id=T0606501064&enforcement_id=5993782&temptable=ENFORCEMENT

Title Description Comments:

RivCo Site Closure

Action Type: Other Regulatory Actions
Action: File review - #RCDEH Upload Site File 2/20/2015
Action Date: 11/17/2008
Received Issue Date: 11/17/2008
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501064&enforcement_id=6050430&temptable=ENFORCEMENT
Title Description Comments:

RCDEH Upload Site File 2/20/2015

Action Type: Leak Action
Action: Leak Reported
Action Date: 2/8/1993
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 7/14/1992
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Stopped
Action Date: 7/8/1992
Received Issue Date:
Doc Link:
Title Description Comments:

GeoTracker Search - Documents (as of October 16, 2023)

Document Type: Site Documents ***Document Date:*** 11/18/2008
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: RIVERSIDE COUNTY LOP (REGULATOR)
Title: RIVCO SITE CLOSURE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501064&enforcement_id=5993782

Document Type: Site Documents ***Document Date:*** 11/17/2008
Type: FILE REVIEW ***Submitted:***
Submitted By: LINDA SHURLOW (REGULATOR)
Title: RCDEH UPLOAD SITE FILE 2/20/2015
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606501064&enforcement_id=6050430

9	1 of2	SSE	0.29 / 1,545.39	257.42 / 8	Thunderbird Country Club 70612 Hwy 111 Rancho Mirage CA	LOP RIVERSIDE

Site ID: 200219064 ***Closed Code:*** Y
Status Code: 9 ***Closed Desc:*** CLOSED SITE
Status Desc: CLOSED/ACTION COMPLETED ***Employee:*** Shurlow-LOP
Case Type Code: S
Case Type Desc: SOIL ONLY IS IMPACTED

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
9	2 of2	SSE	0.29 / 1,545.39	257.42 / 8	THUNDERBIRD COUNTRY CLUB 70612 HIGHWAY 111 RANCHO MIRAGE CA 92270	LUST

Global ID: T0606591755
Site Facility Type:
Cleanup Status:
Status (SRCH): COMPLETED - CASE CLOSED
Status (DL): Completed - Case Closed
Status Date (DL): 4/17/2003
Case Type (DL): LUST Cleanup Site
Business Name (DL): THUNDERBIRD COUNTRY CLUB
Site Facility Name:
Address: 70612 HIGHWAY 111
City: RANCHO MIRAGE
County: RIVERSIDE
State: CA
Zip: 92270
Report Source: LUST Cleanup Sites & Military UST Sites - GeoTracker Search Results (SRCH); GeoTracker Sites Data Download (DL)

Census Tract: 6065045103
Census Tract (SRCH): 6065045103
Oil Field (SRCH):
Oil Field Oper (SRCH):
RWQCB Region (DL): COLORADO RIVER BASIN RWQCB (REGION 7)
Longitude:
Latitude:

GeoTracker Sites Data Download - Site Details

CUF Case: NO
Lead Agency: RIVERSIDE COUNTY LOP
Case Worker:
Local Agency:
RB Case No:
Local Case No: 200219064
File Location: Local Agency Warehouse
Potential COC: Diesel
Potential Media of Concern: Soil
Begin Date: 11/7/2002
How Discovered: Facility Inspection
How Discovered Description:
Stop Method: Repair Product Piping
Stop Description: REPAIR PIPING
Calwater Watershed Name: Whitewater - Coachella - Indio (719.47)
DWR GW Subbasin Name: Coachella Valley - Indio (7-021.01)
Disadvantaged Community:
CalEnvScreen Score:
Coordinate Source: Google Geocode
Discharge Cause: Unknown
Discharge Source: Piping
EPA Region: 9
Leak Reported Dt: 2002-11-07 00:00:00
Military DoD Site: No
No Further Action Dt: 2003-04-17 00:00:00
Qty Rlsd Gallons:
Facility Project Sub Type:
Calenviroscreen 3 Score: 11-15%
Calenviroscreen 4 Score: 10-15%
Site History:

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type: Regional Board Caseworker
Contact Name: Phan Le
Organization Name: COLORADO RIVER BASIN RWQCB (REGION 7)
Address: 73720 FRED WARING DRIVE SUITE #100
City: PALM DESERT
Email: phan.le@waterboards.ca.gov
Phone No: 7607768974

GeoTracker Sites Data Download - Status History

Status: Completed - Case Closed
Status Date: 4/17/2003

Status: Open - Site Assessment
Status Date: 11/7/2002

Status: Open - Case Begin Date
Status Date: 11/7/2002

GeoTracker Search - Regulatory Profile (as of October 16, 2023)

Site Facility Name: THUNDERBIRD COUNTRY CLUB
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Address: 70612 HIGHWAY 111
City: RANCHO MIRAGE
Zip: 92270
County: RIVERSIDE
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0606591755
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 4/17/2003
Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0606591755&tabname=regulatoryhistory
Potential COC: DIESEL
Potential Media of Concern: SOIL
File Location: LOCAL AGENCY WAREHOUSE
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND
DWR GW Sub Basin: Coachella Valley - Indio (7-021.01)
Calwater Watershed Name: Whitewater - Coachella - Indio (719.47)
Post Closure Site Management: NOTIFY PRIOR TO CHANGE IN LAND USE
Future Land Use: UNKNOWN
Cleanup Oversight Agencies: RIVERSIDE COUNTY LOP (LEAD) - CASE #: 200219064
COLORADO RIVER BASIN RWQCB (REGION 7)
CASE MANAGER: Phan Le
CUF Claim No:
CUF Priority Assig:
CUF Amount Paid:
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply
Site History:

No site history available

GeoTracker Search - Cleanup Status History (as of October 16, 2023)

Status: Completed - Case Closed
Date : 4/17/2003

Status: Open - Site Assessment
Date : 11/7/2002

Status: Open - Case Begin Date
Date : 11/7/2002

GeoTracker Search - Cleanup Action Report (as of October 16, 2023)

Action Type: OTHER (USE DESCRIPTION FIELD)
Begin Date: 11/7/2002
End Date:
Phase:
Contaminant Mass Removed:
Description:

GeoTracker Search - Regulatory Activities (as of October 16, 2023)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter - #Riv Co Closure
Action Date: 4/11/2003
Received Issue Date: 4/11/2003
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606591755&enforcement_id=6017261&temptable=ENFORCEMENT
Title Description Comments:

Riv Co Site Closure

Action Type: Other Regulatory Actions
Action: File review - #RCDEH Upload Site File 11/22/2010
Action Date: 4/10/2003
Received Issue Date: 4/10/2003
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606591755&enforcement_id=6069859&temptable=ENFORCEMENT
Title Description Comments:

RCDEH Upload Site File 11/22/2010

Action Type: Leak Action
Action: Leak Stopped
Action Date: 11/30/2002
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 11/7/2002
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Reported
Action Date: 11/7/2002
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action: Other (Use Description Field)
Action Date: 11/7/2002
Received Issue Date:
Doc Link:
Title Description Comments:

GeoTracker Search - Documents (as of October 16, 2023)

Document Type: Site Documents
Type:
Document Date: 6/3/2003
Submitted:

Submitted By: (REGULATOR)
Title: CASE CLOSURE SUMMARY
Title Link: https://geotracker.waterboards.ca.gov/site_documents/4472882926/200219064%2Epdf

Document Type: Site Documents ***Document Date:*** 6/3/2003
Type: ***Submitted:***
Submitted By: (REGULATOR)
Title: CASE CLOSURE LETTER
Title Link: https://geotracker.waterboards.ca.gov/site_documents/5545972526/200219064racc%2Epdf

Document Type: Site Documents ***Document Date:*** 4/11/2003
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: RIVERSIDE COUNTY LOP (REGULATOR)
Title: RIV CO SITE CLOSURE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606591755&enforcement_id=6017261

Document Type: Site Documents ***Document Date:*** 4/10/2003
Type: FILE REVIEW ***Submitted:***
Submitted By: STEVEN COOK (REGULATOR)
Title: RCDEH UPLOAD SITE FILE 11/22/2010
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606591755&enforcement_id=6069859

10	1 of1	WNW	0.61 / 3,213.48	299.79 / 50	GRAVEL PIT RIVERSIDE COUNTY RANCHO MIRAGE CA 92270	MRDS

Dep ID: 10213119 ***I1:*** 15
Dev Status: PAST PRODUCER ***Latitude:*** 33.766479
Code List: SDG ***Longitude:*** -116.447998
Url: http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10213119

Commodity

I1: 24 ***Line:*** 1
Code: SDG ***Inserted By:*** MAS migration
Commodity: Sand and Gravel, Cons ***Insert Date:*** 29-OCT-2002 09:00:24
Commodity Type: Non-metallic ***Updated By:*** USGS
Commodity Group: Sand and Gravel ***Update Date:*** 29-OCT-2002 09:01:56
Importance: Primary

Names

I1: 14 ***Inserted By:*** MAS migration
Status: Current ***Insert Date:*** 29-OCT-02
Site Name: Gravel Pit ***Updated By:*** USGS
Line: 1 ***Update Date:*** 29-OCT-02

Unplottable Summary

Total: 1 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
CHMIRS	Coachella Valley Water District	Peterson Rd. 1/2 mile north of Highway 111	Rancho Mirage CA		821846653
		Control No **|** ***Notified Date:*** 2/28/200408:08:30 AM			

Unplottable Report

Site: ***Coachella Valley Water District***
Peterson Rd. 1/2 mile north of Highway 111 Rancho Mirage CA

CHMIRS

Control No:		***Notified Date:***	2/28/200408:08:30 AM
County:	Riverside County	***Notified Date Time:***	
Year:	2004		
URL:			

California Hazardous Material Incident Report System (as of 1997 to 2005)

Contained:	Yes	***Bbls:***	0
Substance:	Domestic Wastewater	***Cups:***	0
Incident Date:	2/27/200412:00:00 AM	***Cu Ft:***	0
No of Injuries:	0	***Gals:***	2,851
No of Fatals:	0	***Grams:***	0
No of Evacs:	0	***Lbs:***	0
Cleanup:	Reporting Party	***Liters:***	0
Water:		***Oz:***	0
Water Way:		***Pts:***	0
City:	Rancho Mirage	***Qts:***	0
County:	Riverside County	***Sheen:***	0
ZIP:		***Tons:***	0
Site:	Road	***Unknown:***	0

Admin Agency: Riverside County Environmental Health
Location: Peterson Rd. 1/2 mile north of Highway 111
Description: They believe the release is due to vandalism to a manhole.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Oct 26, 2023

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Oct 26, 2023

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Oct 26, 2023

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the SEMS GIS/REST file layer obtained from EPA's Facility Registry Service.

Government Publication Date: Nov 14, 2023

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Nov 14, 2023

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Oct 2, 2023

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Oct 2, 2023

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Oct 2, 2023

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Oct 2, 2023

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Oct 2, 2023

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Oct 2, 2023

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Oct 2, 2023

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Dec 26, 2023

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Dec 26, 2023

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Oct 26, 2023

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Aug 12, 2023

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Mar 13, 2023

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: May 2, 2023

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: May 2, 2023

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Sep 20, 2023

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Sep 22, 2023

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Nov 14, 2023

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Dec 26, 2023

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database is state equivalent NPL.

Government Publication Date: Oct 23, 2023

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database is state equivalent CERCLIS.

Government Publication Date: Oct 23, 2023

Delisted State Response Sites: DELISTED ENVS

Sites removed from the list of State Response Sites made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).

Government Publication Date: Oct 23, 2023

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.

Government Publication Date: Feb 15, 2024

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF

This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.

Government Publication Date: Sep 20, 2006

Waste Management Unit Database: WMUD

The Waste Management Unit Database System tracks and inventories waste management units. CCR Title 27 contains criteria stating that Waste Management Units are classified according to their ability to contain wastes. Containment shall be determined by geology, hydrology, topography, climatology, and other factors relating to the ability of the Unit to protect water quality. Water Code Section 13273.1 requires that operators submit a water quality solid waste assessment test (SWAT) report to address leak status. The WMUDS was last updated by the State Water Resources control board in 2000.

Government Publication Date: Jan 1, 2000

EnviroStor Hazardous Waste Facilities: HWP

A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.

Government Publication Date: Oct 23, 2023

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT

In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.

Government Publication Date: Dec 31, 1995

Construction and Demolition Debris Recyclers: C&D DEBRIS RECY

This listing of Construction and Demolition Debris Recyclers is maintained by the California Intergrated Waste Management Board-common C&D materials include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development.

Government Publication Date: Jun 20, 2018

Recycling Centers: RECYCLING

This list of Certified Recycling Centers that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 17, 2024

Listing of Certified Processors: PROCESSORS

This list of Certified Processors that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 17, 2024

Listing of Certified Dropoff, Collection, and Community Service Programs: CONTAINER RECY

This list of Certified Dropoff, Collection, and Community Service Programs (non-buyback) operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 22, 2024

Land Disposal Sites: LDS

Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.

Government Publication Date: Nov 30, 2023

Leaking Underground Fuel Tank Reports: LUST

List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.

Government Publication Date: Nov 30, 2023

Delisted Leaking Storage Tanks: DELISTED LST

List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.

Government Publication Date: Nov 30, 2023

Permitted Underground Storage Tank (UST) in GeoTracker: UST

List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).

Government Publication Date: Feb 15, 2024

Proposed Closure of Underground Storage Tank Cases: UST CLOSURE

This listing includes Proposed Closure of Underground Storage Tank (UST) Cases which are being considered for closure by either the State Water Resources Control Board at a Future Board Meeting or the Executive Director that have been posted for a 60-day public comment period, and Closure of UST Cases with Closure Denials and Approved Orders. The lists are provided by the California Water Boards.

Government Publication Date: Dec 22, 2023

Historical Hazardous Substance Storage Information Database: HHSS

The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.

Government Publication Date: Aug 27, 2015

Statewide Environmental Evaluation and Planning System: UST SWEEPS

The Statewide Environmental Evaluation and Planning System (SWEEPS) is a historical listing of active and inactive underground storage tanks made available by the California State Water Resources Control Board (SWRCB).

Government Publication Date: Oct 1, 1994

Aboveground Storage Tanks: AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

SWRCB Historical Aboveground Storage Tanks: AST SWRCB

A list of aboveground storage tanks made available by the California State Water Resources Control Board (SWRCB). Effective January 1, 2008, the Certified Unified Program Agencies (CUPAs) are vested with the responsibility and authority to implement the Aboveground Petroleum Storage Act (APSA).

Government Publication Date: Dec 1, 2007

Oil and Gas Facility Tanks: TANK OIL GAS

Locations of oil and gas tanks that fall under the jurisdiction of the Geologic Energy Management Division of the California Department of Conservation (CalGEM) (CCR 1760). CalGEM was formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR).

Government Publication Date: Jan 24, 2024

Delisted Storage Tanks: DELISTED TNK

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Feb 15, 2024

California Environmental Reporting System (CERS) Tanks: CERS TANK

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Jan 17, 2024

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Jan 17, 2024

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR

The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Oct 23, 2023

CALSITES Database: CALSITES

This historical database was maintained by the Department of Toxic Substance Control (DTSC) for more than a decade. CALSITES contains information on Brownfield properties with confirmed or potential hazardous contamination. In 2006, DTSC introduced EnviroStor as the latest Brownfields site database.

Government Publication Date: May 1, 2004

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR

The Department of Toxic Substances Control (DTSC) Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Government Publication Date: Feb 18, 2021

Deed Restrictions and Land Use Restrictions: DEED

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Nov 30, 2023

Voluntary Cleanup Program: VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Oct 23, 2023

GeoTracker Cleanup Program Sites: CLEANUP SITES

A list of Cleanup Program sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Nov 30, 2023

Delisted Cleanup Program Sites: DELISTED CLEANUP

A list of Cleanup Program sites which were once included - and have since been removed from - the list of Cleanup Program Sites in GeoTracker. GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.
Government Publication Date: Nov 30, 2023

Delisted County Records: DELISTED COUNTY
Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.
Government Publication Date: Feb 6, 2024

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST
This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).
Government Publication Date: Oct 25, 2023

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST
This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).
Government Publication Date: Oct 25, 2023

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST
Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).
Government Publication Date: Oct 25, 2023

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST
Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).
Government Publication Date: Oct 25, 2023

County

Riverside County - Local Oversight Program List: LOP RIVERSIDE
A list of Leaking Underground Storage Tank (LUST) facilities in Riverside County. This list is made available by Riverside County Department of Environmental Health. Environmental Cleanup Program provides oversight of assessments and cleanups at properties that have been, or may have been, contaminated with hazardous substances from LUSTs or releases associated with other commercial/industrial use.
Government Publication Date: Feb 6, 2024

Riverside County - Underground Storage Tanks List: UST RIVERSIDE
A list of registered Underground Storage Tank (UST) sites in Riverside County. This list is made available by Riverside County Department of Environmental Health. The Hazardous Materials Management Branch (HMMB) regulates and oversees the inspections of constructions, repairs, upgrades, system operation and removal of UST systems.
Government Publication Date: Sep 27, 2023

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: Nov 15, 2023

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 8, 2023

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Oct 19, 2022

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 18, 2023

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from March 2022 to September 2023. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Sep 5, 2023

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: May 19, 2023

National Response Center PFAS Spills: ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Nov 21, 2023

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Nov 27, 2023

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Oct 19, 2022

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Dec 13, 2023

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Dec 4, 2023

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Nov 26, 2023

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Jul 26, 2023

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Nov 14, 2023

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Jan 21, 2023

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jul 23, 2023

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Jul 23, 2023

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: Nov 6, 2023

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: May 1, 2023

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Jun 13, 2023

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 30, 2023

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS) since 2010. CMS may not reflect the latest developments in a case nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Apr 19, 2023

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2023

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Oct 30, 2023

State

PFAS Sampling Locations: PFAS SAMPLING

This data is sourced from the State Water Board's GeoTracker Per- and Polyfluoroalkyl Substances (PFAS) Map tool which contains individual sampling points (i.e., soil boring, groundwater monitoring well, drinking water well for municipal drinking water systems, etc.) or a site location with PFAS analytical data. Includes analytical results that are finalized and submitted electronically by the Responsible Parties via GeoTracker's Electronic Submittal of Information Portal, and after it's accepted by a Regional Water Quality Control Board.

Government Publication Date: Sep 25, 2023

Dry Cleaning Facilities: DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Dec 20, 2021

Delisted Drycleaners: DELISTED DRYCLEANERS

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Jan 31, 2022

Non-Toxic Dry Cleaning Incentive Program: DRYC GRANT

A list of grant recipients of the Non-Toxic Dry Cleaning Incentive Program made available by the California Air Resources Board (CARB). The program provides grants to eligible dry cleaning businesses to assist them in transitioning away from PERC machines to alternative non-toxic and non-smog forming technologies.

Government Publication Date: Jan 31, 2022

PFAS GeoTracker Cleanup Sites: PFAS GT CLEANUPS

A list of applicable cleanup sites from the State Water Resources Control Board's (SWRCB) GeoTracker data management system where one or more of the potential contaminants of concern are identified in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 30, 2023

PFOA/PFOS Groundwater: PFAS GW

A list of water wells from the Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System with the groundwater chemical perfluorooctanoic acid (PFOA) (NL = 0.014 UG/L) or perfluorooctanoic sulfonate (PFOS) (NL = 0.013 UG/L). The GAMA Groundwater Information System search is made available by California Water Boards.

Government Publication Date: Jan 7, 2024

PFAS Investigations: PFAS INVEST

This list of potential Per- and Polyfluoroalkyl Substance (PFAS) sites is compiled from the California State Water Resources Control Board's (SWRCB) PFAS Investigations Map tool. The SWRCB issued investigative orders, per California Water Code (CWC) Section 13267 and/or 13383, to these sites. This does not mean that PFAS has been produced, used, or discharged at these sites. Orders were also issued to the public water systems to sample wells in the vicinity of these locations. The data includes locations for airports, landfills, suspected chrome plating facilities, publicly owned treatment works (aka wastewater treatment plants), bulk fuel terminals, refineries, and military facilities that have potential sources of PFAS.

Government Publication Date: Nov 28, 2022

Hazardous Waste and Substances Site List - Site Cleanup: HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Mar 15, 2023

Toxic Pit Cleanup Act Sites: TOXIC PITS

The Toxic Pits Cleanup Act (TPCA) list identifies sites suspected of containing hazardous substances where cleanup has not yet been completed. This list was maintained by the State Water Resources Control Board (SWRCB), is not longer maintained, and updates are not planned.

Government Publication Date: Jul 1, 1995

List of Hazardous Waste Facilities Subject to Corrective Action: DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

EnviroStor Inspection, Compliance, and Enforcement: INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked by the California Department of Toxic Substance Control's (DTSC) EnviroStor data management system.

Government Publication Date: Nov 23, 2023

School Property Evaluation Program Sites: SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Oct 23, 2023

California Hazardous Material Incident Report System (CHMIRS): CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Oct 16, 2023

Historical California Hazardous Material Incident Report System (CHMIRS): HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Handlers from Hazardous Waste Manifest Data: HAZNET

A list of handlers not otherwise classified as Treatment, Storage, Disposal facilities (TSDF) or generators from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Oct 24, 2016

Generators from Hazardous Waste Manifest Data: HAZ GEN

List of handlers listed as having generated waste from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

TSDF from Hazardous Waste Manifest Data: HAZ TSD

List of Treatment, Storage, and Disposal Facilities (TSDFs) from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

Historical Hazardous Waste Manifest Data: HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

DTSC Registered Hazardous Waste Transporters: HW TRANSPORT

The California Department of Toxic Substances Control (DTSC) maintains this list of Registered Hazardous Waste Transporters.

Government Publication Date: Jan 2, 2024

Registered Waste Tire Haulers: WASTE TIRE

This list of registered waste tire haulers is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Dec 5, 2023

California Medical Waste Management Program Facility List: MEDICAL WASTE

This list of Medical Waste Management Program Facilities is maintained by the California Department of Public Health. The Medical Waste Management Program (MWMP) regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (MWMA). The MWMP permits and inspects all medical waste off-site treatment facilities, medical waste transporters, and medical waste transfer stations. This list contains transporters, treatment, and transfer facilities.

Government Publication Date: Jan 8, 2024

Historical Cortese List: HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Dec 6, 2021

California Environmental Reporting System (CERS) Hazardous Waste Sites: CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Jan 17, 2024

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Nov 29, 2018

Sites in GeoTracker: GEOTRACKER

GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. This is a list of sites in GeoTracker that aren't otherwise categorized as LUST, Land Disposal Sites (LDS), Cleanup Sites, or sites having Waste Discharge Requirements (WDR). This listing includes program types such as Underground Injection Control (UIC), Confined Animal Facilities (CAF), Irrigated Lands Regulatory Program, plans, and non-case information.

Government Publication Date: Nov 30, 2023

Mines Listing: MINE

This list includes mine site locations extracted from the Mines Online database, maintained by the California Department of Conservation. Mines Online (MOL) is an interactive web map designed with GIS features that provide information such as the mine name, mine status, commodity sold, location, and other mine specific data. Please note: Mine location information is provided to assist experts in determining the location of mine operators in accordance with California Civil Code section 1103.4 and reflects information reported by mine operators in annual reports provided under Public Resources Code section 2207. While the Division of Mine Reclamation (DMR) attempts to populate MOL with accurate location information, the DMR cannot guarantee the accuracy of operator reported location information.

Government Publication Date: Jun 16, 2023

Recorded Environmental Cleanup Liens: LIEN

The California Department of Toxic Substance Control (DTSC) maintains this list of liens placed upon real properties. A lien is utilized by the DTSC to obtain reimbursement from responsible parties for costs associated with the remediation of contaminated properties.

Government Publication Date: Dec 18, 2023

Waste Discharge Requirements: WASTE DISCHG

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Nov 30, 2023

Toxic Pollutant Emissions Facilities: EMISSIONS

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program. This program requires emission inventory updates every four years.

Government Publication Date: Dec 31, 2020

Clandestine Drug Lab Sites: CDL

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jan 19, 2021

Tribal

No Tribal additional environmental record sources available for this State.

County

Riverside County - Hazardous Waste Generator Sites List: HWG RIVERSIDE

A list of Hazardous Waste Generator Sites in the County of Riverside. This list is made available by Riverside County Department of Environmental Health which has been designated as the CUPA for the County.

Government Publication Date: Sep 27, 2023

Riverside County - Disclosure Facility List: HZH RIVERSIDE

A list of facilities disclosed to Riverside County Department of Environmental Health (DEH). This list is made available by Riverside County DEH which has been designated as the CUPA for the County. A business is required to establish and submit a Business Plan if the facility handles hazardous material equal to or greater than 55 gallons, 500 pounds or 200 cubic feet at any time during the year.

Government Publication Date: Sep 27, 2023

Riverside County - Medical Waste Facilities: MED WST RIVERSIDE

This list of active and inactive medical waste facilities is maintained by the County of Riverside Department of Environmental Health.

Government Publication Date: Jan 12, 2023

Riverside County - California Accidental Release Prevention Program Sites: RMP RIVERSIDE

This list of Riverside County California Accidental Release Prevention Program sites is maintained by the County of Riverside Department of Environmental Health. AB 3777 was enacted in 1986 to minimize potential emergencies involving acutely hazardous materials by requiring facilities which handle these materials to submit Risk Management Prevention Plans. The Riverside County Department of Environmental Health Hazardous Materials Branch began implementation of this Program County-wide in January 1991. All cities within Riverside County are included in this list.

Government Publication Date: Sep 29, 2023

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX C
REGULATORY AGENCY RECORDS

Request Visibility: Unpublished

Request 24-1314 Open

Dates

Due

March 28, 2024

Received

March 18, 2024 via web

Request

Our firm is performing a Phase I Environmental Site Assessment on the subject property located at 39360 Peterson Road (APN 689-180-012), Rancho Mirage, CA 92270. Please provide any building permits, well and septic permits as well as fire department record pertaining to hazardous waste or materials, and underground storage tank files. Thank you.

Requester

Samantha Weis

sw@weisenviro.com

1938 Kellogg Avenue, Suite 116, Carlsbad, 92008

7606726339

Weis Environmental LLC

Timeline | Documents

Message to requester

Requester + Staff

Thank you for submitting your request to the Riverside County Public Records Request system. We will review your request and will respond within the required timeframe.

March 18, 2024, 5:15pm

Department assignment

Public

Environmental Health

March 18, 2024, 5:15pm by Samantha Weis

Request opened

Public

Request received via web

March 18, 2024, 5:15pm by Samantha Weis

Invoices

No invoices due

Staff assigned

Departments

Environmental Health

Point of contact

Jessica L Henderson

County of Riverside - California

Request Visibility: Unpublished

Request 24-1314 Closed

1 of 7

Dates

Due

March 28, 2024

Received

March 18, 2024 via web

Requester

Samantha Weis

sw@weisenviro.com

1938 Kellogg Avenue, Suite 116, Carlsbad, 92008

7606726339

Weis Environmental LLC

Invoices

No invoices due

Staff assigned

Departments

Environmental Health

Point of contact

Jessica L Henderson

Request

Our firm is performing a Phase I Environmental Site Assessment on the subject property located at 39360 Peterson Road (APN 689-180-012), Rancho Mirage, CA 92270. Please provide any building permits, well and septic permits as well as fire department record pertaining to hazardous waste or materials, and underground storage tank files. Thank you.

Timeline | Documents

Request closed Public

No nonexempt records have been located, and your request has been fulfilled.

March 28, 2024, 9:47am by Noemi Padilla (Staff)

Message to requester Requester + Staff

The Environmental Cleanup Program (ECP) does not have files for the locations listed.

March 25, 2024, 12:54pm by Alberto Lopez, Supervising EHS (Staff)

Message to requester Requester + Staff

DEH Land Use does not have the requested septic record for subject property.

Check with City of Rancho Mirage for possible records.

March 21, 2024, 9:16am by Yesenia Gonzalez, EHS IV (Staff)

Message to requester Requester + Staff

Thank you for submitting your request to the Riverside County Public Records Request system. We will review your request and will respond within the required timeframe.

March 18, 2024, 5:15pm

Department assignment

Public

Environmental Health

March 18, 2024, 5:15pm by Samantha Weis

Request opened

Public

Request received via web

March 18, 2024, 5:15pm by Samantha Weis

County of Riverside - California

Request Visibility: Unpublished

Request 24-1314 Open

Dates

Due
March 28, 2024

Received
March 18, 2024 via web

Requester

Samantha Weis
sw@weisenviro.com
1938 Kellogg Avenue, Suite 116, Carlsbad, 92008
7606726339
Weis Environmental LLC

Invoices

No invoices due

Staff assigned

Departments
Environmental Health

Point of contact
Jessica L Henderson

Request

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Timeline | Documents

Message to requester
Requester + Staff

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Message to requester
Requester + Staff

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March 18, 2024, 5:15pm

Department assignment
Public

Environmental Health

March 18, 2024, 5:15pm by Samantha Weis

Request opened
Public

Request received via web

March 18, 2024, 5:15pm by Samantha Weis

Request Visibility: Unpublished

Request 24-1314 Open

Dates

Due

March 28, 2024

Received

March 18, 2024 via web

Requester

Samantha Weis

sw@weisenviro.com

1938 Kellogg Avenue, Suite 116, Carlsbad, 92008

7606726339

Weis Environmental LLC

Invoices

No invoices due

Staff assigned

Departments

Environmental Health

Point of contact

Jessica L Henderson

Request

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Timeline | Documents

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Requester + Staff

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March 25, 2024, 12:54pm by Alberto Lopez, Supervising EHS (Staff)

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system. We will review your request and will respond within the required timeframe.

March 18, 2024, 5:15pm

Department assignment

Public

Environmental Health

March 18, 2024, 5:15pm by Samantha Weis

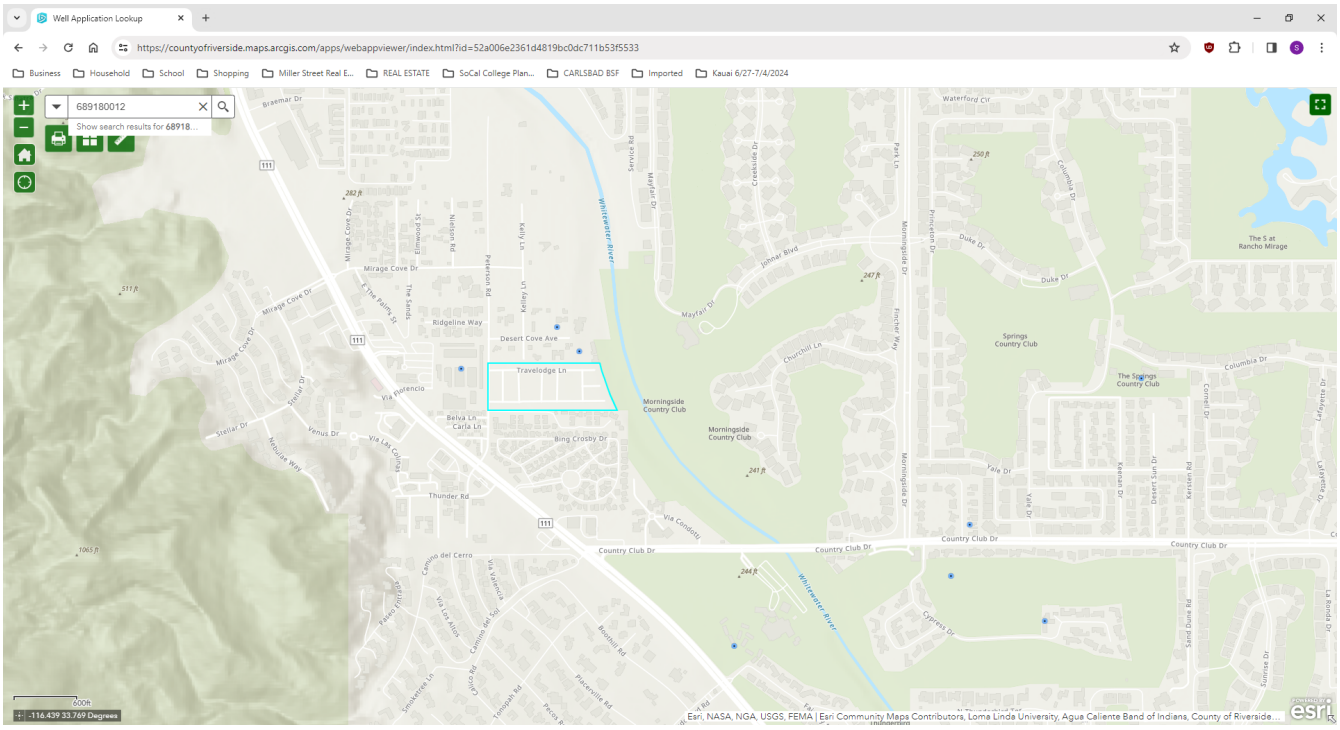
Request opened

Public

Request received via web

March 18, 2024, 5:15pm by Samantha Weis

No well tank - 3.18.2024



APPENDIX D
HISTORICAL RESOURCES

HISTORICAL AERIALS

Project Property: 39360 Peterson Road
39360 Peterson Road
Rancho Mirage CA 92270

Project No:

Requested By: Weis Environmental, LLC

Order No: 24022701207

Date Completed: February 29,2024

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

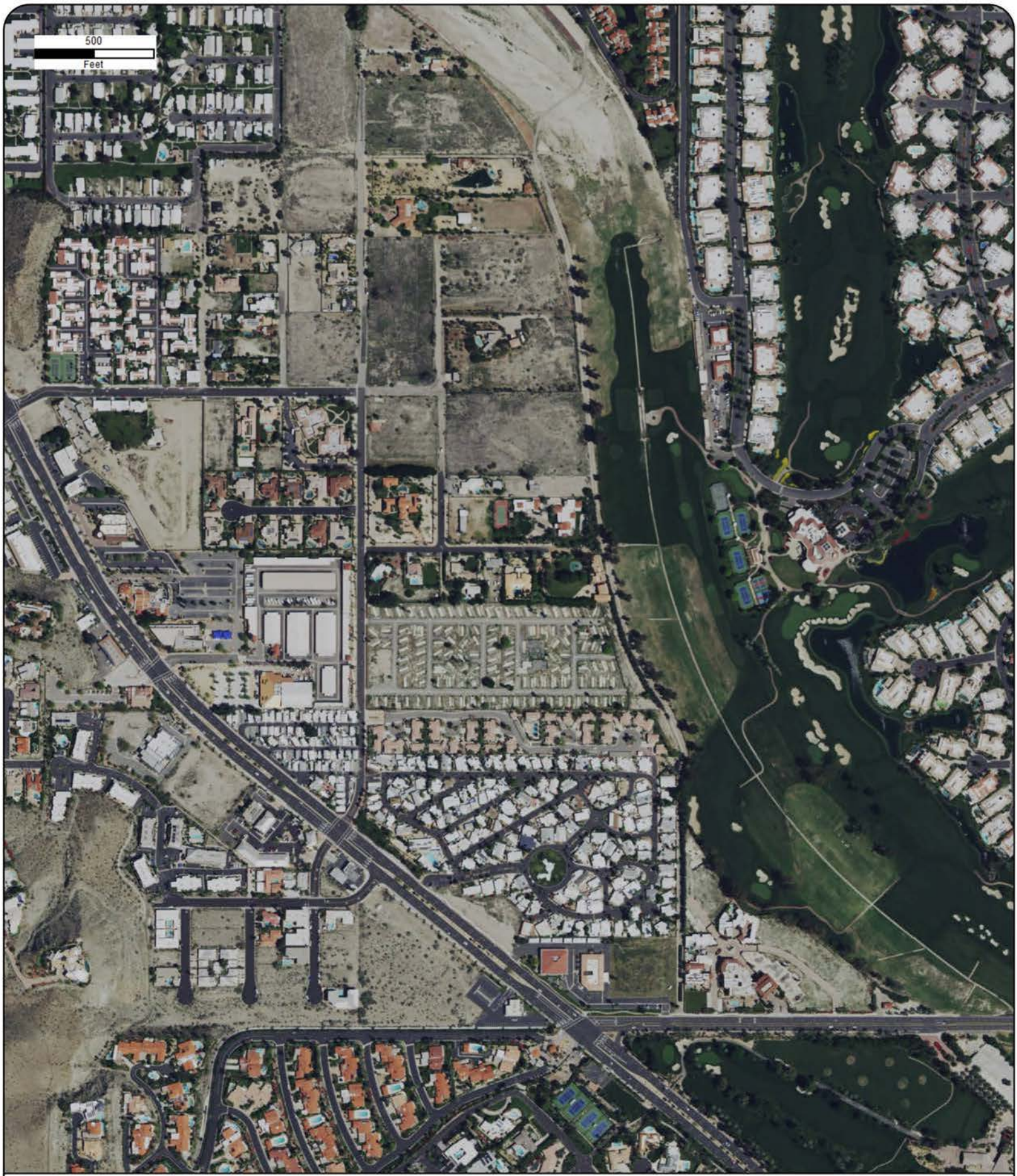
Date	Source	Scale	Comments
2023	Maxar Technologies	1" = 500'	
2020	United States Department of Agriculture	1" = 500'	
2018	United States Department of Agriculture	1" = 500'	
2016	United States Department of Agriculture	1" = 500'	
2014	United States Department of Agriculture	1" = 500'	
2012	United States Department of Agriculture	1" = 500'	
2010	United States Department of Agriculture	1" = 500'	
2009	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
1996	United States Geological Survey	1" = 500'	
1984	United States Geological Survey	1" = 500'	
1978	Private	1" = 500'	
1967	Private	1" = 500'	
1959	Agricultural Stabilization & Conserv. Service	1" = 500'	
1954	Agricultural Stabilization & Conserv. Service	1" = 500'	
1940	Fairchild	1" = 500'	

Year: 2023
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

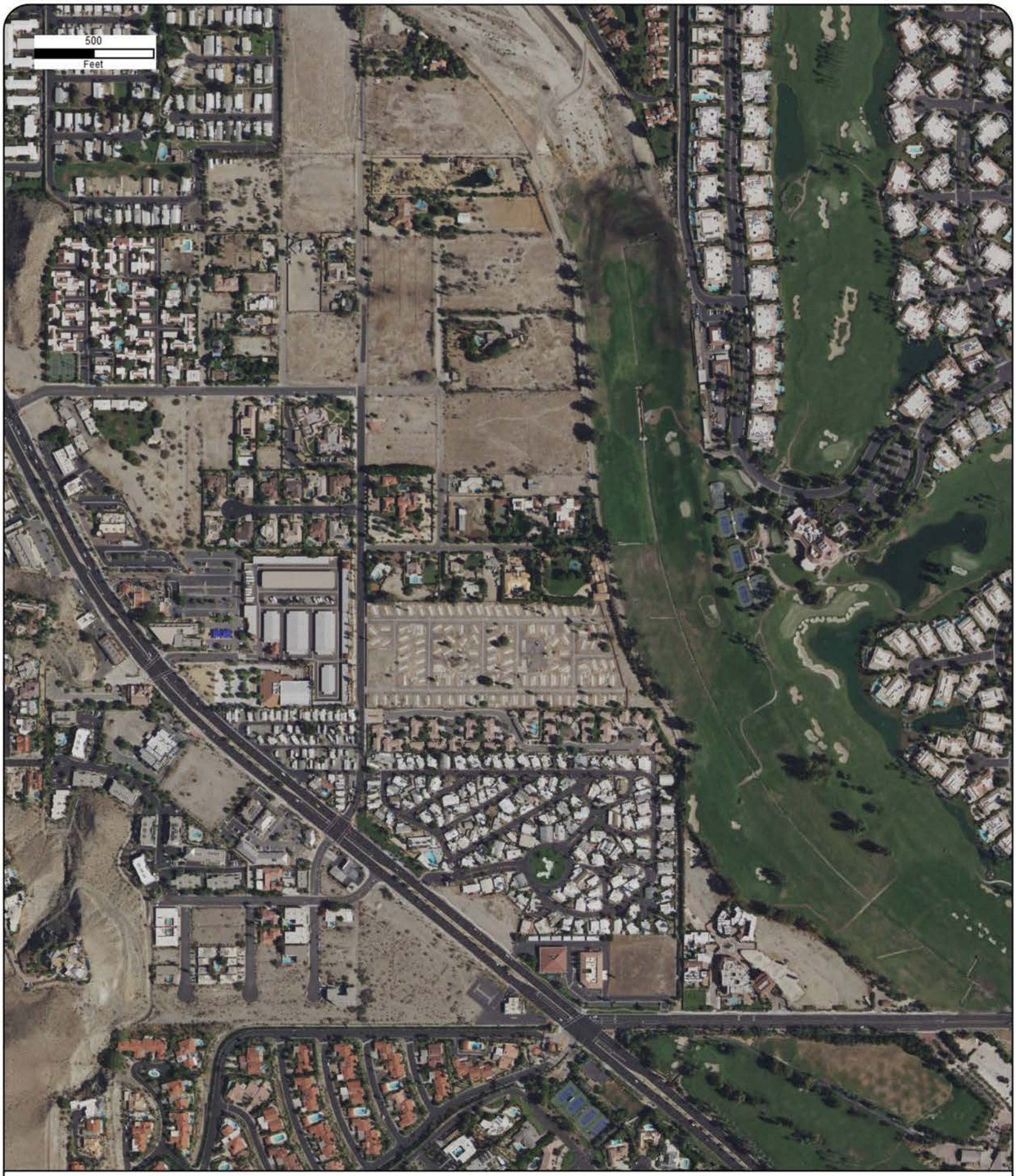


Year: 2020
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

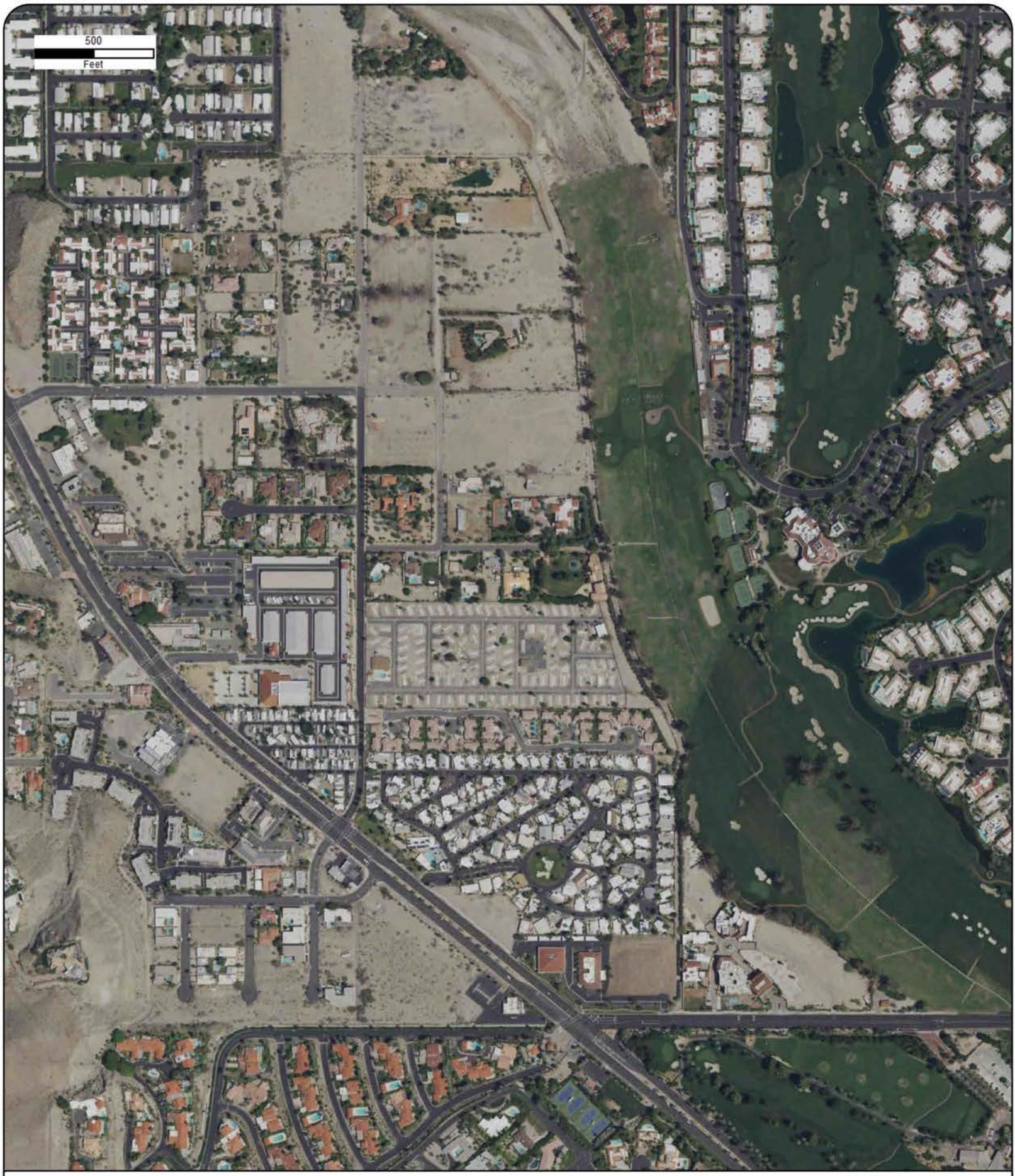


Year: 2018
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

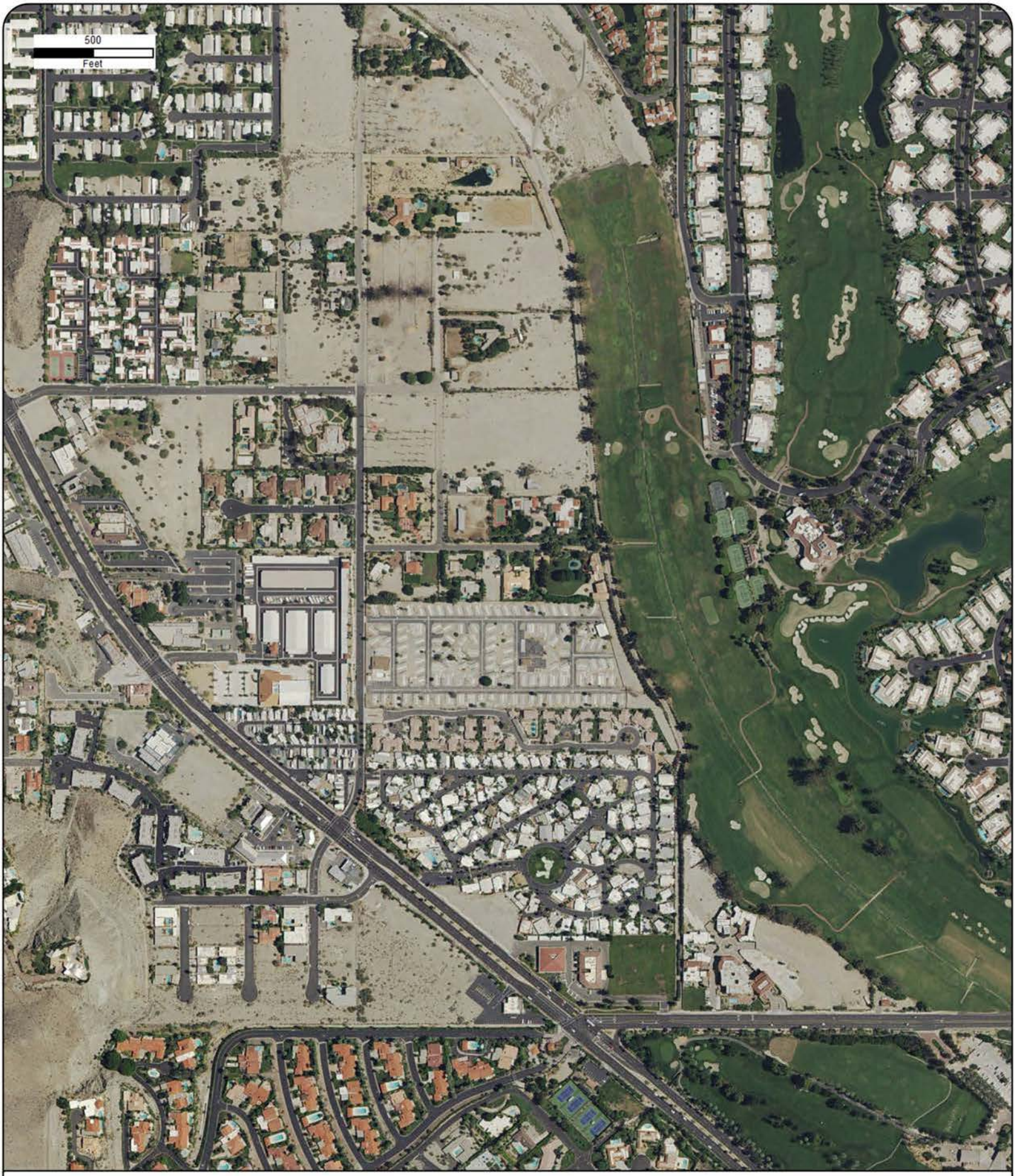


Year: 2016
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS



Year: 2014
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

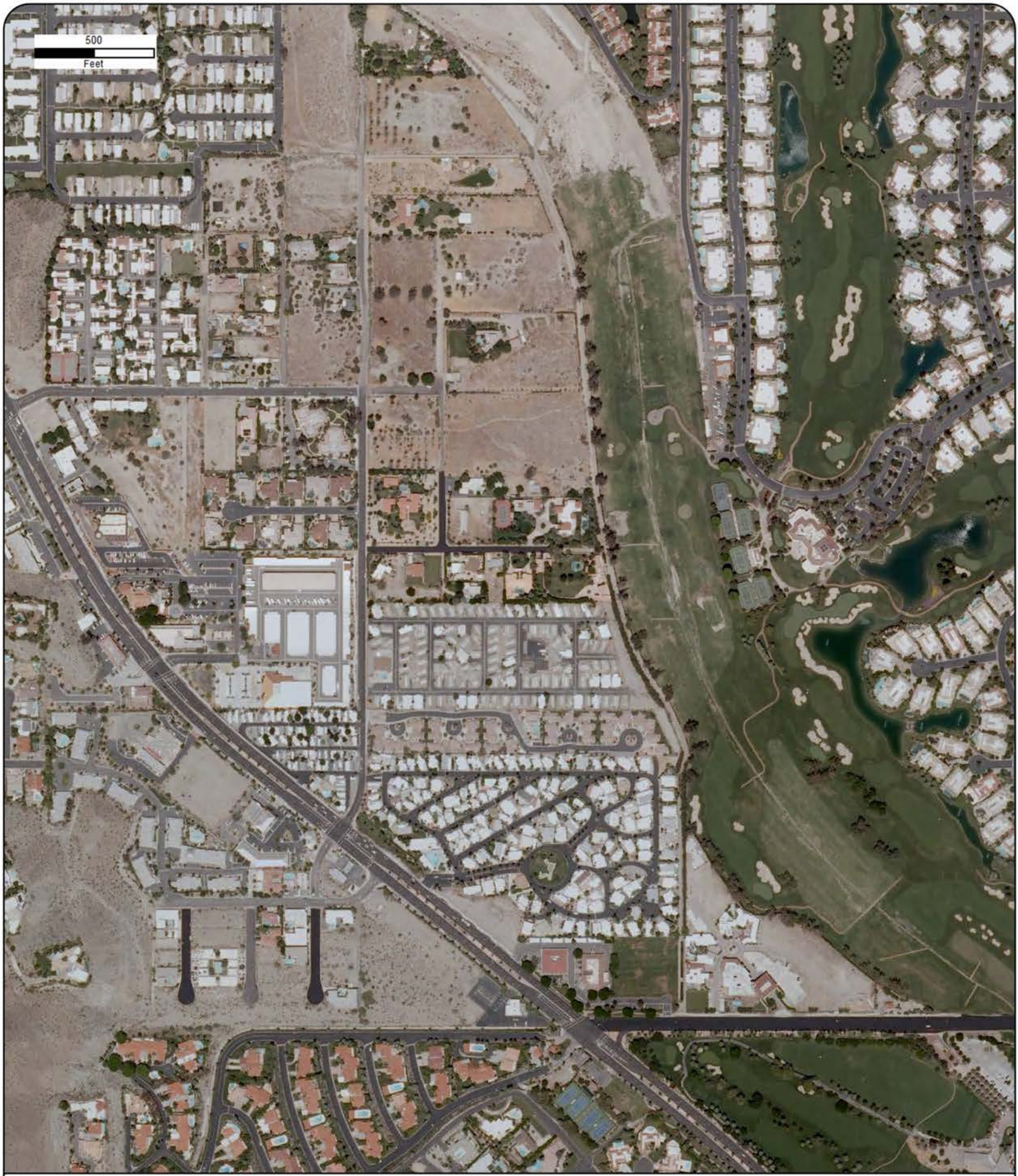
ERIS

Year: 2012
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

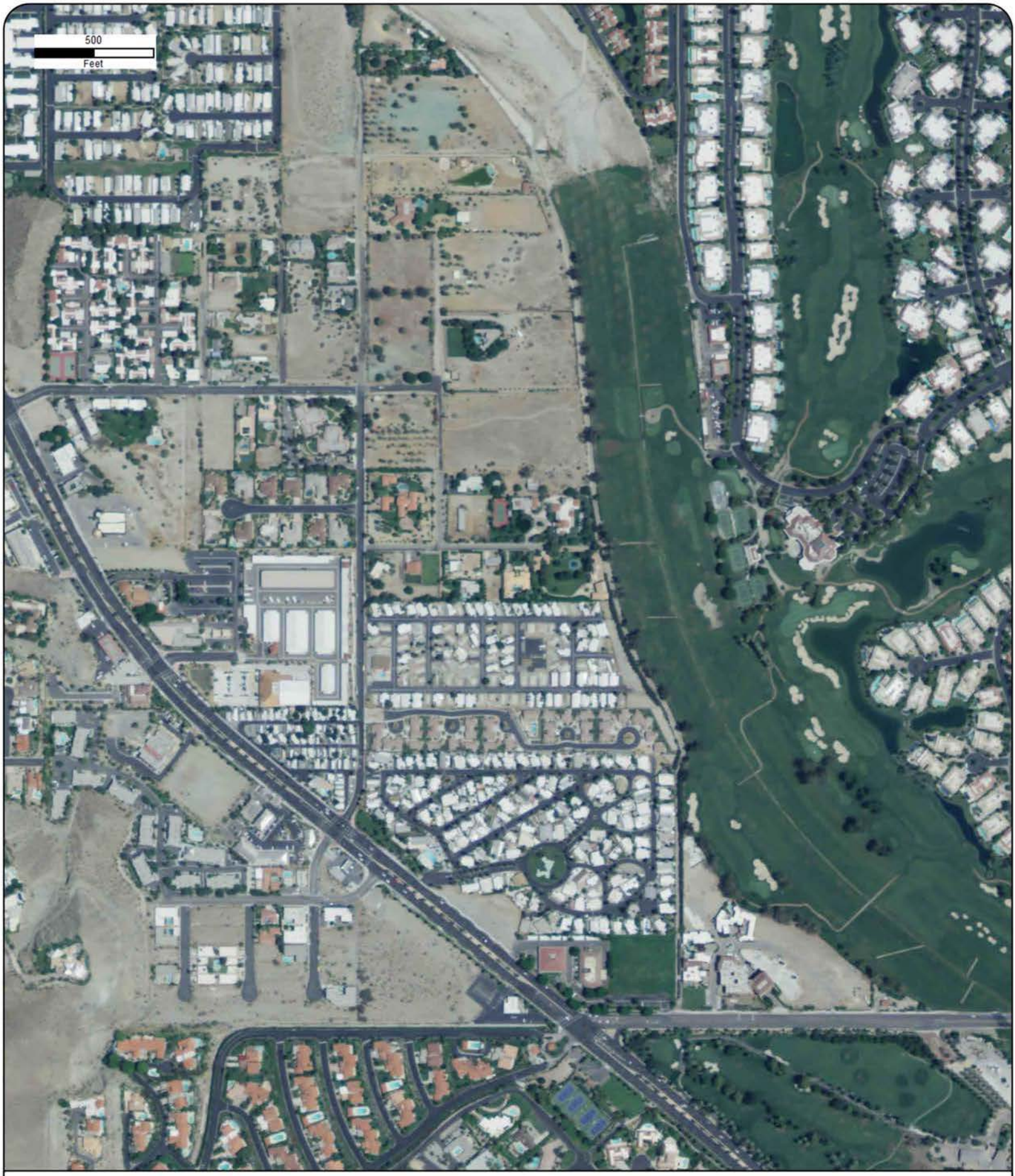


Year: 2010
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS



Year: 2009
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1996
Source: USGS
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1984
Source: USGS
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1978
Source: Private
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1967
Source: Private
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1959
Source: ASCS
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1954
Source: ASCS
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

Year: 1940
Source: FAIRCHILD
Scale: 1" = 500'
Comment:

Address: 39360 Peterson Road, Rancho Mirage, CA
Approx Center: -116.43672123,33.76185499

Order No: 24022701207

ERIS

CITY DIRECTORY

Project Property:	*39360 Peterson Road* *39360 Peterson Road* *Rancho Mirage,CA 92270*
Project No:	
Requested By:	*Weis Environmental, LLC*
Order No:	*24022701207*
Date Completed:	*February 28, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

February 28, 2024
RE: CITY DIRECTORY RESEARCH
39360 Peterson Road
Rancho Mirage,CA 92270

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
ALL of Peterson Rd
Search Notes:

Search Results Summary

Date	Source	Comment
2022	DIGITAL BUSINESS DIRECTORY	
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
2000	HAINES	
1996	HAINES	
1991	HAINES	
1986	HAINES	
1984	HAINES	
1977	HAINES	
1974	HAINES	
1956	WESTERN DIRECTORY CO	

2022 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38480	**LOTHAR MUENCH**...*RESIDENTIAL*
38600	**RONALD WILLIAMS**...*RESIDENTIAL*
38841	**ROBERT PAULSON**...*RESIDENTIAL*
39360	**CARLOS ALVAREZ**...*RESIDENTIAL*
39360	**JUAN REYNOSO**...*RESIDENTIAL*
39360	**KAREN MACIAS**...*RESIDENTIAL*
39360	**LILIAN MORENO**...*RESIDENTIAL*
39360	**PEREZ GONZALEZ**...*RESIDENTIAL*
39360	**PETRA GARCIA**...*RESIDENTIAL*
39360	**SULMA CASTILLO**...*RESIDENTIAL*
39360	**TONY BIRDSEY**...*RESIDENTIAL*

2020 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38480	**LOTHAR MUENCH**...*RESIDENTIAL*
38600	**REBECCA WILLIAMS**...*RESIDENTIAL*
38841	**B PAULSON**...*RESIDENTIAL*
39360	**CARLOS ALVAREZ**...*RESIDENTIAL*
39360	**JUAN REYNOSO**...*RESIDENTIAL*
39360	**KAREN MACIAS**...*RESIDENTIAL*
39360	**LILIAN MORENO**...*RESIDENTIAL*
39360	**MIREYA GONZALEZ**...*RESIDENTIAL*
39360	**PETRA GARCIA**...*RESIDENTIAL*
39360	**SULMA CASTILLO**...*RESIDENTIAL*
39360	**TONY BIRDSEY**...*RESIDENTIAL*

2016 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38480 **LOTHAR MUENCH**...*RESIDENTIAL*
38600 **REBECCA WILLIAMS**...*RESIDENTIAL*
38600 **RONALD WILLIAMS**...*RESIDENTIAL*
38841 **B PAULSON**...*RESIDENTIAL*
38841 **ROBERT PAULSON**...*RESIDENTIAL*
39360 **CARLOS ALVAREZ**...*RESIDENTIAL*
39360 **JUAN REYNOSO**...*RESIDENTIAL*
39360 **KAREN MACIAS**...*RESIDENTIAL*
39360 **LILIAN MORENO**...*RESIDENTIAL*
39360 **LORENA ALVAREZ**...*RESIDENTIAL*
39360 **MIREYA GONZALEZ**...*RESIDENTIAL*
39360 **PEREZ GONZALEZ**...*RESIDENTIAL*
39360 **PETRA GARCIA**...*RESIDENTIAL*
39360 **TONY BIRDSEY**...*RESIDENTIAL*

2012 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38480 **LOTHAR MUENCH**...*RESIDENTIAL*
38600 **KAY WILLIAMS**...*RESIDENTIAL*
38600 **REBECCA WILLIAMS**...*RESIDENTIAL*
38600 **RONALD WILLIAMS**...*RESIDENTIAL*
38785 **HELENA SOPWITH**...*RESIDENTIAL*
38785 **SOPWITH IRENA**...*RESIDENTIAL*
38841 **B PAULSON**...*RESIDENTIAL*
38841 **ROBERT PAULSON**...*RESIDENTIAL*
39360 **AMELIA STEPHENS**...*RESIDENTIAL*
39360 **ANGELA HOWELL**...*RESIDENTIAL*
39360 **DAISY CENTENO**...*RESIDENTIAL*
39360 **DAVID DAVIS**...*RESIDENTIAL*
39360 **E WEST**...*RESIDENTIAL*
39360 **FERNANDO TORRES**...*RESIDENTIAL*
39360 **FRANSISCO SEGOIEA**...*RESIDENTIAL*
39360 **FREDDY CASTRO-MONTOYA**...*RESIDENTIAL*
39360 **GLORIA CENTENO**...*RESIDENTIAL*
39360 **ISMAEL RAMIREZ**...*RESIDENTIAL*
39360 **JAMES HANSON**...*RESIDENTIAL*
39360 **JULIA SOBERANIS**...*RESIDENTIAL*
39360 **KAREN MACIAS**...*RESIDENTIAL*
39360 **LEONEL AGUIRRE**...*RESIDENTIAL*
39360 **LET SOTO-LEON**...*RESIDENTIAL*
39360 **LORENA CASTILLO**...*RESIDENTIAL*
39360 **LYNNE HANSON**...*RESIDENTIAL*
39360 **MARIA MACIAS**...*RESIDENTIAL*
39360 **MARTHA CASTELO**...*RESIDENTIAL*
39360 **MIGUEL GUARDADO**...*RESIDENTIAL*
39360 **RANCHO PALMS MOBILE HOME PARK**...*MOBILE HOMES-PARKS & COMMUNITIES*
39360 **RICHARD EARHART**...*RESIDENTIAL*
39360 **RYAN DAVIS**...*RESIDENTIAL*
39360 **S VELAZQUEZ**...*RESIDENTIAL*
39360 **SELMA CASTILLO**...*RESIDENTIAL*
39360 **VERNON HOWELL**...*RESIDENTIAL*

2008 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38841 **B D PAULSON**...*RESIDENTIAL*
39360 **ALEJANDRO CARDENAS**...*RESIDENTIAL*
39360 **ALVARO CENTENO**...*RESIDENTIAL*
39360 **BALTAZAR PEREZ**...*RESIDENTIAL*
39360 **BENJAMIN GONZALEZ**...*RESIDENTIAL*
39360 **CESAR PENA**...*RESIDENTIAL*
39360 **DAVID F DOMBROWSKI**...*RESIDENTIAL*
39360 **DIONICIO MARQUEZ**...*RESIDENTIAL*
39360 **ENRIQUE VILLALOBOS**...*RESIDENTIAL*
39360 **FERNANDO CASTELLANOS**...*RESIDENTIAL*
39360 **FREDERICK P DAVIS**...*RESIDENTIAL*
39360 **GUILLERMO SEGOVIA**...*RESIDENTIAL*
39360 **HERMAN & IVA FEUFERER**...*RESIDENTIAL*
39360 **ILDEFONSO CASTELLANOS**...*RESIDENTIAL*
39360 **ISABEL SANCHEZ**...*RESIDENTIAL*
39360 **J BARRERA**...*RESIDENTIAL*
39360 **JAIME GONZALEZ**...*RESIDENTIAL*
39360 **JEFFREY A HICKMAN**...*RESIDENTIAL*
39360 **JESUS GONZALEZ**...*RESIDENTIAL*
39360 **JESUS HERNANDEZ**...*RESIDENTIAL*
39360 **JIM & LYNNE HANSON**...*RESIDENTIAL*
39360 **K FISCUS**...*RESIDENTIAL*
39360 **KAREN MACIAS**...*RESIDENTIAL*
39360 **LARRY HALL**...*RESIDENTIAL*
39360 **LOURDES TORRES**...*RESIDENTIAL*
39360 **MARY A RIGMAIDEN**...*RESIDENTIAL*
39360 **MICHAEL RYAN**...*RESIDENTIAL*
39360 **OSCAR A CERVANTES**...*RESIDENTIAL*
39360 **P YOUNG**...*RESIDENTIAL*
39360 **PHILLIP LONG**...*RESIDENTIAL*
39360 **RANCHO PALMS MOBILE HOME PARK**...*MOBILE HOMES-PARKS & COMMUNITIES*
39360 **RANCHO PALMS MOBILE HOME PARK**...*MOBILE HM SITE OPER*
39360 **RAUL GARCIA**...*RESIDENTIAL*
39360 **ROBERT R JUDY**...*RESIDENTIAL*
39360 **ROBERT R REGEZ**...*RESIDENTIAL*
39360 **ROD HAWKINS**...*RESIDENTIAL*
39360 **RUBEN & LETICIA AVILES**...*RESIDENTIAL*
39360 **S LUSK**...*RESIDENTIAL*
39360 **S M STEPHAN**...*RESIDENTIAL*
39360 **TERRY & KATHY SMITH**...*RESIDENTIAL*
39360 **THOMAS SWANN**...*RESIDENTIAL*
39360 **WILLIAM SHARP**...*RESIDENTIAL*
39556 **THENA NELSON**...*RESIDENTIAL*
39556 **VERNON BAUGHMAN**...*RESIDENTIAL*

2003 PETERSON RD

SOURCE: DIGITAL BUSINESS DIRECTORY

38841 **B D PAULSON**...*RESIDENTIAL*
39360 **ALEJANDRO CARDENAS**...*RESIDENTIAL*
39360 **ANGEL MARTINEZ**...*RESIDENTIAL*
39360 **BEN CROCKER**...*RESIDENTIAL*
39360 **EDGAR MORALES**...*RESIDENTIAL*
39360 **ELMER & JANE MERCER**...*RESIDENTIAL*
39360 **FRANK B SCHWARTZ**...*RESIDENTIAL*
39360 **FREDERICK P DAVIS**...*RESIDENTIAL*
39360 **GORDON R LANGTON**...*RESIDENTIAL*
39360 **GUILLERMO SEGOVIA**...*RESIDENTIAL*
39360 **J STADLER**...*RESIDENTIAL*
39360 **JAS MC DONALD**...*RESIDENTIAL*
39360 **JIM & LYNNE HANSON**...*RESIDENTIAL*
39360 **JOHN A & SALLY HENDON**...*RESIDENTIAL*
39360 **JOHN A HENDON**...*RESIDENTIAL*
39360 **KAREN MACIAS**...*RESIDENTIAL*
39360 **KENNETH & JOYCE EARNHART**...*RESIDENTIAL*
39360 **LARRY HALL**...*RESIDENTIAL*
39360 **M E NUTTEN**...*RESIDENTIAL*
39360 **MANUEL FERNANDEZ**...*RESIDENTIAL*
39360 **MARIA RAMOS**...*RESIDENTIAL*
39360 **MERLE KOCH**...*RESIDENTIAL*
39360 **MICHAEL J RYAN**...*RESIDENTIAL*
39360 **N M SHAW**...*RESIDENTIAL*
39360 **NANCY C WILLIAMS**...*RESIDENTIAL*
39360 **OSCAR A CERVANTES**...*RESIDENTIAL*
39360 **OSCAR ALONSO CERVANTES**...*RESIDENTIAL*
39360 **OSWALDO B MORALES**...*RESIDENTIAL*
39360 **P WILSON**...*RESIDENTIAL*
39360 **P YOUNG**...*RESIDENTIAL*
39360 **PHILLIP LONG**...*RESIDENTIAL*
39360 **RANCHO PALMS MOBILE HOME PARK**
39360 **RICHARD M WHITE**...*RESIDENTIAL*
39360 **ROBERT JUDY**...*RESIDENTIAL*
39360 **ROBERT REGEZ**...*RESIDENTIAL*
39360 **ROBT R JUDY**...*RESIDENTIAL*
39360 **ROBT R REGEZ**...*RESIDENTIAL*
39360 **ROD HAWKINS**...*RESIDENTIAL*
39360 **ROSALIE MYERS**...*RESIDENTIAL*
39360 **STEVE STEPHENS**...*RESIDENTIAL*
39360 **THOMAS C HARWICK**...*RESIDENTIAL*
39360 **THOMAS HARWICK**...*RESIDENTIAL*
39360 **V SCHERER**...*RESIDENTIAL*
39360 **WILLIAM SHARP**...*RESIDENTIAL*
39360 **WM SHARP**...*RESIDENTIAL*
39556 **ALICE HARTZLER**...*RESIDENTIAL*
39556 **ARCH BANNISTER**...*RESIDENTIAL*
39556 **LENORE Y BLUE**...*RESIDENTIAL*
39556 **ROWLAND G BYERLY**...*RESIDENTIAL*
39556 **VERNON BAUGHMAN**...*RESIDENTIAL*
39556 **WILLIAM LEE**...*RESIDENTIAL*

2000 PETERSON RD

SOURCE: HAINES

PETERSON RD 92270
RANCHO MIRAGE

WEALTH CODE 2.0

38841	●PAULSON B Dorian	760-328-3528	
X	39TH AV		
X	CARLA LN		
38990	●BROWN Ronald	OO	+0
X	DESERT COVE AV		
39060	XXXX	OO	
39360.....	RANCHO PLMS MBL PK		
	AVILES Leticia	760-321-5406	8
	AVILES Ruben	760-321-5406	8
	BALINT Christopher	760-321-9964	+0
	BARRERA J	760-328-5314	9
	CARDENAS Alejandro	760-770-7893	3
	CASTELLANOS Idefonso	760-324-6847	9
	CENTENO Alvaro	760-202-1347	+0
	CERVANTES Oscar A	760-328-2725	6
	DAVIS Frederick P	760-324-7172	2
	ESCAMILLA Juan L	760-770-3525	+0
	FEUFERER Herman	760-321-5846	8
	FEUFERER Iva	760-321-5846	8
	FILORIO Cecilia	760-321-2794	+0
	GONZALEZ Benjamin	760-321-7145	9
	GONZALEZ Jaime	760-202-4869	+0
	GONZALEZ Jesus	760-770-4290	+0
	HALL Larry	760-328-1431	5
	HANSON Jim	760-321-1037	7
	HANSON Lynn	760-321-1037	7
	HAWKINS Rod	760-321-2199	2
	HERNANDEZ Jesus	760-321-6527	8
	JOUDRIE Louise	760-321-2543	9
	JUDY Robert R	760-328-0129	
	LONG Phillip	760-324-6806	3
	LUSK S	760-321-8269	8
	MACIAS Karen	760-321-0324	4
	MORENO Lilian V	760-202-4761	+0
	NOBLE Barbara	760-770-1267	9
	★RANCHO PALMS MBL HM	760-328-4323	
	REGEZ Robert R	760-328-0941	6
	RYAN Michael John	760-770-7084	7
	SANCHEZ Isabel	760-321-5220	+0
	SCHERER V	760-328-0525	2
	SEGOVIA Guillermo	760-770-5382	7
	SHARP William	760-328-2719	
	SMITH Kathy	760-770-2931	8
	SMITH Terry	760-770-2931	8
	STEPHENS Steve	760-328-3376	
	SWANN Thomas	760-324-5670	+0
	YOUNG P	760-324-0434	
39360.....			
X	ANN LN		
39556	BAUGHMAN Vernon	760-324-7770	
	★BLUE HEAVEN MOBILE HOME PK OFC	760-321-5909	8

★ 2 BUS 43 RES 10 NEW

1996 PETERSON RD-A

SOURCE: HAINES

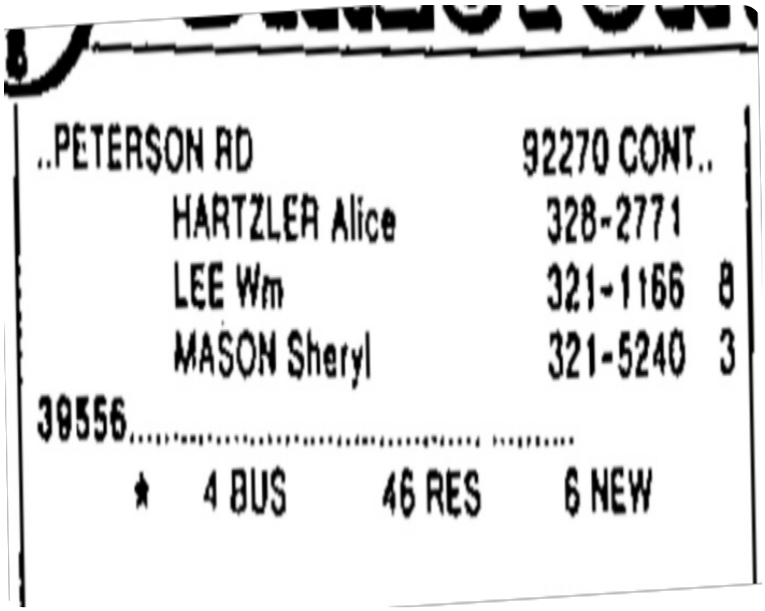
PETERSON RD 92270
RANCHO MIRAGE

WEALTH CODE 3.1

38480	XXXX	00	
38841	PAULSON B Dorian	328-3528	
38990	XXXX	00	
39060	XXXX	00	
39360.....	RANCHO PLMS MBL PK		
	CARDENAS Alejandro	770-7893	3
	CERVANTES Oscar A	328-2725	+6
	CROCKER Ben	321-6641	4
	DAVIS Frederick P	324-7172	2
	EARNHART Joyce	324-7681	
	EARNHART Kenneth	324-7681	
	★ELEGANTLY YOURS	321-0596	2
	HALL Larry	328-1431	5
	HARWICK Thos C	324-1300	
	HAWKINS Rod	321-2199	2
8	HENDON John A	328-7093	
	HENDON Sally	328-7093	
	JUDY Robt R	328-0129	
	JUSTUS Dorothy	324-6214	+6
	KOCH Merle	321-5779	9
	LANGTON Gordon R	328-7759	8
	LONG Phillip	324-6806	3
	MACIAS Karen	321-0324	4
	MARTINEZ Angel	328-3365	4
	MCDONALD Jas	324-6806	3
82	MERCER Elmer	328-9543	
	MERCER Jane	328-9543	
	MOORE Terence A	321-5201	4
	MORALES Edgar	770-9111	+6
	MYERS Rosalie	321-7371	7
	NUTTEN M E	328-4695	
	★RANCHO PALMS MBL HM	328-4323	
	REGEZ Robt R	328-0941	+6
	SCHERER V	328-0525	2
	SCHWARTZ Frank B	328-4161	
90	SHARP Wm	328-2719	
92	SHAW N M	328-9139	
	STADLER Jeanette	324-3923	
08	STEPHENS Steve	328-3376	
	WHITE Richard M	328-8101	
	WILLIAMS Nancy C	328-2180	7
	WILSON P	328-2147	
	YOUNG P	324-0434	8
39360.....			
39556.....	BLUE HAVEN TRLR PK		
	★BANNISTER ARCH	324-4446	+6
	BAUGHMAN Vernon	324-7770	
	★BLUE HEAVEN MBL HM	328-1567	
	BLUE Lenore Y	328-5574	3
	BYERLY Rowland G	324-2442	+6

1996 PETERSON RD-B

SOURCE: HAINES



..PETERSON RD 92270 CONT..

HARTZLER Alice 328-2771

LEE Wm 321-1166 8

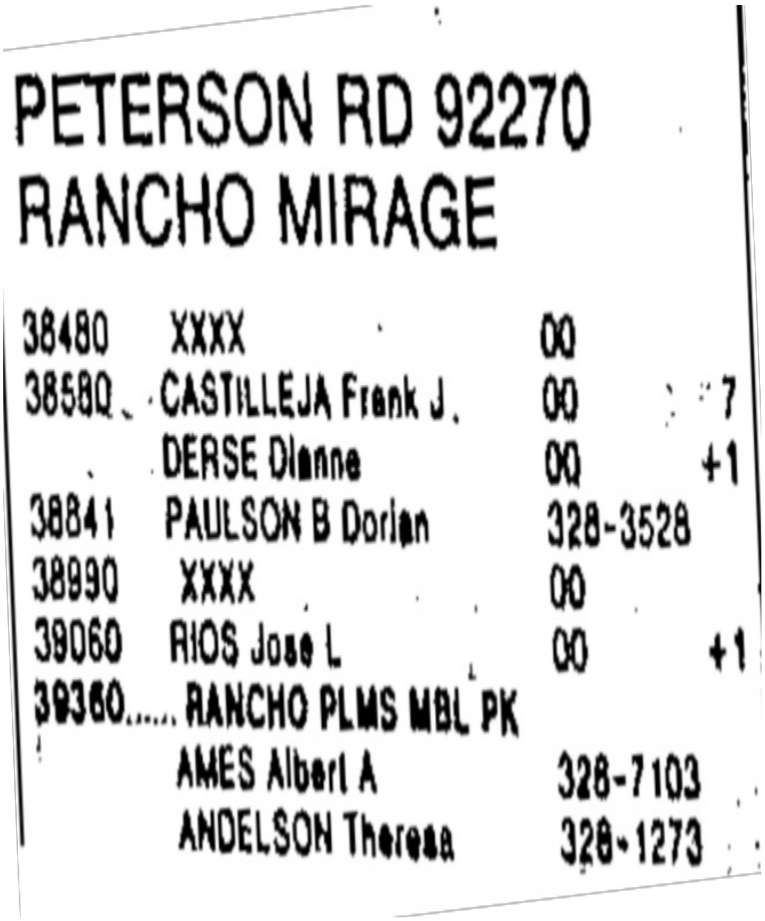
MASON Sheryl 321-5240 3

39556.....

* 4 BUS 46 RES 6 NEW

1991 PETERSON RD-A

SOURCE: HAINES



PETERSON RD 92270

RANCHO MIRAGE

38480 XXXX 00

38580 CASTILLEJA Frank J. 00 7

DERSE Dianne 00 +1

38841 PAULSON B Dorian 328-3528

38890 XXXX 00

39060 RIOS Jose L 00 +1

39360..... RANCHO PLMS MBL PK

AMES Albert A 328-7103

ANDELSON Theresa 328-1273

1991 PETERSON RD-B

SOURCE: HAINES

92270 CONT

PETERSON RD

	BOWLES Dorothy M	328-3425	
	BOWLES Noble C	328-3425	
S	BOYER Velta I	00	4
	CALLA Benny	321-1487	
	CALLA Lee	321-1487	
	CARTER Russell A Jr	324-7922	5
	CHAPMAN Lynn	324-1682	
84	CHEHOVIN Christine	00	
	CHRISTY Nancy L	00	4
	COLLENTINE Lawrence	00	
	CUNNINGHAM Clifford	324-3596	
	DAVIS Frederick P	324-7172	2
	DELFRANCIA Elyse	00	
22	DIBENEDETTO Sam	328-8189	
	DIEHL Jimmy M	00	
1	DOYLE Stanley	328-5293	
	DUARTE Enrique D	00	0
	DUNN Nancy J	324-0394	7
	EDMONDS P	324-6896	6
	EKERT Mark	324-1780	+1
	ELLIS Joy	321-0420	0
	FARRIS Virginia R	00	
	FAUBEL Ned Howe	328-9893	
	FREDERICK Gerald E	00	4
	HARTMAN Jerry	321-4807	0
	HARWICK Thos C	324-1300	
8	HENDON John A	328-7093	
	HENDON Sally	328-7093	
	HERNANDEZ Ramiro	00	+1
66	JAMES E A	328-2919	
	JAYSON I	321-9947	+1
	JOHNSON Pat	321-0401	+1
	JUDY Bob	328-0129	
	JUDY Cora	328-0129	
	KNUDSON Jack R	00	0
	KOCH Merle	321-5779	9
	LANCASTER Mary	00	+1
	LANGTON Gordon R	328-7759	8
	MARRERO V	324-9429	+1
	MARSH Franklin	00	
	MASSMAN Richard J	00	
	MCDADE Robert M	00	0
82	MERCER Elmer	328-9543	
	MERCER Jane	328-9543	
	MOREY J	324-8806	4
	MORSS Flood	328-2701	6
	MYERS Rosalie	321-7371	7
	NUTTEN M E	328-4695	
	PRESTIGIACOMO Frank	00	+1
	★RANCHO PALMS MBL HM	328-4323	
	RENARD K	328-1894	4
	SCHWARTZ Frank B	328-4161	6
90	SHARP Wm	328-2719	
92	SHAW N M	328-9139	
	SOBCZYK Steve	324-6450	0
	STADLER Jeanette	324-3923	
08	STEPHENS Steve	328-3376	
	STEVENSON Elsie	324-2614	
	STEVENSON S N	324-2614	
	TOBIASSEN Ruth	324-9821	3
	WHITE Richard M	328-8101	
	WHITE Victor J	324-4414	9
	WILLIAMS Nancy C	328-2180	7
	WILSON P	328-2147	3
	WINWARD K J	00	+1
	YOUNG Lilly	324-4012	+1
	YOUNG Mayo	324-4012	+1
	YOUNG P	324-0434	8
	ZAHARIADES Jon G	00	+1
39360			
39556	BLUE HAVEN TRLR PK		
	ADAMS Darlene	328-3168	+1
	ALGER Oran	321-1230	+1
	BAUGHMAN Vernon	324-7770	3
	BEHNCKE Donald J	00	+1
	★BLUE HEAVN TRLR PK	328-1567	
	BLUE Lenore Y	328-5574	9
	CARILLO Phillip	324-9995	4
	HARTZLER Alice	328-2771	5
	HAWKINS Rod	321-2199	8
	KIRKPATRICK Jerry L	328-3974	+1
	KIRKPATRICK Timothy	328-3974	+1
48	KUMMER Clarence W	328-2973	
	LAVELLE John R	00	0
	LEE Wm	321-1166	8
	MASHBURN Chas	328-4566	+1
	MASON Donald G	00	4
	MOSS Robert E	00	
	SNELL Chris W	00	0
	★STRAFFIN DEVLP CO	324-3209	+1
	TRAVERSO Marie T	00	0
	WELLINGTON Stanley	00	4
	YOW Dale	321-5879	9
39556			
39566	MASON Donald G	00	+1

★ 3 BUS 97 RES 21 NEW

PETITE CT 92504

RIVERSIDE

1986 PETERSON RD-A

SOURCE: HAINES

PETERSON RD 92270
RANCHO MIRAGE

38841	PAULSON B DORIAN	328-3528	
38990	XXXX	00	
39230	XXXX	00	
39360.....	RANCHO PLMS MBL PK		
	AMES ALBERT A	328-7103	
	ANDELSON THERESA	328-1273	
	BALBERDE SAM	328-5367	0
	BOWLES DOROTHY M	328-3426	
	BOWLES NOBLE C	328-3426	
	BRAUS ANTHONY	328-5921	0
	BURKE CHICK	328-1284	0
	CARTER RUSSELL	324-7922	5
84	CHAPMAN LYNN	324-1682	8
	CUNNINGHAM CLIFFORD	324-3596	0
	DAVIS FREDERICK P	324-7172	2
73	DAY LESLIE A	328-4318	9
22	DIBENEDETTO SAM	328-8189	
1	DOYLE STANLEY	328-5293	8
	EDMONDS P	324-6896	+6
	ELIASEN NANETTE H	328-3713	+6
	EVERIST J P	328-8668	
	FAUBEL NED HOWE	328-9893	7
	FRIEDMAN LOUIS J	328-1751	+6
	HARWICK THOS C	324-1300	9
8	HENDON JOHN A	328-7093	
	HENDON SALLY	328-7093	
66	JAMES E A	328-2919	8
11	JOST ARTHUR C	328-1295	9
	JUDY BOB	328-0129	
	JUDY CORA	328-0129	
	KOCH JOHN	328-3238	2
	LOWELL L N	328-7458	2
	MCDADE BOB	321-2603	+6
	MEEKS GLENN	324-3191	0
82	MERCER ELMER	328-9543	8
83	MILLS ERNA	328-4978	

1986 PETERSON RD-B

SOURCE: HAINES

..PETERSON RD 92270 CONT..

	MILLS W S	328-4978	
	MOREY J	324-8806	4
	MORSS FLOOD	328-2701	+6
	NEVE RAYMOND H	328-3495	2
	NUTTEN M E MRS	328-4695	
	PARADIS VICTOR J	324-1249	0
	PERRY ELLYN	328-9338	
	PERRY LEONARD	328-9338	
	PETERSON LEO	328-2812	+6
	PETTIT ROBT E	328-7105	
	POUCHER IRENE G	328-3262	
	RANCHO PALMS MBL HM	328-4323	9
	RENARD K	328-1894	4
36	ROBERTS B J	328-0528	9
	RYE ERIC	321-0185	+6
	SCHWARTZ FRANK B	328-4161	+6
90	SHARP WM	328-2719	
92	SHAW N M	328-9139	8
	STADLER JEANETTE	324-3923	0
08	STEPHENS STEVE	328-3376	
	STEVENSON S N	324-2614	0
	TOBIASSEN RUTH	324-9821	3
	TUCKER MERLE	324-7352	2
02	VLASEK MARY MOLNAR	328-3457	
	WHITE RICHARD M	328-8101	
	WILSON P	328-2147	3
	WOOD DEAN K	328-4171	5
	WOOD LARRY	324-7024	3

39360.....

39556..... BLUE HAVEN TRLR PK

	ARMSTRONG BRENDA	321-7371	+6
	BAUGHMAN VERNON	324-7770	3
	BLUE HEAVN TRLR PK	328-1567	
	CARILLO PHILLIP	324-9995	4
	HARTZLER ALICE	328-2771	5
	HAWKINS ROD	324-0849	+6
	HOLICK MARTHA W	324-5908	2
48	KUMMER CLARENCE W	328-2973	
	MORELAND TERRY	321-6302	+6
	PALM YVONNE	328-0507	+6
	SILVA DENNIS	321-2137	+6
	SISNEROS JOSE	328-4716	+6
	WALKER ALMA	324-0214	3

39556.....

★ 2 BUS 74 RES 14 NEW

1984 PETERSON RD

SOURCE: HAINES

PETERSON RD 92270
RANCHO MIRAGE

38480	XXXX	00	
38580	XXXX	00	
38775	TAFF DOW	328-7991	
38841	PAULSON B DORIAN	328-3528	5
38990	XXXX	00	
39230	XXXX	00	
39360.....	RANCHO PLMS MBL PK		
	AMES ALBERT A	328-7103	
	ANDELSON THERESA	328-1273	
	BALBERDE SAM	328-5387	0
	BOWLES NOBLE C	328-3425	
	BRAUS ANTHONY	328-5921	0
	BURESH CHAS E	324-7792	2
	BURKE CHICK	328-1284	0
	CERRA ROBT	324-5770	2
84	CHAPMAN LYNN	324-1682	8
	COX CHAS C	324-6653	2
	CUNNINGHAM CLIFFORD	324-3596	0
	DAVIS FREDERICK P	324-7172	2
73	DAY LESLIE A	328-4318	9
29	DENTON CAROL	324-1258	8
22	DIBENEDETTO SAM	328-8189	5
1	DOYLE STANLEY	328-5293	8
	EVERIST HUBERT	328-8668	5
	FAUBEL NED HOWE	328-9893	7
	HAAN RAY R	328-8186	0
	HARWICK THOS C	324-1300	9
8	HENDON JOHN A	328-7093	
11	HENDRICKSON WM H	328-3713	
66	JAMES E A	328-2919	8
11	JOST ARTHUR C	328-1295	9
	JUDY BOB	328-0129	1
	JUDY CORA	328-0129	1
	KNIGHT HAROLD	324-6011	+4
	KOCH JOHN	328-3238	2
	LOWELL L N	328-7458	2
	MEEKS GLENN	324-3191	0
82	MERCER ELMER	328-9543	8
	MILLER D L	328-5361	
83	MILLS ERNA	328-4978	8
	MILLS W S	328-4978	8
	MOREY J	324-8806	+4
	MORSS FLOOD	328-2701	3
	NEVE RAYMOND H	328-3495	2
	NUTTEN M E MRS	328-4695	
	PARADIS VICTOR J	324-1249	0
	PERRY LEONARD	328-9338	6
	PETTIT ROBT E	328-7105	5
	POUCHER IRENE G	328-3262	
	RANCHO PALMS MBL HM	328-4323	9
	RENARD K	328-1894	+4
	ROBERT B	324-5891	1
36	ROBERTS B J	328-0528	9
62	SELFE J W	328-4639	
	SHALLIES HERBERT	328-7464	3
90	SHARP WM	328-2719	5
92	SHAW N M	328-9139	8
5	SIMMONS GALE	328-3836	9
	STADLER JEANETTE	324-3923	0
08	STEPHENS STEVE	328-3376	
	STEVENSON S N	324-2614	0
	TOBIASSEN RUTH	324-9821	3
	TUCKER MERLE	324-7352	2
02	VLASEK MARY MOLNAR	328-3457	5
	WHITE RICHARD M	328-8101	
	WHITT ROY A	328-5764	8
	WILSON P	328-2147	3
	WILSON WADE	324-4227	0
	WOOD LARRY	324-7024	3

39360.....

39556..... BLUE HAVEN TRLR PK

	ARMSTRONG BRENDA	324-0840	3
	BAUGHMAN VERNON	324-7770	3
	BLUE HEAVN TRLR PK	328-1567	
	CARILLO PHILLIP	324-9995	+4
	GRAY WALTER	340-5766	3
	HERNANDEZ BLAS M	324-4358	3
	HOLICK MARTHA W	324-5908	2
	HOWELL TERRY	324-2492	+4
	KELLY RANDALL D	324-7544	+4
	KNUPP CHAS P	324-5094	3
48	KUMMER CLARENCE W	328-2973	5
	MALLAH CARLOS	328-9826	7
	MARSH GALEN	324-2096	+4
	MCBRIDE JAS	324-7086	2
	MCQUEARY RICHARD	321-1704	+4
	ROSILES JESUS B	324-7718	+4
	STEPHAN SHIRLEY	324-8934	3
	WALKER ALMA	324-0214	3

39556.....

★ 3 BUS 83 RES 9 NEW

1977 PETERSON RD-A

SOURCE: HAINES

PETERSON RD 92270 RANCHO MIRAGE

38480 FELIZ GEO R 328-3562 5
38580 THOMPSON LULA E MRS 328-2436
38775 TAFF DOW 328-7991 4
38841 PAULSON B DORIAN 328-3528 5
38990 SAPPINGTON GARY D 328-7133 6
39230 FORBES R T 328-2449+7
39360 ...TRAVLODGE MBL HM PK
85 AMES ALBERT A 328-7103
ANDELSON THERESA 328-1273
7 AURRICHIO ANGELO 328-2064
80 BALBERDE SAM 328-5387 4
23 BANGS LOUBELLE 328-2701
103 BERCHTOLD H F 328-7005 4
54 BLAKELEY CHAS W 328-5126
81 BOWLES NOBLE 328-3425
25 DEGRUCCIO LOUIS M 328-3495
73 DERSCHON MARTHA L 328-6211 4
122 DIBENEDETTO SAM 328-8189 5
105 EVERIST HUBERT 328-8668 5
33 FARRIS V H 328-7377 6
FAUBEL NED HOWE 328-9893+7
55 GOLDBERG ROBT L 328-7284
GREGER KEN 328-0468+7
7 HARDMAN ROBT V 328-6944 6
8 HENDON JOHN A 328-7093 4
11 HENDRICKSON WM H 328-3713
HUNEFELT E H 328-4243 6
HYDE JACQUELINE 328-0784+7
6 JONKER WM 328-1482
KRACK M M 328-2708 4
91 KRUM CHARLES 328-5102 5
14 LANGDON A H 328-2065 5
119 LAPLANTE VICTOR 328-2216 5
41 LARABEE T M 328-5604 5
94 LOWELL L M 328-3956 6
66 MCCORMICK CHAS E 328-1576 5
66 MCCORMICK HARRIS E 328-5102 5
30 MILLER D L 328-5361 4
5 MILLER OSCAR 328-5877
12 NEUDORFER CHAS 328-6255
50 NEVIN JOS 328-1344 4
29 NOYES ROBT E 328-1982 5
2 NUTTEN M E MRS 328-4695
PERRY LEONARD W 328-9338 6
93 PETTIT ROBT E 328-7105 5
121 PFLUEGER GEORGE F 328-5602 5
PHOENIX BERNICE 328-6468
86 POUCHER FRED W 328-3262
72 PRICE KENNETH 328-5041 4
125 RAITE LOUIS 328-3800 5
51 RENARD K 328-1894 5
24 ROGERS CARRIE K 328-1927

1977 PETERSON RD-B

SOURCE: HAINES

..PETERSON RD 92270 CONT..
83 ROPER LEE 328-9270 6
62 SELFE J W 328-4639 4
83 SESSIONS CARLTON 328-4323 5
90 SHARP WM 328-2719 5
SIMON HOWARD L 328-1869+7
SKINNER C R 328-2949+7
108 STEPHENS STEVE 328-3376
49 STOKES F MARION 328-2282
31 STUART MARY LOU 328-3686
THURSTON ANN 328-6211 6
TOUSSAINT DENNIS H 328-9872+7
*TRAVELODG MBL HM PK 328-4323 6
40 TRIGGS MAYNARD 328-5895
VANDERHOOF E G 328-2248+7
102 VLASEK MARY MOLNAR 328-3457 5
WERNER DALE 328-9564+7
WHITE RICHARD M 328-8101 4
WRIGHT E L 328-1204 5
39360.....
39556 ...BLUE HAVEN TRLR PK
ALLEN ALICE 328-5129
ARCHER THOS R 328-6147+7
AVERETT TERESA 328-0481+7
*BLUE HEAVEN TRLR PK 328-1567 4
BROYLES DENISE 328-0528+7
CHRISTIANSEN B M 328-4921+7
241 EICHELBERGER R 328-4751 5
5 ELLIOTT MARY R 328-5453 6
4 FORD DONALD B 328-4213 4
562 HADDIX DEAN O 328-3983
2A HARBISON JUDY 328-7042 6
2A HARBISON ROBT J 328-1567 5
25 HARDISTY ROBT L 328-7890 4
230 HARTZLER ALICE 328-2771
HENDERSON ROBT 328-0256+7
KLEIN PAUL A 328-6421+7
KNIGHT HAROLD 328-4180+7
48 KUMMER CLARENCE W 328-2973 5
MALLAH CARLOS 328-9826+7
PALFREY DOROTHY B 328-2026+7
TWITCHELL CLARENCE 328-7296 6
29 WERNER LESTER 328-7958 6
39556.....
* 2 BUS 89 RES 18 NEW

1974 PETERSON RD

SOURCE: HAINES

PETERSON RD 92234 CATHEDRAL CTY

38480 GILES ELLEN 328-7523+4
38580 THOMPSON LULA E MRS 328-2436
38775 TAFF DOW 328-7991+4
38990 BARTLETT CLARA 328-5887
39360...TRAVELDGE MBL HM PK
85 AMES ALBERT A 328-7103
48 ANDELSON JULIUS 328-1273
AURRICHIO ANGELO 328-2064
BALBERDE SAM 328-5387+4
23 BANGS LOUBELLE 328-2701
BERCHTOLD H F 328-7005+4
54 BLAKELEY CHAS W 328-5126
81 BOWLES NOBLE 328-3425
58 CAMPBELL BEA 328-2920
59 COLLINS W S 328-5722
CRISCENTI DOMINIC 328-4001+4
DAVIS ROBT WARREN 328-7634+4
25 DEGRUCCIO LOUIS M 328-3495
DERSCHON MARTHA L 328-6211+4
DOWLIN EARNEST G 328-8211+4
116 FOSTER HAROLD W 328-2785
107 GOLDBERG ROBT L 328-7284
99 GRIMES PAUL C 328-4358
HENDON JOHN A 328-7093+4
11 HENDRICKSON WM H 328-3713
HERMAN GEO 328-4461+4
6 JONKER WM 328-1482
118 KNOX MALCOLM W 328-1086
KRACK M M 328-2708+4
91 KRUM CHAS 328-5102
LACER L R 328-5421+4
LAPLANTE VICTOR 328-2216+4
MACPHAIL A H 328-5509+4
66 MCCORMICK CHAS E 328-1576
MCCORMICK HARRIS E 328-5102
MILLER D L 328-5361+4
5 MILLER OSCAR 328-5877
93 MOLLER T G DR 328-1206
12 NEUDORFER CHAS 328-6255
57 NEVILLE EDW F JR 328-3077
NEVIN JOS 328-1344+4
2 NUTTEN M E MRS 328-4695
PFFUEGER GEO F 328-5602+4
PHOENIX BERNICE 328-6468
86 POUCHER FRED W 328-3262
PRICE KENNETH 328-5041+4
78 RAU MARY L 328-2755
ROGERS CARRIE K 328-1927
SELFE J W 328-4639+4
20 SILKWOOD ROBERTA 328-2801
108 STEPHENS STEVE 328-3376
49 STOKES F MARION 328-2282
83 STOREY JOHN A 328-5947
31 STUART MARY LOU 328-3686
50 SUMMERS B K 328-3764
THOMAS LALE W 328-4323
*TRAVELDGE MBL HM PK 328-4323
40 TRIGGS MAYNARD 328-5895
WHITE RICHARD M 328-8101+4
30 WHITING VERNON 328-2833
39360.....
39369 WRIGHT E L 328-1204
39556...BLUE HEAVEN TRLR PK
ADLEY M C 328-7935+4
233 ALLEN CHAS 328-5129
*BLUE HEAVEN TRLR PK 328-1567+4
244 BORKENHAGEN GEO 328-3656
*BOWYER&HUDSON 346-6568+4
225 FORBES R T 328-2449
FORD DONALD B 328-4213+4
GABBARD Z G 328-5631+4
562 HADDIX DEAN O 328-3983
HARDISTY ROBT L 328-7890+4
230 HARTZLER ALICE 328-2771
KEYS KENNETH PAUL 328-4648+4
223 KUMMER CLARENCE W 328-2973
245 LARKIN IONE 328-5950
229 MAYFIELD SARAH E 328-7166
560 OLIVER PHILLIP 328-7166
POWER EDW ALLEN 328-5775+4
265 ROBINSON C F 328-1231
SCHOOF WM 328-7906+4
TWITCHELL CLARENCE 328-1054+4
235 WHITFIELD DOUGLAS 328-1279
39556.....
39566 ADAMS WOODROW C 328-3066
* 3 BUS 79 RES 30 NEW

1956 PETERSON RD

SOURCE: WESTERN DIRECTORY CO

STREET NOT LISTED

TOPOGRAPHIC MAPS

Project Property:	39360 Peterson Road 39360 Peterson Road Rancho Mirage CA 92270
Project No:	None
Requested By:	Weis Environmental, LLC
Order No:	24022701207
Date Completed:	February 28, 2024

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2021	7.5
2018	7.5
2015	7.5
1981	7.5
1975	7.5
1972	7.5
1958	7.5
1958	15
1944	15
1941	15

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

Page 223 of 1918 Topographic Instructions

Page 130 of 1928 Topographic Instructions

1947-2009

Topographic Map Symbols

2009-present

US Topo Map Symbols

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
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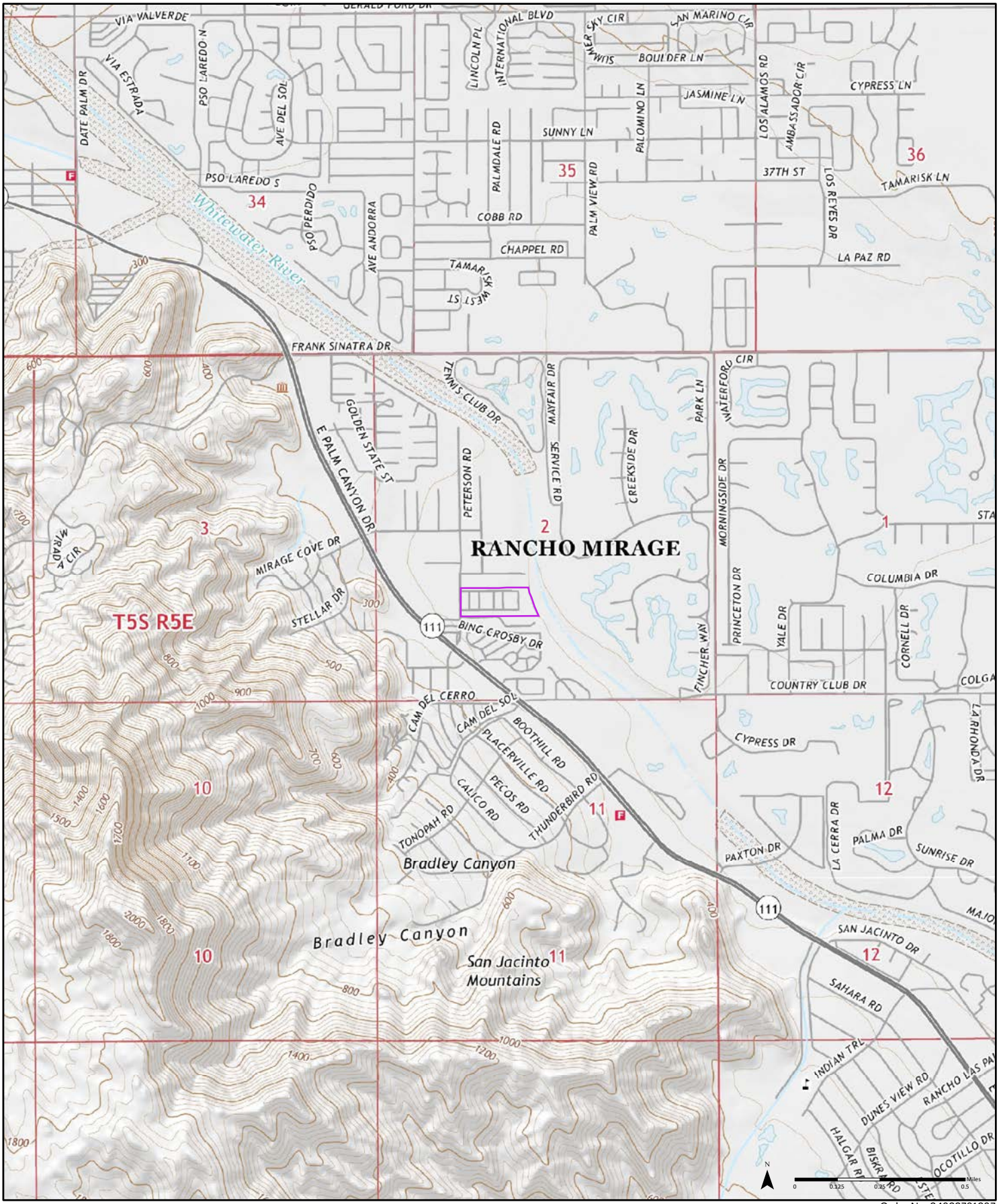
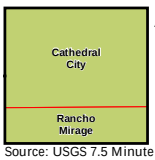


Order No. 24022701207

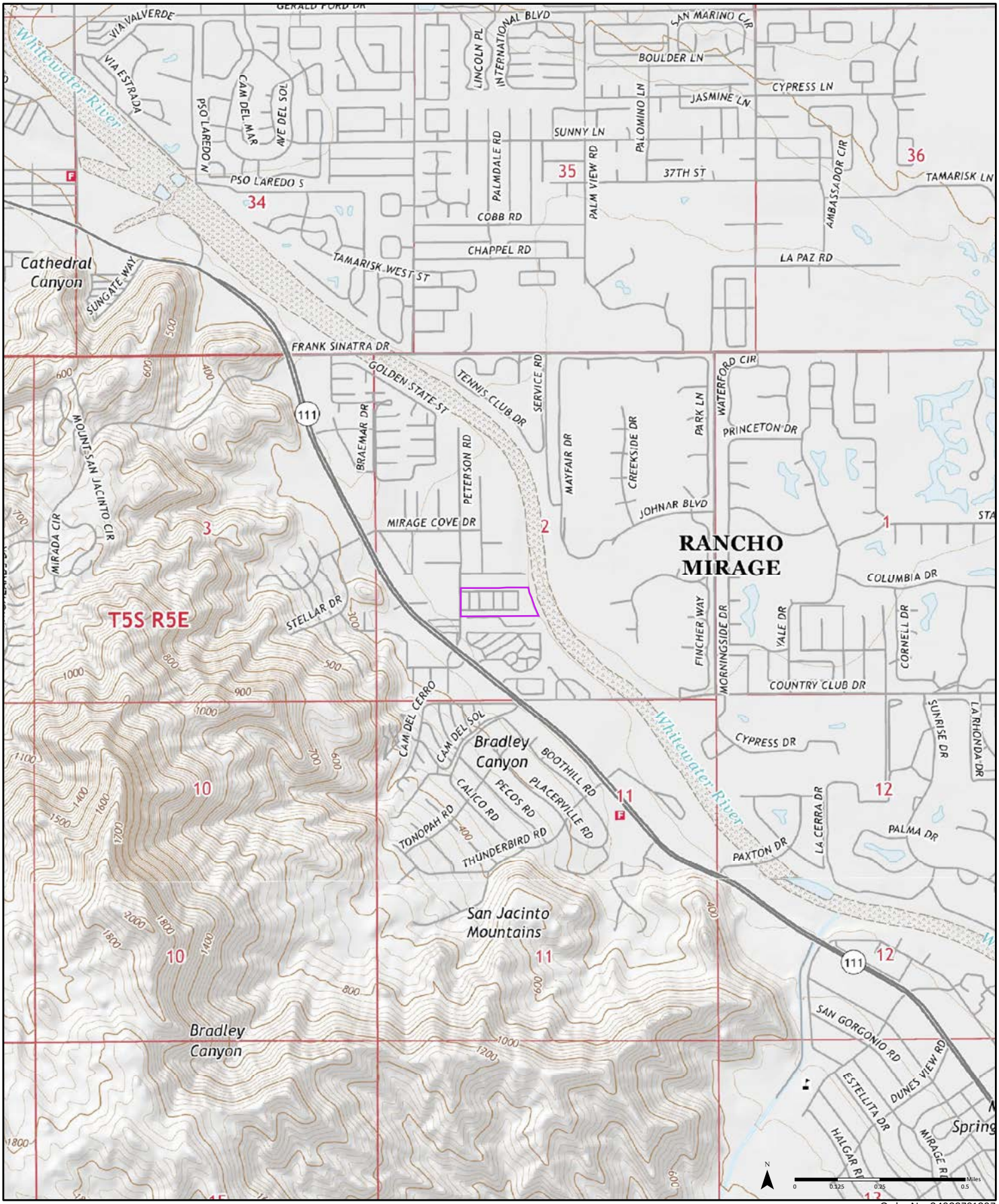
2021



Available Quadrangle(s): Cathedral City, CA
Rancho Mirage, CA

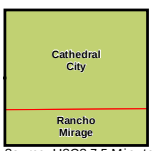
Source: USGS 7.5 Minute Topographic Map

ERIS



Order No. 24022701207

2018



Available Quadrangle(s): Cathedral City, CA
Rancho Mirage, CA

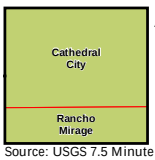
Source: USGS 7.5 Minute Topographic Map

ERIS

2015

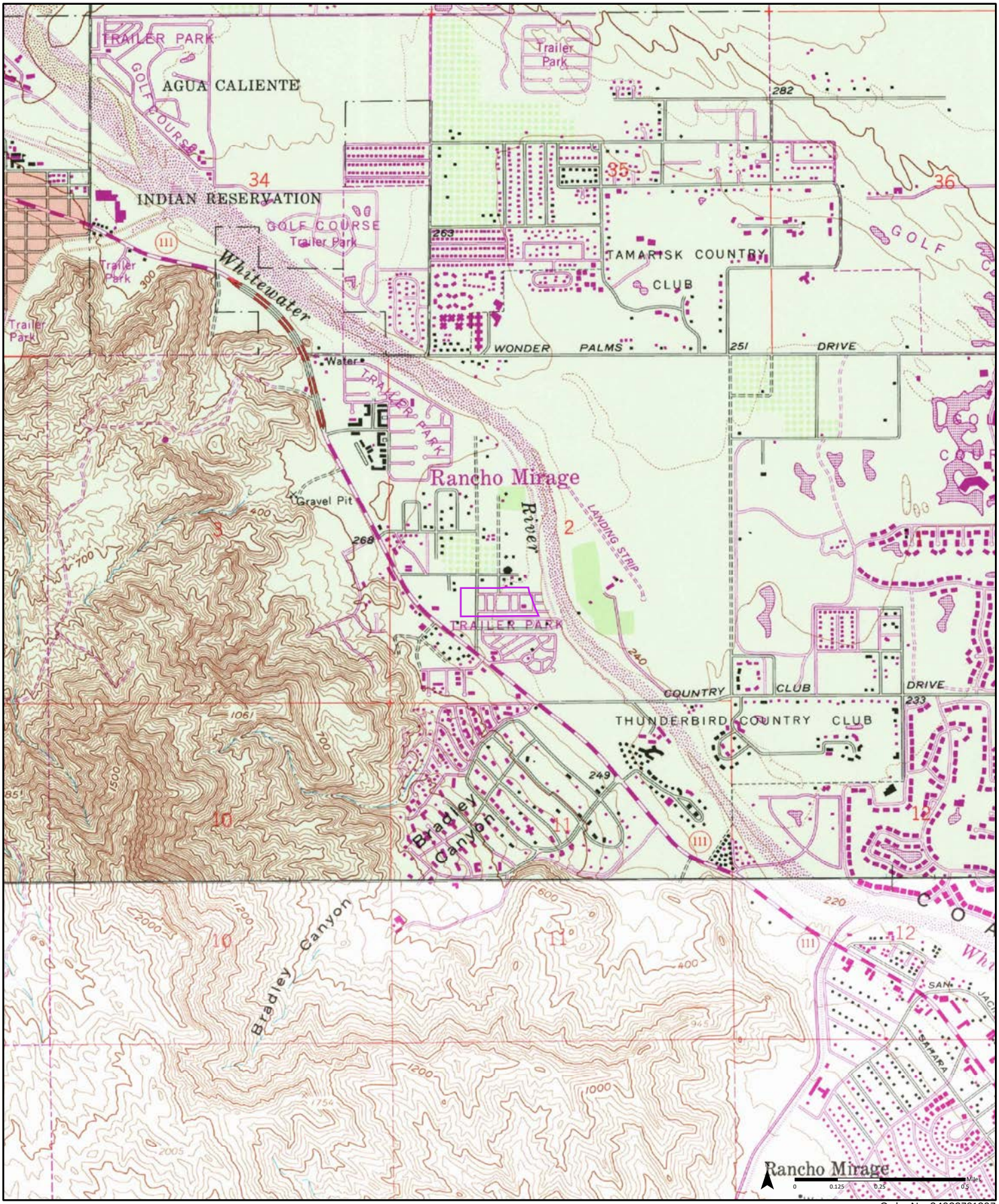
Order No. 24022701207

Available Quadrangle(s): Cathedral City, CA
Rancho Mirage, CA



Source: USGS 7.5 Minute Topographic Map

ERIS



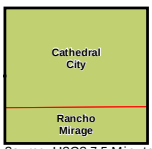
1981

(1-1981)
Aerial Photo Year: 1978
Photo Revision Year: 1981

(2-1981)
Aerial Photo Year: 1978
Photo Revision Year: 1981

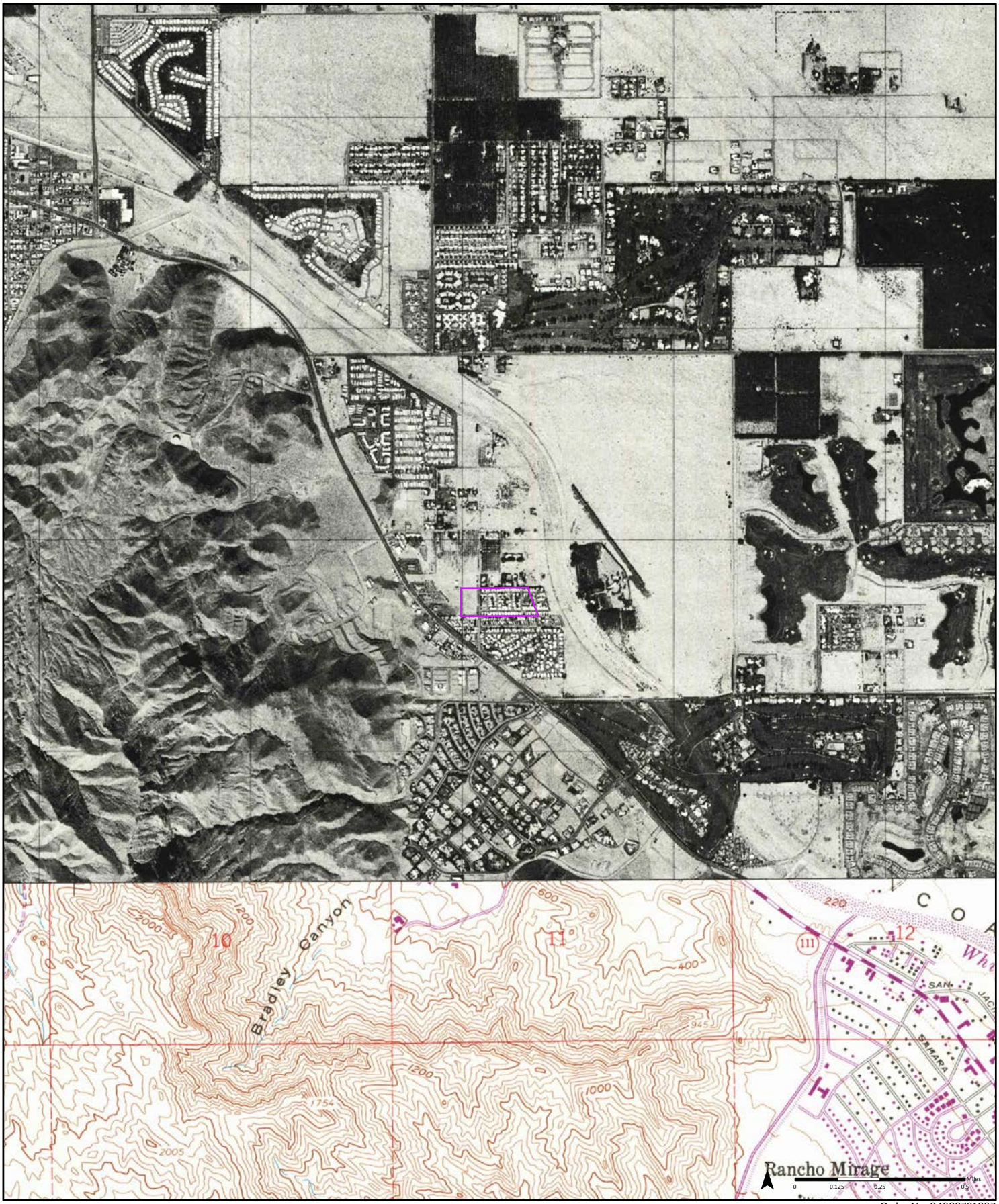
Order No. 24022701207

Available Quadrangle(s): Cathedral City, CA(2-1981)
Rancho Mirage, CA(1-1981)



Source: USGS 7.5 Minute Topographic Map

ERIS

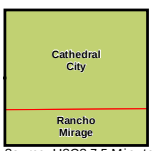


1975

(1-1972) *Aerial Photo Year: 1972*
Photo Revision Year: 1972

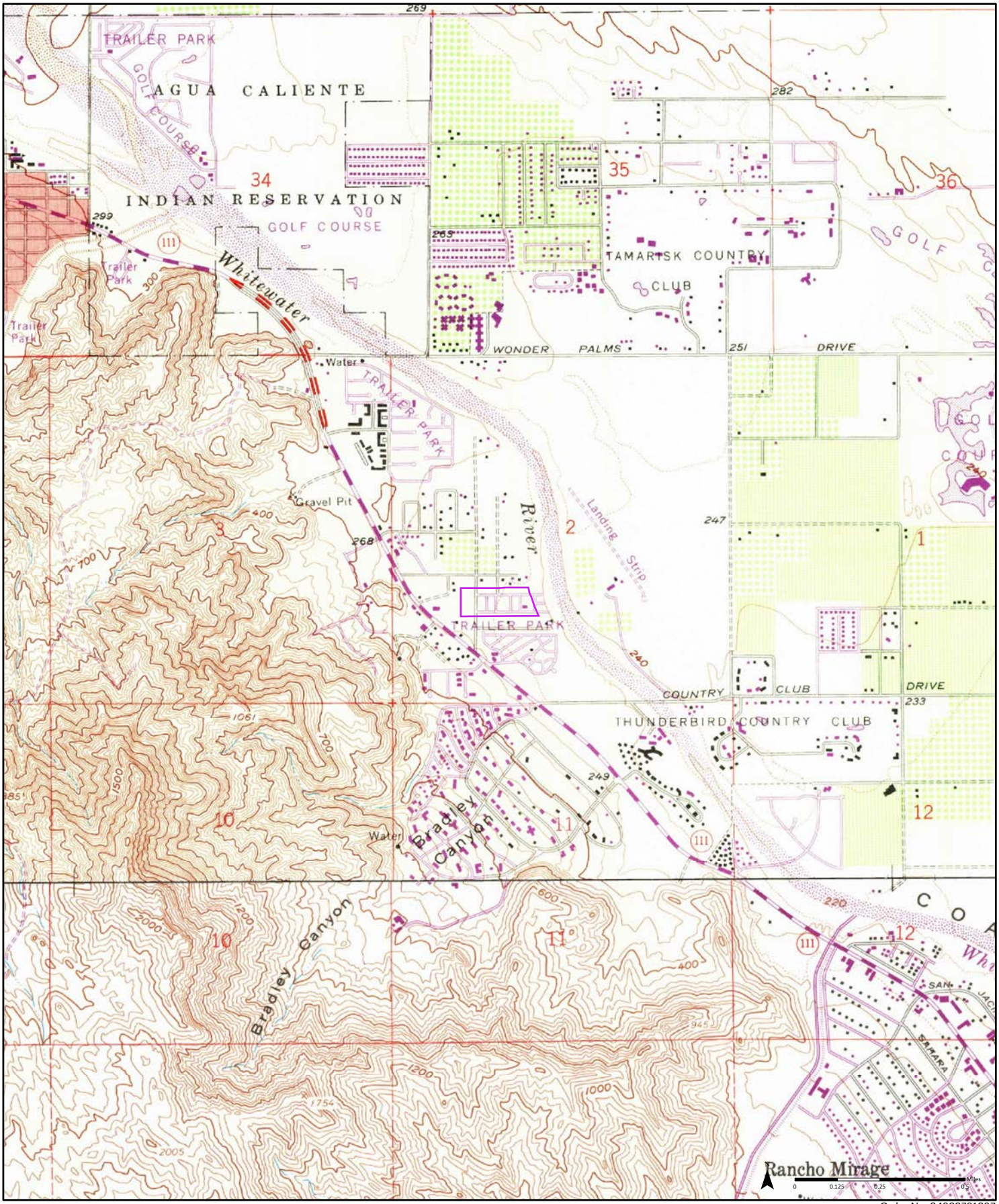
(2-1975) *Aerial Photo Year: 1975*

Order No. 24022701207



Available Quadrangle(s): Cathedral City, CA(2-1975)
Rancho Mirage, CA(1-1972)

Source: USGS 7.5 Minute Topographic Map



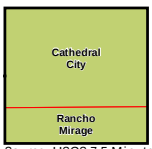
1972

(1-1972)
Aerial Photo Year: 1972
Photo Revision Year: 1972

(2-1972)
Aerial Photo Year: 1972
Photo Revision Year: 1972

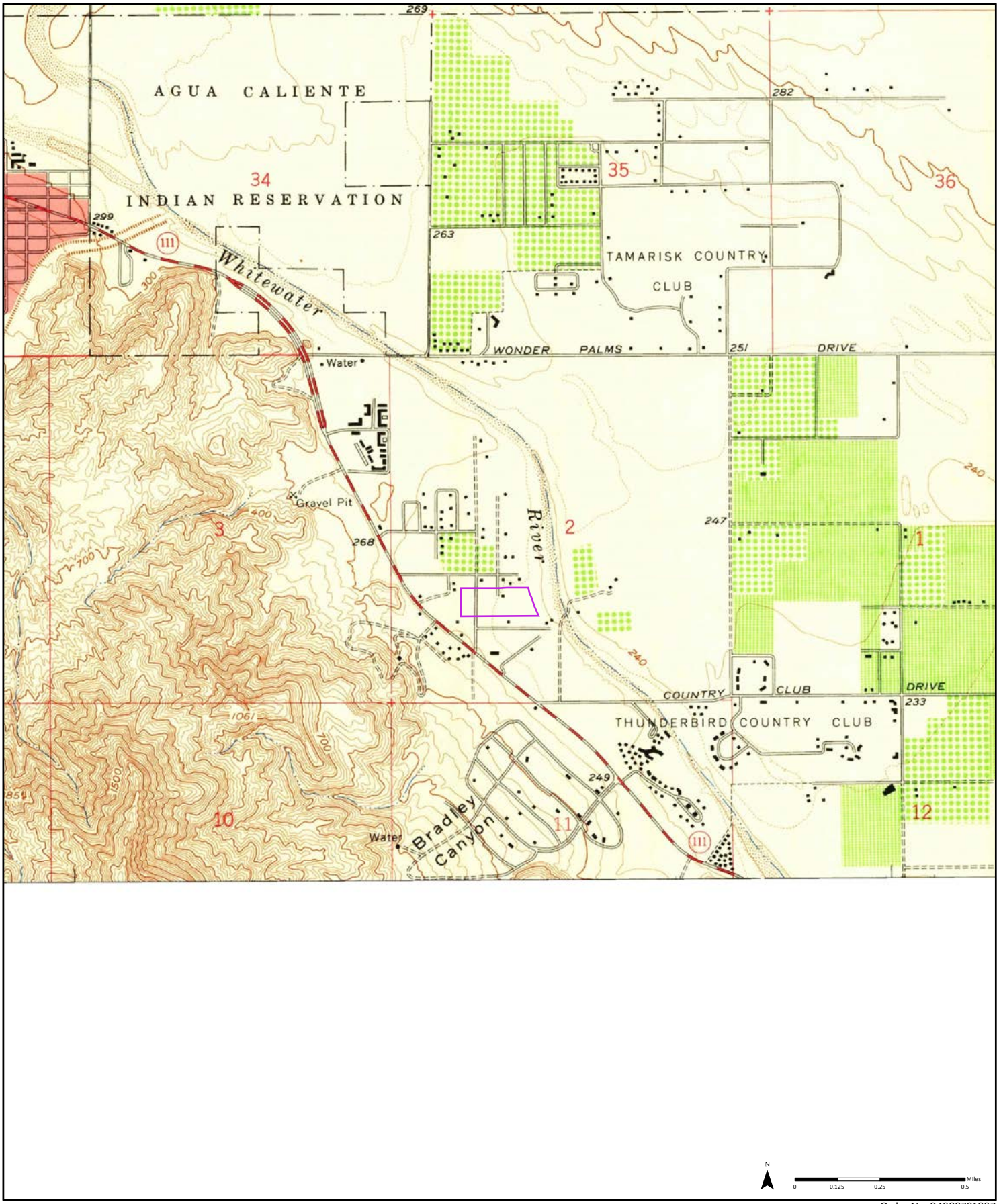
Order No. 24022701207

Available Quadrangle(s): Cathedral City, CA(2-1972)
Rancho Mirage, CA(1-1972)



Source: USGS 7.5 Minute Topographic Map

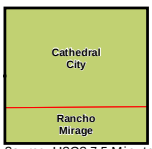
ERIS



1958 (1-1958)

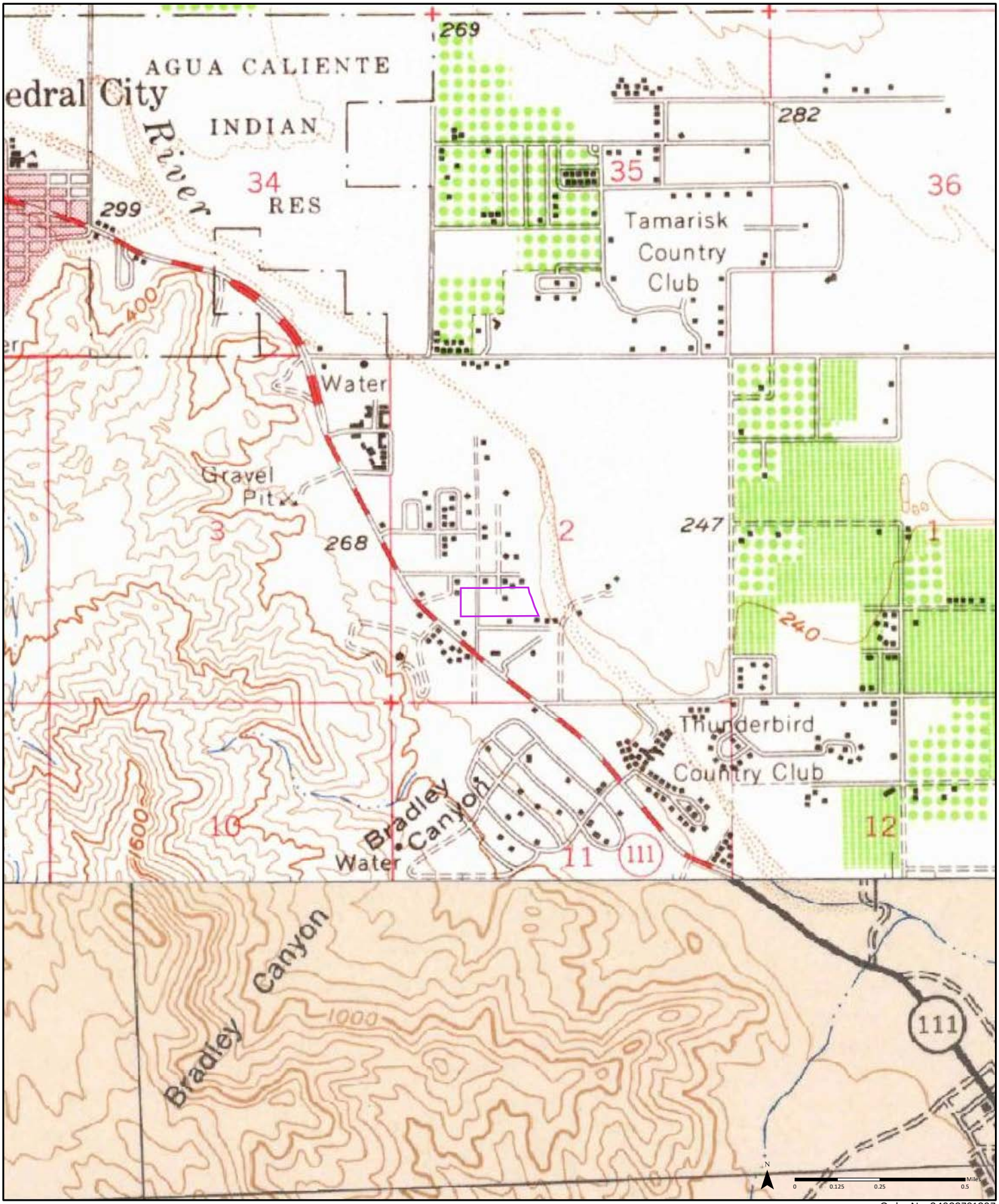
Aerial Photo Year: 1956

Order No. 24022701207



Available Quadrangle(s): Cathedral City, CA(1-1958)

Source: USGS 7.5 Minute Topographic Map



1958 *(1-1958) Aerial Photo Year: 1956* *(2-1944) Aerial Photo Year: 1941*

Order No. 24022701207

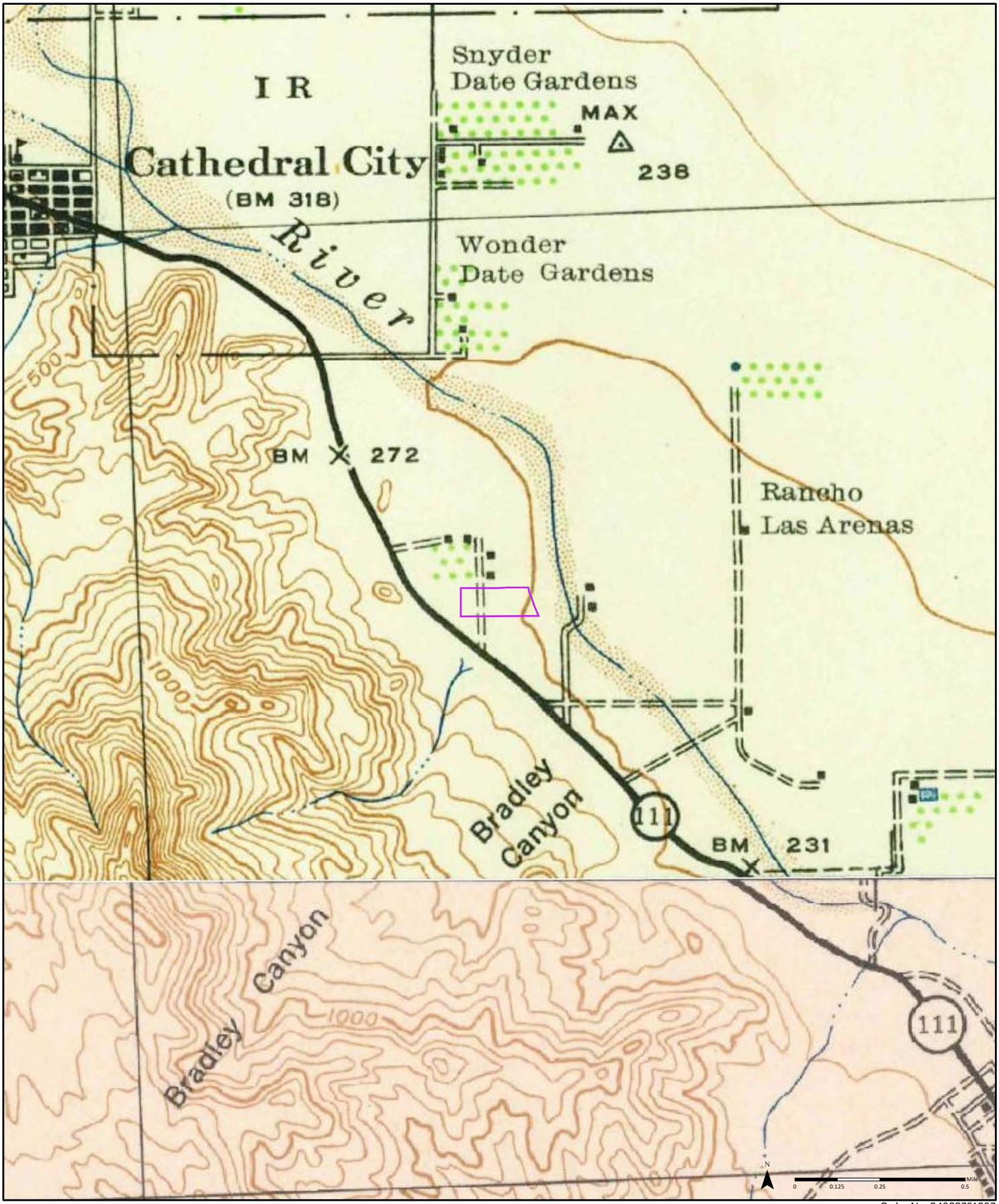
Available Quadrangle(s): Thousand Palms, CA(1-1958)
Toro peak, CA(2-1944)

Thousand Palms

Palm Desert

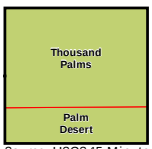
Source: USGS 15 Minute Topographic Map

ERIS



1944 *(1-1944) Aerial Photo Year: 1941* *(2-1944) Aerial Photo Year: 1941*

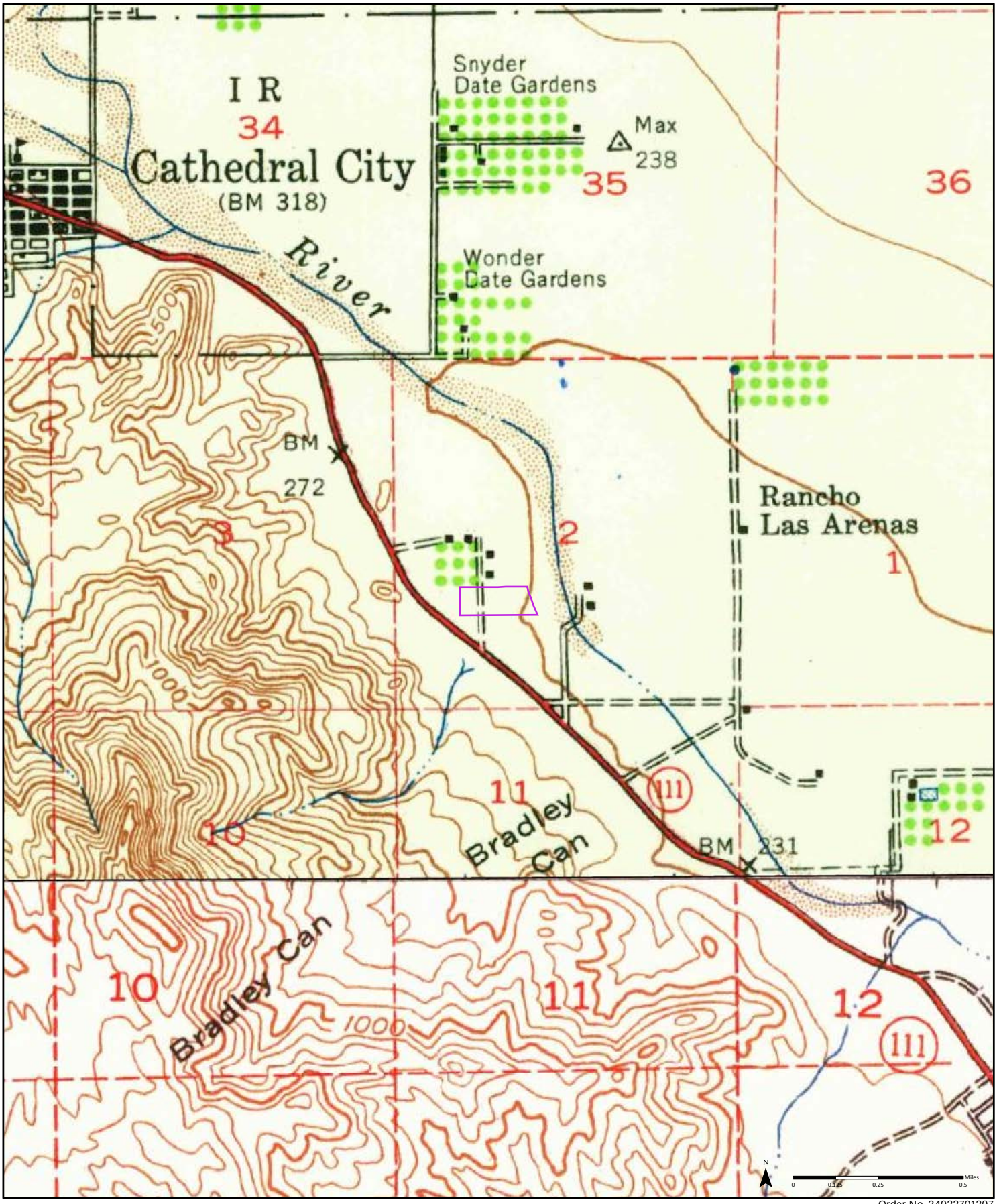
Order No. 24022701207



Available Quadrangle(s): Edom, CA(1-1944)
Toro peak, CA(2-1944)

Source: USGS 15 Minute Topographic Map

ERIS



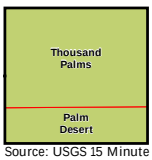
1941

(1-1941) *Aerial Photo Year: 1941*

(2-1941) *Aerial Photo Year: 1941*

Order No. 24022701207

Available Quadrangle(s): Edom, CA(1-1941)
Toro Peak, CA(2-1941)



Source: USGS 15 Minute Topographic Map

ERIS

APPENDIX E
PHOTOGRAPHS

1. View of the Site from the northwest.

2. View of the Site from the north.

3. View of the Site from the east,

4. View of the Site from the southwest.

5. View of the Site from the northeast.

6. Typical former mobile home pad area.

Photograph Log

Crossings at Peterson Road
Rancho Mirage, California

7. Typical former mobile home pad areas.

8. West adjacent.

9. North adjacent and east adjacent.

10. South adjacent (beyond wall).

11. North adjacent.

12.South adjacent.

APPENDIX F
INTERVIEW QUESTIONNAIRE

Due Diligence Environmental Questionnaire - ***Owner***

Site Name - Crossings at Peterson Road, Rancho Mirage, CA

Return to dw@weisenviro.com

Completed by: Marcus Aleman

Company or Organization: City of Rancho Mirage

Title Housing Manager

Date: March 19, 2024

1.) Who is the current owner of the subject property and when was it purchased?

City of Rancho Mirage Housing Authority

December 1, 2008

2.) Who are the past owners of the property and years of ownership (if available)?

Krumholz Thomas J

3.) What was the past use of the subject property?

Mobile home community

4.) Are you aware of any environmental cleanup liens that are filed or recorded against the subject property?

Not to our knowledge.

5.) Are you aware of any activity and land use limitations that are in place on the property that have been filed or recorded in a registry?

None

6.) Are you aware of any specialized knowledge or experience related to the property or nearby properties that is pertinent to potential adverse environmental conditions?

No

7.) Are you aware of commonly known or reasonably obtainable information that would help us to identify conditions indicative of releases or threatened releases of hazardous wastes/materials at the property? Such information includes knowledge of specific chemicals that are present or were once present on the property, spills or other chemicals releases that may have occurred, underground or aboveground storage tanks and environmental cleanups that have been conducted on the property.

None

8.) Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

No

APPENDIX G
QUALIFICATIONS

Dan Weis, R.E.H.S.

ENVIRONMENTAL MANAGER

1938 Kellogg Avenue, Suite 116, Carlsbad, CA 92008

(760) 585-7070 // (760) 672-6338 // dw@weisenviro.com // www.weisenviro.com

Professional Summary

Environmental Manager and California Registered Environmental Health Specialist with extensive expertise in environmental science and assessment, environmental and public health, risk assessment, health and safety, remedial design and implementation, strategic planning and project/program design and implementation. Over 20 years of professional experience and achievement. Successful completion of projects for a wide range of clientele including, but not limited to, local government entities, developers (affordable housing and market rate), educational institutions, Federal government entities, law firms, architectural and engineering firms, lending institutions, life insurance companies, conservancies, commercial/industrial real estate owners/managers, insurance companies, wireless telecommunication carriers and real estate developers. Extensive experienced in the completion of assessment, construction and remediation quality assurance during the completion of urban redevelopment/brownfields projects and public works projects, many of which have been located in downtown areas of San Diego, Los Angeles, Oakland, San Francisco, and other urban communities throughout the State of California. Proven ability to train and mentor professional, technical and support staff. Manages a comprehensive health and safety program. Holds a Master of Science in Public Health with an emphasis in environmental health science, risk assessment, health and safety, toxicology and environmental policy. Registered Environmental Health Specialist #8172 in the State of California.

Education and Professional Certification

- University of Delaware, Bachelor of Arts, 1995
- San Diego State University, Master of Science, Public/Environmental Health, 2001
- State of California Registered Environmental Health Specialist #8172
- Centers for Disease Control and Prevention National Center for Environmental Health Division of Emergency and Environmental Health Services - Environmental Health Training in Emergency Response
- Occupational Safety and Health Administration (OSHA) 40 Hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) Training and Annual 8 Hour HAZWOPER Refresher Training
- OSHA 8 Hour HAZWOPER Supervisor Training

Relevant Skills and Qualifications

- Proven ability to manage staff and programs/projects in challenging and diverse environments and regulatory settings. Consistently meets project schedules, goals, deadlines and budgetary restrictions.
- Completed or managed over 3,000 due diligence related environmental assessments and completed or managed over 500 subsurface environmental investigations of soil gas, soil, groundwater and other media. Investigations have included human health and ecological risk assessments, evaluations of indoor air conditions based on interpretations of subsurface conditions, underground storage tank (UST) evaluation/closure and hazardous waste characterization/management. Subsurface activities performed include the completion of soil borings using various drilling technologies, soil and groundwater sampling, installation and sampling of groundwater monitoring wells, free product evaluations, exploratory trenching and real-time delineation using mobile analytical laboratories and other soil screening technology.
- Managed over 100 remediation or construction management related projects primarily related to source removal of subsurface contaminants, including but not limited to, petroleum hydrocarbons, chlorinated solvents, heavy metals, organochlorine pesticides and other agricultural related chemicals, dioxins and furans and polychlorinated biphenyls. Has also assisted in cost recovery efforts from private parties and State/Federal funding programs for environmental assessment and remediation work and has served as an expert witness during legal proceedings pertaining to environmental related claims.
- Strong collaboration and negotiation skills with environmental regulatory agencies regarding project planning, initiation, status, approvals and implementation. Direct experience in interfacing with members of regulatory agencies including but not limited to the United States Environmental Protection Agency (EPA), California EPA Department of Toxic Substances

Control and Office of Environmental Health Hazard Assessment, County of San Diego Departments of Environmental Health (DEH), Public Works and Planning and Land Use, San Diego Air Pollution Control District, South Coast Air Quality Management District, Riverside County DEH, San Francisco City and County Department of Public Health (DPH), Arizona Department of Environmental Quality, County of Los Angeles County DPH and other local Certified Unified Program Agencies. Develop, manage and implement compliance and best practices efforts with Federal and State laws and regulations.

- Conducted and/or managed hundreds of public/environmental health related assessments including electromagnetic field surveys, radionuclide surveys, indoor air quality investigations, radon surveys, drinking water assessments, asbestos containing materials and lead-based paint surveys and mold/microbial evaluations.
- Recovered over $10,000,000 of assessment and cleanup costs for clientele from various sources including State of California Cleanup Funds, United States Environmental Protection Agency Brownfield grants and private parties including major oil companies.
- Responsible for facilitating a safe and healthy work environment in concert with the mission of the company while ensuring compliance with applicable Federal, State, and local regulations.
- Published technical papers pertaining to geogenic concentrations of metals in San Diego County, radioactive dating and pollutant chronologies in estuarine sediments and various urban runoff related implications.
- Delivered presentations pertaining to various environmental topics including human health risk assessment to membership at local and national trade conferences

Project Experience (Projects Completed at Multiple Firms)

- 14th and Island, San Diego, California – Development of Site Mitigation Plan, contaminated soil management and disposal concurrent with site construction activities at the superblock construction site in downtown San Diego and achievement of regulatory closure with the County of San Diego Department of Environmental Health.
- 2198 Market Street, San Francisco, California – Phase I and II Environmental Site Assessments, supplemental subsurface investigation, Site Mitigation Plan development, contaminated soil management and disposal concurrent with site construction activities and negotiation/achievement of regulatory closure with the City of San Francisco Department of Public Health.
- Former EZ Serve, 9305 Mission Gorge Road, Santee, California – Closure report preparation and San Diego Regional Water Quality Control Board interface and negotiation/achievement of regulatory closure under State of California low-threat policy.
- French Field – Former Vista Burn Dump, Oceanside, California – Oversight of the capping of a former burn dump/landfill facility and restoration for public use as a sports facility. Negotiation and achievement of regulatory closure with the California Department of Toxic Substances Control with concurrence from the San Diego Regional Water Quality Control Board and the County of San Diego Local Enforcement Agency.
- Indoor Skydiving Facility, 1401 Imperial Avenue, San Diego, California – Development of Soil Management Plan and contaminated soil management and disposal concurrent with site construction activities in downtown San Diego.
- Lemon Grove Avenue Realignment Project, Lemon Grove, California – Development of Impacted Soil Management Plan, Community Health and Safety Plan and Worker Health and Safety Plan and oversight of the implementation of such plans during construction activities.
- North Side Interior Road and Utilities Project at San Diego International Airport, San Diego, California - Subsurface assessment, development of Soil Management Plan and Work Health and Safety Plan and implementation and monitoring of soil management strategies.
- Olympic and Hill, Los Angeles, California – Removal of multiple underground storage tanks and underlying contaminated soil and achievement of regulatory closure with the City of Los Angeles Fire Department.
- San Ysidro - U.S. Land Port of Entry, San Diego, California – Subsurface assessment and development and implementation of soil management strategies.
- VA Medical Center Long Beach, 5901 East 7th Street, Long Beach, California - VA Long Beach: Seismic Corrections – Mental Health, Community Living Center and Chiller Replacements Project – Asbestos containing materials and lead-based paint surveys and preparation of abatement contractor bid specifications.

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PETERSON ROAD RANCHO MIRAGE

Initial Study / Mitigated Negative Declaration

Appendix G
Vehicle Miles Traveled Evaluation

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TRAMES SOLUTIONS INC.
4225 Oceanside Blvd., 354H
Oceanside, CA 92056
(760) 291 - 1400

May 20, 2024

Mark Irving
Blieu Companies, LLC
2000 E. Fourth St. #205
Santa Ana, CA 92705

Subject: Crossings at Peterson Rd. Vehicle Miles Traveled Evaluation (JN 0398-0001)

Dear Mr. Irving:

Trames Solutions Inc. is pleased to submit this Vehicle Miles Traveled (VMT) evaluation for the proposed Crossings at Peterson Rd. development. It is our understanding that the project consists of up to 120 multi-family units and is located east of Peterson Rd. and north of Hwy. 111 in the City of Rancho Mirage

INTRODUCTION

The proposed project consists of developing up to 120 multi-family units. Attachment "A" contains the site plan for the proposed project. The intent of this analysis is to determine if the project will have a significant impact from a Vehicle Miles Traveled (VMT) perspective.

VEHICLE MILES TRAVELED (VMT) EVALUATION

The VMT evaluation is based on the passage of California Senate Bill 743 (SB 743) which replaces automobile delay and LOS as the basis of determining CEQA impacts. The City of Rancho Mirage has passed Resolution No. 2021-06 that aligns with SB 743 and establishes the threshold for transportation impacts under CEQA. Resolution 2021-06 identifies screening criteria under which Projects are not required to submit detailed VMT analysis. In short, if a project is "screened out", a determination of a non-significant transportation impact can be made and no further analysis is required.

The screening criteria for small projects is applicable for the proposed project. Based on the screening criteria, a multi family (low rise) housing project with less than or equal to 147 dwelling units can be presumed to cause a less-than-significant impact. The

proposed project consists of up to 120 multi-family units. Therefore, since it falls below the 147 unit threshold, a less-than-significant impact can be presumed. Therefore, no further analysis is required.

CONCLUSIONS

The project will consist of up to 120 multi-family units. Based on the City's Resolution No. 2021-06 Screening criteria, this project falls below the 147 unit threshold and may be "screened out" from further VMT analysis.

If you have any questions, please contact me directly at (949) 244-2436.

Respectfully submitted,

Trames Solutions Inc.

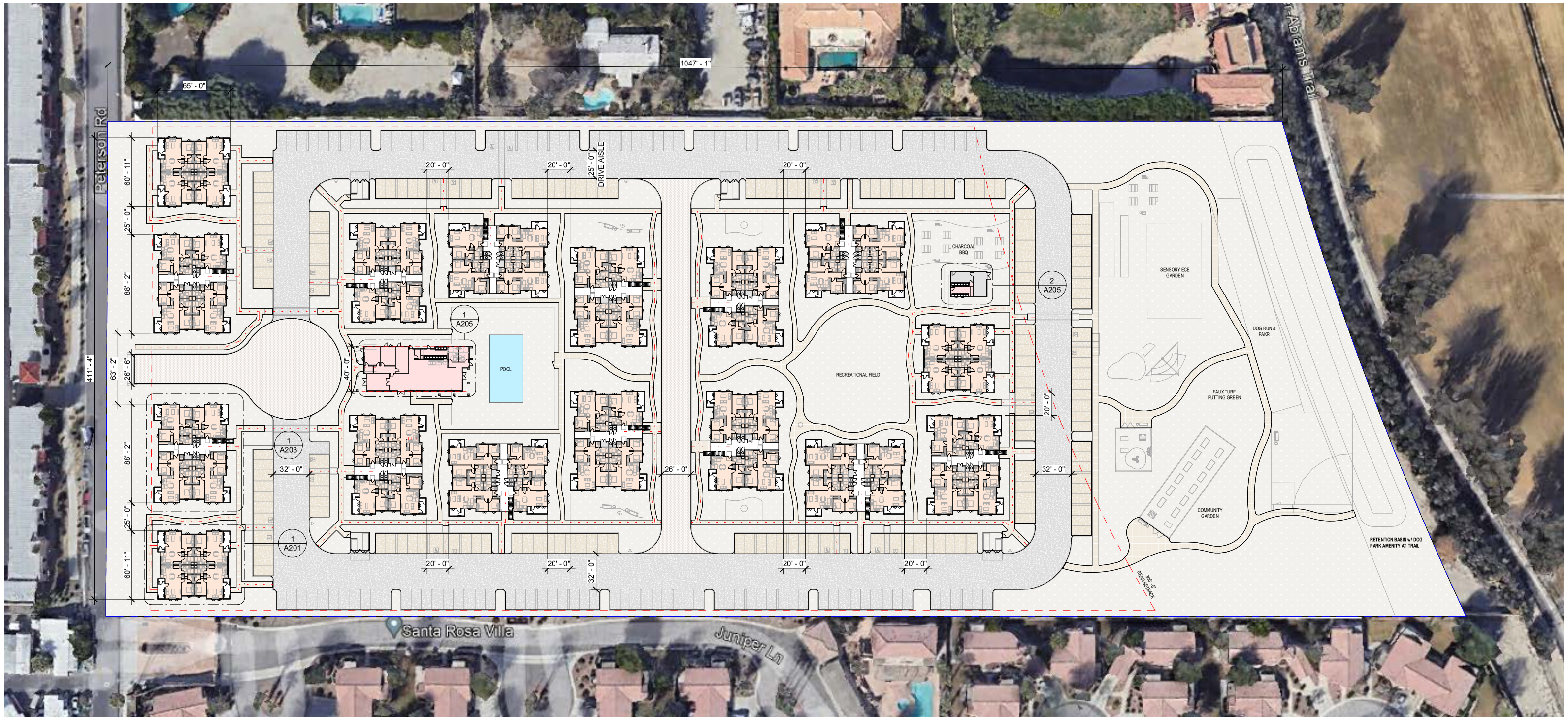
Scott Sato, P.E.

Vice President

Attachment A – Site Plan

ATTACHMENT A

SITE PLAN



UNIT MIX	
NAME	UNIT COUNT
1BR	38
2BR	39
3BR	39
	116

PARKING	
NAME	COUNT
STS-PRKG-ACCESIBLE: 9'-0"Wx18'-0"D	22
STS-PRKG-ACCESIBLE: VAN_12'-0"Wx 18'-0"D	2
STS-PRKG-STANDARD: 18'-0"Dx9'-0"W	264
	288

OVERALL PLAN - LEVEL 1 | 1" = 50'-0" | 1

STUDIO T SQUARE

: Architecture
: Planning
: Urban Design

: 1970 Broadway, Suite 615
: Oakland, California 94612
: (510) 451 - 2850

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PETERSON ROAD
39360 PETERSON RD, RANCHO MIRAGE, CA 92270

BLIEU COMPANIES

BLIEU
A SENSE OF PLACE

Sheet Title:
SITE PLAN

Job No. 23050A
Date: MM/DD/YYYY
Scale: 1" = 50'-0"
Drawn By: Author

Sheet No:
A100

05/06/2024