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CEQA ENVIRONMENTAL CHECKLIST FORM

PROJECT INFORMATION

1.	**Project Title:**	Home2Suites - Plot Plan No. PLN23-0069 and Conditional Use Permit No. PLN23-0070
2.	**Agency Name:**	City of Menifee, Community Development Department 29844 Haun Road, Menifee, CA 92586
3.	**Agency Contact:**	Russell Brown, Senior Planner 951-723-3745
4.	**Project Location:**	The project site is bordered in the City of Menifee, County of Riverside, State of California as follows: • To the north by Newport Road • To the east by Antelope Road • To the south by La Piedra Road • To the west by State Route 215
	A. Total Project Area:	2.01 acres (87,556 gross square feet)
	B. Assessor's Parcel No:	364-010-015
	C. Section: Township: Range:	02 6S3W T.6S.R.3W
	D. Latitude: Longitude:	33.68044992 (Decimal Degrees) -117.170129 (Decimal Degrees)
	E. Elevation:	1,437 AMSL
5.	**Project Applicant/Owners:**	Apollo V Development Group/Chintu Patel 2661 Pummelo Court, Escondido CA 92037
	Engineer/Representative:	Hariya Inc./Manoj Hariya 26121 Wallack Place, Loma Linda CA 92354
6.	**General Plan Land Use Designation:**	Specific Plan (SP)
7.	**Zoning Designation:**	Menifee Village Specific Plan (SP No. 158)

PROJECT INFORMATION

8. Project Description:

The project includes Plot Plan No. PLN23-0069 and Conditional Use Permit No. PLN23-0070. The project site consists of an approximate 2.01-acre parcel (364-010-015). The project site is bound to the south by La Piedra Road, to the east by Antelope Road, to the north by Newport Road, and to the west by Interstate 215 (I-215).

Plot Plan No. PLN23-0069 proposes a 4-story, 65,463 square foot hotel, consisting of 106-rooms with an extended stay option located behind (or to the south) of Living Spaces within the Menifee Village Shopping Center. The 2.01-acre site has partial improvements (approx. 1-acre) consisting of an overflow parking lot and associated landscaping that serve the existing retail shopping center to the north. The project proposes 106 parking spaces, of which 60 spaces are provided on-site and 46 spaces are located within the existing shopping center project site via reciprocal parking. The project site is part of the Menifee Village Specific Plan (SP No. 158, Planning Area 2-7).

Conditional Use Permit No. PLN23-0070 is proposed as the maximum height allowed is 35-feet per the applicable development standards of the specific plan. The current proposal includes a maximum height of approximately 54'3". The maximum height limit may be increased per Section 18.34 of Ordinance 348

Access/Circulation

The project proposes access via a new driveway and an existing shared driveway via Antelope Road. Regional access to the site is provided by the I-215 freeway, and local access to the site is via Antelope Road, Newport Road, La Piedra Road, and Scott Road.

Landscaping

Landscaping will consist of ornamental trees, shrubs, and groundcover consistent with the City's Landscape standards and design guidelines. Drought-tolerant trees, shrubs, and groundcovers are proposed to be planted along the street frontage (Antelope Road); to the north along the entryway; and to the west along the Caltrans ROW and adjacent retention basin. The existing landscaping to the south would remain in place. Flowering accent and shade trees along with clusters of shrub planting would be installed along the project site boundaries for screening purposes. Landscaping also would occur at building entries in and around automobile parking areas. Landscaping is estimated to cover approximately 20 percent of the property (approximately 0.4- acre). Proposed landscaping would be ornamental in nature.

Grading and Drainage

The project site is within two sub basins with a total 64 percent impervious area. Existing surface runoff flows over the parking areas and driveway aisle into the curb and gutter system and finally discharges into the west side of the boundary through a curb cut opening. The runoff also flows over the parking areas and driveway aisle into the curb and gutter system and finally discharges into the northwest side of the site. Cut and fill quantities are expected to be balanced onsite. No imported/exported material is anticipated for the project.

Project Phasing

Site development will begin with demolition of the existing parking lot followed by grading and compaction. Building construction and site paving and utility trenching and installation will occur concurrent with building construction and site paving. Overall construction is expected to occur within a 12-month period.

9. Surrounding Land Uses & Environmental Setting:

The subject site is comprised of a single parcel located on an existing parking lot. The proposed project site is currently vacant. Vegetation consists of ornamental trees and shrubs. Topographically, the study area is generally flat. The elevation ranges from 1,430 feet along the western property line to approximately 1,440 feet across most of the relatively level site.

The project site and surrounding area is generally built out with retail/commercial uses and residential uses. An existing retention basin on the Caltrans' ROW is located immediately west of the project site; the I-215 freeway is west of the project site. The site is surrounded by retail and residential uses, local roadways and the I-215 freeway. Table 1 (Surrounding Land Uses) lists the different uses that are located immediately adjacent to the proposed project site.

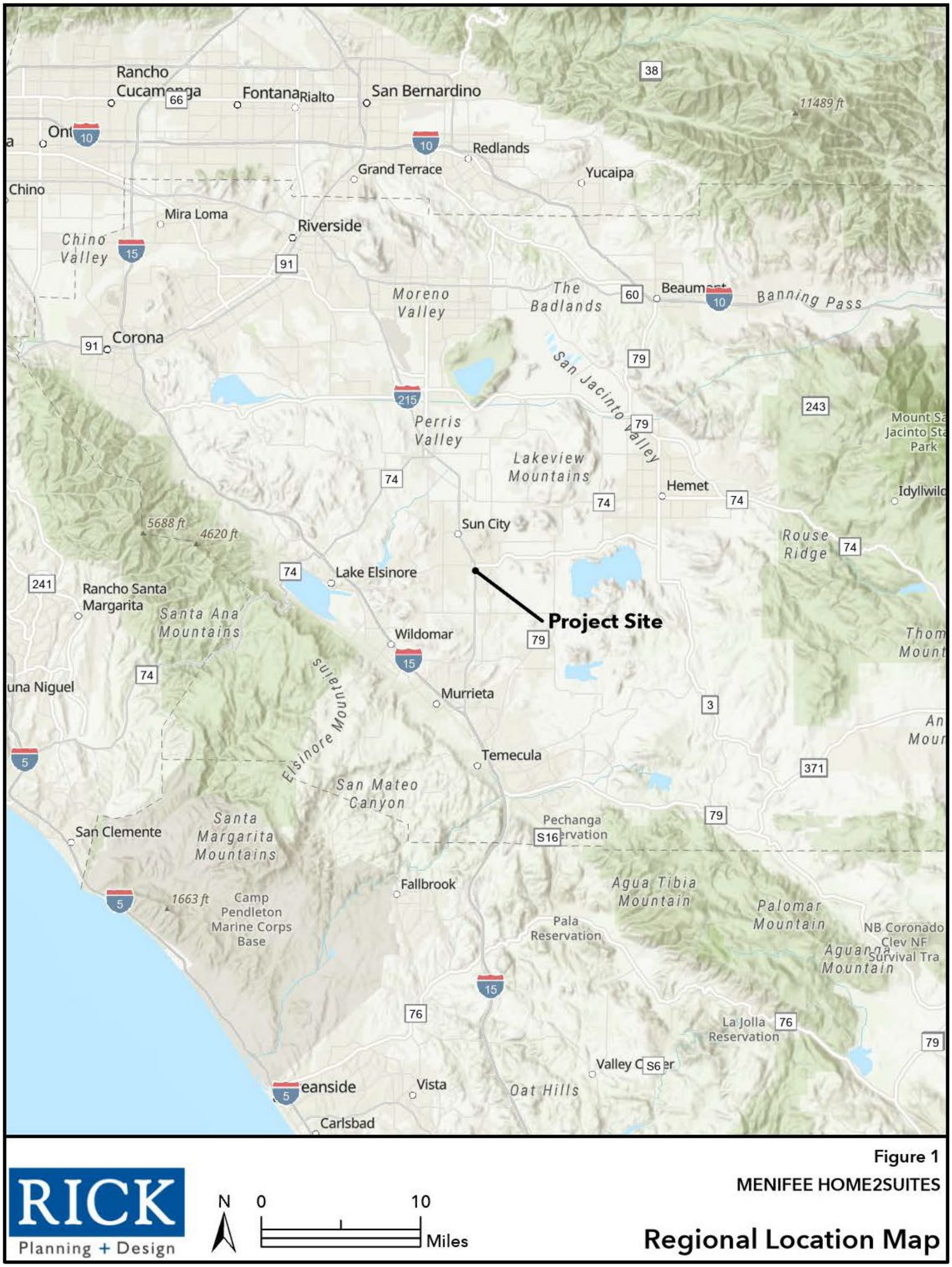
Table 1
Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Specific Plan (SP)	Specific Plan (S-P)	Parking lot
North	Specific Plan (SP)	Specific Plan (S-P)	Retail
South	Specific Plan (SP)	Specific Plan (S-P)	Landscaped roadway
East	Specific Plan (SP)	Specific Plan (S-P)	Multi-family housing
West	Right-of-Way (ROW)	Scenic Highway Commercial (C-P-S)	State highway

10. Required Approvals & Other Public Agency Whose Approval is Required:

- Plot Plan
- Conditional Use Permit
- Grading Permit
- Building Permit

PROJECT INFORMATION



RICK
Planning + Design

Figure 1
MENIFEE HOME2SUITES
Regional Location Map

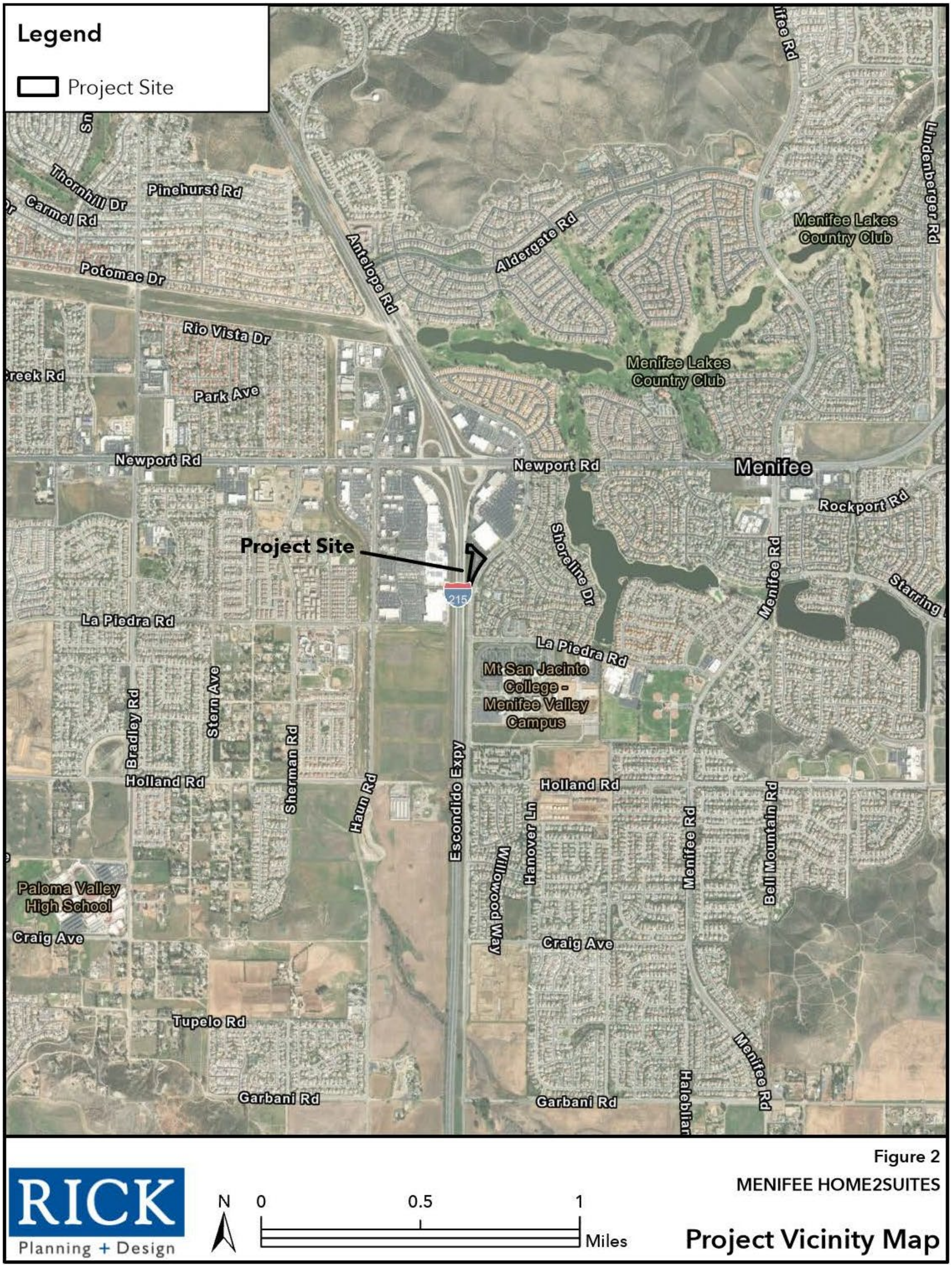


Figure 2
MENIFEE HOME2SUITES

Project Vicinity Map

PROJECT INFORMATION

Source: NOAA Group Architects 4/29/2024

Figure 3

MENIFEE HOME2SUITES

Site Plan

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (x) 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
- ☐ Biological Resources
- ☐ Geology/Soils
- ☐ Hydrology/Water Quality
- ☐ Noise
- ☐ Recreation
- ☐ Utilities & Service Systems
- ☐ Agricultural & Forestry Resources
- ☐ Cultural Resources
- ☐ Greenhouse Gas Emissions
- ☐ Land Use/Planning
- ☐ Population & Housing
- ☐ Transportation
- ☐ Wildfire
- ☐ Air Quality
- ☐ Energy
- ☐ Hazards & Hazardous Materials
- ☐ Mineral Resources
- ☐ Public Services
- ☐ Tribal Cultural Resources
- ☐ Mandatory Findings of Significance

DETERMINATION

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.

Signature

Date

Printed Name

Title

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.

CONTENTS

FIGURES

TABLES

I. AESTHETICS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view from a state scenic highway?	☐	☐	☐	☒
c) 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

City of Menifee General Plan, adopted December 18, 2013

- Community Character
- Open Space and Resource Conservation Element

Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013

- Section 4 – Aesthetics

Title 9 – Planning and Zoning of the City of Menifee Municipal Code

- Section 9.08.199 – Lighting
- Section 9.10.110 – Light and Glare of the Moreno Valley Municipal Code
- Chapter 9.16 – Design Guidelines

Applicable General Plan Policies

The City's General Plan Conservation Element related to visual resources apply to the proposed project as follows:

- OSC-3 requires development to preserve view corridors and outstanding scenic vistas;
- OSC-3.3 encourages the use of clustered development and other site planning strategies to facilitate the preservation of the City's natural landforms.
- OSC-3.4: Support the preservation of natural vegetation during and after the construction process.

The City's Community Design Element related to visual resources apply to the project as follows:

- CD-3.3: Minimize visual impacts of public and private facilities and support structures through sensitive site design and construction. This includes but is not limited to appropriate placement of facilities; undergrounding, where possible; and aesthetic design (e.g., cell tower stealthing).
- CD-3.4: Develop or participate in programs to rehabilitate older residential neighborhoods and commercial centers to prevent blight and maintain the quality of the built environment.

- CD-3.5: Design parking lots and structures to be functionally and visually integrated and connected; off-street parking lots should not dominate the street scene.
- CD-3.6: Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.
- CD-3.12: Utilize differing but complementary forms of architectural styles and designs that incorporate representative characteristics of a given area.
- CD-3.13: Utilize architectural design features (e.g., windows, columns, offset roof planes, etc.) to vertically and horizontally articulate elevations in the front and rear of residential buildings.
- CD-3.14: Provide variations in color, texture, materials, articulation, and architectural treatments. Avoid long expanses of blank, monotonous walls or fences.
- CD-3.15: Require property owners to maintain structures and landscaping to high standards of design, health, and safety.
- CD-3.22: Incorporate visual buffers, including landscaping, equipment and storage area screening, and roof treatments, on properties abutting either Interstate 215 or residentially designated property.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. For purposes of CEQA, a scenic vista is generally considered an expansive view of a unique or remarkable landscape, which is observable from a location accessible to the public. The project site is within an urbanized area consisting of major commercial development along the I-215 corridor and surrounding multi-family uses further east. The ongoing planned development and distant views of rugged mountainous terrain to the northeast and southwest in the surrounding area have reduced the overall visual quality of the project area. Therefore, the visual landscape is not considered to have the attributes of a unique or remarkable landscape.

The site is located adjacent to I-215 which is designated as a scenic corridor by the City of Menifee General Plan. Views of the site from the I-215 consist of a developed parcel of land with existing commercial uses. The site is a flat, graded pad and generally at the same elevation as the surrounding commercial and residential uses as well as the adjacent I-215 freeway. The proposed four-story hotel will be approximately 53 feet in height. The proposed height increase will be allowed following approval of the project's Conditional Use Permit. The proposed hotel development would be visible from the surrounding public views including from motorists traveling along the I215. However, consisted with the City's community design element goals and policies (CD-3.22) the project includes visual buffers including tree screening, landscaping, equipment and storage area screening, and roof treatments to enhance views of the developed site. Although highly visible, the project is not expected to substantially interrupt or obstruct available views from any scenic vistas. Thus, impacts to scenic vistas would be less than significant.

b) Less-than-Significant Impact. The project site is located within a local scenic highway corridor however it does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings. The I-215 is eligible as a County designated scenic highway. There are no state designated scenic highways within the City of Menifee. The project site is located approximately 20 miles northwest of Highway 74, which is the only facility within the project vicinity that is designated as a state-eligible scenic highway. Due to the distance and intervening topography and development, the project would not be visible from State Highway 74. Therefore, the project site is not located within a state scenic highway corridor and implementation of the proposed project would not have a substantial effect on scenic resources, including, but not limited to, trees rock outcroppings, and historic buildings within a state scenic highway corridor. No impact to scenic resources would occur.

c) Less-than-Significant Impact. The presence and movement of heavy construction equipment and staging areas could temporarily degrade the existing visual character and/or quality of the project site and surrounding area for existing developed land uses. Buildout of the project is anticipated to occur over a 12-month period. Construction activities would require the use of various types of equipment, such as scrapers, graders, dozers, and trucks as well as signs, cones, and trash receptacles. Project construction would involve the temporary use of fenced staging areas for construction equipment and materials. Although these staging areas would be in disturbed areas, construction equipment and materials would be visible to motorists and residents over an 18-month duration. Thus, construction activities would temporarily degrade the existing visual character of the site in the vicinity of developed areas. The temporary impacts to the visual character of the site would be less than significant given the short-term nature of construction activities.

I. AESTHETICS

The project site includes a graded parking lot flat with ornamental landscaping located around the surrounding parcels. Grading would occur throughout the site, resulting in the removal of the existing asphalt parking lot, trees, and low-lying shrubs; no significant landforms such as vegetated slopes or rock outcroppings exist on site. The City's General Plan Conservation Element, Objectives and Goals as listed above, and Commercial Design Guidelines emphasize criteria assuring high-quality architectural design for the hotel and sensitivity to views along public streets. The project site plan includes a single 4-story building. The building will be situated along the northern property line providing a good pedestrian orientation to the sidewalk. The facades include visual relief and articulation provided by balconies and other architectural elements to enhance the aesthetic impacts. The use of setbacks, treatment of the building facade, integration of street-frontage, lighting and landscaping treatment will enhance the visual integrity of the project area. Project implementation would not have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings. The overall aesthetic quality of the design would complement the surrounding retail and multi-family uses. The Project would be consistent with the objectives and goals of the City's Conservation Element.

The proposed Project would be generally consistent with the existing commercial retail and urban character of the surrounding area. While the proposed Project would change the character of the project site from a parking lot to a hotel development, it would not significantly degrade the existing visual character or quality of the site and impacts would be less than significant.

d) Less-than-Significant Impact. Existing lighting sources on the site and surrounding area generally consist of any streetlights; business lighting, and vehicle headlights. Chapter 9.205.060 (General Lighting Standards, Menifee Development Code) establishes that all outdoor lighting associated with nonresidential uses shall be fully shielded and directed away from adjacent properties.

Such lighting shall not exceed 0.25-foot-candle minimum maintained lighting measured from within 5 feet of any property line, and shall not blink, flash, oscillate or be of unusually high intensity or brightness. Additionally, the City's Municipal Code also specifies that all lighting installations shall be designed and installed with full cutoff and be fully shielded to reduce glare and light trespass. The project would be required to demonstrate compliance with these requirements to the City of Menifee prior to the issuance of building permits. Project compliance with the lighting requirements of the City of Menifee Development Code would ensure that the proposed Project would not produce a new source of substantial light or glare from artificial lighting sources that would adversely affect day or nighttime views in the area.

Mitigation Measures

No mitigation measures are required.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined in Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Sources

1. Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013
    - Section 5.2 – Agricultural and Forestry Resources
        - Figure 5.2-1 – Significant Farmlands
2. Title 9 ‑ Planning and Zoning of the City of Menifee Municipal Code
3. California Department of Conservation. California Important Farmland Finder. Accessed October 23, 2023. https://maps.conservation.ca.gov/DLRP/CIFF/

Applicable General Plan Policies

OSC-6.1: Protect both existing farms and sensitive uses around them as agricultural acres transition to more developed land uses.

II. AGRICULTURE AND FORESTRY RESOURCES

Analysis of Project Effect and Determination of Significance

a) No Impact. The site is identified as “Urban & Built-Up Land” in the City’s General Plan Final Environmental Impact Report (Figure 5.2-1). It is not listed as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project site is designated as “SP-Specific Plan” and is not under a Williamson Act contract. The project site is developed with an existing paved surface parking lot and is not used for agricultural purposes. Therefore, development of the site would not result in the conversion of agricultural lands to non-agricultural uses. No impact on existing or potential agricultural activity in the project area would occur with project implementation.

b) No Impact. As described above, the project site is not under a Williamson Act contract and would not result in the conversion of agricultural land to non-agricultural uses. Additionally, there is no agricultural zoning on the subject site or in the vicinity of the project site. Therefore, no impact to agricultural uses would occur with project implementation.

c) No Impact. The subject parcel is identified as developed with no onsite native habitat. No farmland, forest land, timberland, or other agricultural uses occur on the project site or surrounding area. The property is not listed as agricultural or prime farmland by the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program. Development of the project site will not result in the conversion of forest land to non-forest use. The project site does not contain any Williamson Act or other agricultural land contracts. There is no agricultural zoning in the vicinity of the site. Accordingly, no associated impacts to forest land or timberland zoning would result. No impact would occur.

d) No Impact. As stated above, the project site is designated as Specific Plan use and no forest land exists on site. Therefore, the Project would not result in the loss or conversion of forest land. No impact would occur.

e) No Impact. The project site is in an urban setting, surrounded by commercial uses to the north and multi-family residential uses to the north. The Project is not expected to result in the conversion of Farmlands to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

Mitigation Measures

No mitigation measures are required.

III. AIR QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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:				
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

1. Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013
    - Section 5.3 – Air Quality
2. Air Quality/Greenhouse Gas/Energy Technical Study for the Home2Suites Project, Bluescape Environmental. November 2023 (Appendix A).

Applicable General Plan Policies

OCS-9.1: Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.

OCS-9.2: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.

OCS-9.3: Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

OCS-9.4: Support the Riverside County Regional Air Quality Task Force, the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy, and the South Coast Air Quality Management District's Air Quality Management Plan to reduce air pollution at the regional level.

OCS-9.5: Comply with the mandatory requirements of Title 24 Part 1one of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. Air quality modeling for the Project development was performed to identify construction and operational emissions associated with the Project. Criteria pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2022.1.1 which incorporates current air emission data, planning methods and protocols approved by CARB (Bluescape Environmental 2023).

Construction activities would include demolition, site preparation, grading, construction of the buildings/utilities and related improvements as well as paving parking areas. Construction activities would require the use of equipment that would generate criteria air pollutant emissions. For modeling purposes, it was assumed that all construction equipment would be diesel-powered. Construction emissions associated with the development of the Project site were calculated based on default equipment amounts and types. There is currently approximately 1 acre of pavement and landscaping on the parcel, so standard demolition activities would be conservative. Construction emissions were analyzed using the regional and localized thresholds published by the SCAQMD.

Operational emissions from the Project would include mobile source emissions, energy emissions, area source emissions, and emergency generator emissions. Mobile source emissions would be generated by motor vehicle trips associated with operation of the Project site. Emissions attributable to energy use include electricity and natural gas consumption for space and water heating. Area source emissions would be generated by landscape maintenance equipment, use of consumer products and painting. Emergency generator emissions would occur only in the event of a power outage or during engine testing and maintenance. To determine whether a regional air quality impact would occur from this development, the increases in emissions were compared with the operational thresholds published by the SCAQMD.

For the proposed Project to be consistent with the Air Quality Management Plan (AQMP), the pollutants emitted from the Project should not exceed the SCAQMD daily thresholds or cause a significant impact on air quality. The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving state and national air quality standards. The AQMPs are a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the EPA. The pollutant control strategies in the AQMP are based on the latest scientific and technical information and planning assumptions, including SCAG's 2020 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local plans.

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

- Consistency Criterion No. 1: The 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 AQMPs.
- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMPs or increments based on the years of the Project build-out phase.

According to the SCAQMD's CEQA Air Quality Handbook, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS. The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in Table 2, Table 3, and Table 4 the proposed Project would not exceed construction or operational emission standards. Thus, the Project is consistent with the first criterion.

Table 2
Estimated Maximum Daily Construction Emissions

Construction Phase	**Maximum Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2024 Maximum Day	12.7	32.2	33.0	0.05	4.88	2.79
SCAQMD Regional Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Table 3
Estimated Maximum On-Site Daily Construction Emissions

Construction Phase	Maximum Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2024 Maximum On-Site Emissions	15.9	16.0	3.51	2.02
SCAQMD LSTs	*170*	*883*	*7*	*4*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Table 4
Estimated Operational Emissions

	Maximum Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Proposed Project						
Mobile	1.96	1.85	15.7	0.04	3.19	0.83
Area	1.96	0.02	2.85	<0.01	0.01	<0.01
Energy	0.02	0.35	0.29	<0.01	0.03	0.03
Stationary	0.75	2.10	1.92	<0.01	0.11	0.11
Daily Total	***4.69***	***4.31***	***20.7***	***0.04***	***3.33***	***0.97***
SCAQMD Regional Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Concerning Consistency Criterion No. 2, the AQMPs contain air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The project site's existing land use designation is Menifee Village Specific Plan (SP) and is zoned C-P-S (Scenic Highway Commercial). The Project's proposed land uses would be consistent with the approved land use and zoning designations (Riverside County 2019). Therefore, the Project would be compliant with the Menifee Village Specific Plan and City's Zoning Code. Furthermore, the Project will also be designed to be consistent with all applicable planning policies and design standards as set forth within the Menifee Municipal Code and the City's Industrial Good Neighbor Policies. The AQMPs contain air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project would not result in a change of land use designations reflected in the AQMPs. Therefore, the Project is assumed to be consistent with the AQMPs regional emissions inventory for the SCAB. Thus, the Project is consistent with the second criterion.

As described above, the Project would be consistent with the AQMP and would have a less-than-significant impact. Therefore, the proposed Project would not conflict or obstruct implementation of the air quality plans, and impacts are less than significant.

b) Less-than-Significant Impact. Pursuant to CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state Clean Air Acts. If the project's mass regional emissions do not exceed the applicable SCAQMD thresholds, then the project's criteria pollutant emissions would not be cumulatively considerable. As demonstrated in the tables above, the Project's regional emissions do not exceed the SCAQMD thresholds. Therefore, the cumulative impacts are less than significant.

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM10 and PM2.5) from soil disturbance and exhaust emissions (NOX and CO) from heavy construction vehicles. For the purpose of estimating emissions, it was assumed that 2.01 acres will be graded and developed for overall construction. As noted, construction would generally consist of site preparation and grading, construction of the buildings and related improvements, paving of the parking lot and the application of architectural coating (painting).

As shown in Table 3 and Table 4, criteria pollutant emissions would not exceed SCAQMD regional thresholds or LSTs. Because the Project would not exceed SCAQMD's regional construction thresholds or localized significance thresholds (LSTs), Project construction would not result in a cumulatively considerable net increase of a criteria pollutant and impacts would be less than significant. As such, air quality impacts from Project-related construction activities would be less than significant. Because maximum NOx and VOC emissions from construction would not exceed the SCAQMD CEQA significance thresholds, the impacts from these non-attainment pollutants are not expected to have a cumulatively considerable net increase, and therefore, less than significant.

c) Less-than-Significant Impact.

Toxic Air Contaminants (TACs)

The proposed Project does not propose specific stationary sources that would generate TACs, which are not commonly associated with hotel development projects. If stationary sources with the potential to emit TACs were to be included as part of the Project, or included later, those sources would be subject to SCAQMD Rule 1401, and would be subject to New Source Review requirements.

Construction-related activities would result in temporary Project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. Due to the short-term construction duration, the limited construction emissions, and the mostly commercial and residential land use surrounding the Project site, there is very low potential for fugitive dust or DPM to impact sensitive receptors during construction. The total Project construction DPM emissions are not of a magnitude and duration that could create significant air toxic risks to the nearest receptors during construction. Compliance with the SCAQMD rules and regulations would reduce the fugitive dust emissions during Project construction and associated impacts to sensitive receptors. The proposed Project's operating emissions would be negligible and would not have the potential to impact sensitive receptors. Therefore, the Project's construction and operation air pollutant emissions would not expose sensitive receptors to substantial pollutant concentrations and would result in a less-than-significant impact.

Local Carbon Monoxide Emissions and CO Hotspots

The proposed Project would result in CO emissions of approximately 20.7 pounds per day, well below the 550 pounds per day threshold. Based on the low background level of CO in the Project area, improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the Project's low level of operational CO emissions, the Project would not create new hotspots or contribute substantially to existing hotspots, and impacts would be less than significant.

d) Less-than-Significant Impact. For construction activities, odors would be temporary in nature and are subject to SCAQMD Rule 402, Nuisance. Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the proposed Project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

III. AIR QUALITY

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed Project, a hotel, would not include any of these uses. Solid waste generated by the proposed on-site uses would be stored on-site and collected by a municipal waste hauler, thereby managing and collecting on-site waste in a manner to prevent the proliferation of odors. Operational odor impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on sate or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Sources

1. City of Menifee General Plan, adopted December 18, 2013
   - Chapter 10 – Open Space and Resource Conservation Element
2. Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013
   - Section 5.4 – Biological Resources
3. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP); http://www.wrcrca.org/about-rca/multiple-species-habitat-conservation-plan/.
4. MSCHP Consistency Analysis and Habitat Suitability Assessment for Home2Suites, KEC, November 2023.

Applicable General Plan Policies

OCS-8.1: Work to implement the Western Riverside County Multiple Species Habitat Conservation Plan in coordination with the Regional Conservation Authority.

OCS-8.5: Recognize the impacts new development will have on the city's natural resources and identify ways to reduce these impacts.

Analysis of Project Effect and Determination of Significance

a) Less than Significant. The project site is entirely developed as a parking lot with a mowed park-like lawn facing Antelope Road. Street trees including Mexican fan palm (*Washingtonia robusta*), blue gum eucalyptus (*Eucalyptus globulus*) and Peruvian pepper (*Schinus molle*) face Antelope Road and the western boundary of the parking lot. The south end of the parcel is a narrow triangle that has been landscaped with mulch, decomposed granite sands, succulents, large agave (*Agave* sp.), rosemary (*Salvia rosmarinus*), and hedges shaded by the palms, Peruvian pepper and one Cottonwood tree (Populus fremontii). There are other ornamental trees and low hedges in planters between parking sections and around the perimeter of the lot.

On the west side of the parking lot and project site there is a Caltrans detention basin with non-native grass and some shrubs and trees. This is off-site but within the 100-foot survey buffer. It is routinely mowed so that the vegetation does not become naturalized, and the basin retains its function as a detention basin. In the winter during the rainy season this basin is inundated. Onsite water inputs to the detention basin are from two curb runoff drains, one at the northwest end of the parking lot and the other from the middle of the triangular section of parking lot. To the north of the project site and shopping center complex, there is a storm drain culvert that exits just below the off-ramp turn at Newport Road and empties into the detention basin. Freeway debris are scattered along the western boundary of the site.

The historical uses for both the current parking lot and the detention basin were agriculture until the 1970s when Caltrans began developing the interchange and I-215 freeway. It remained a non-native grassland habitat until the 1990’s decade when the present parking lot and shopping center was developed.

The site is identified as Disturbed/Developed land and is comprised of a paved surface parking lot, ornamental landscaping, and existing structures. The existing trees on the site have the potential to provide habitat for nesting migratory birds. Many of these trees would be removed during construction. Therefore, the proposed Project has the potential to impact active bird nests if vegetation and trees are removed during the nesting season. Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) (United States Code Title 33, Section 703 et seq.; see also Code of Federal Regulations Title 50, Part 10) and Section 3503 of the California Fish and Game Code. Any activities that occur during the nesting/breeding season of birds protected by the MBTA could result in a potentially significant impact if requirements of the MBTA are not followed. However, implementation of the City’s standard conditions of approval BIO-1 would ensure MBTA compliance. As such, with implementation of the standard measure, impacts to candidate, sensitive, or special status species would be less than significant.

Standard Condition of Approval

> **BIO-1: Avian Breeding Season Avoidance or Pre-construction Nesting Bird Survey.** Vegetation removal shall occur outside of the avian breeding season (February 1 to September 1) unless a qualified biologist has first surveyed the area of disturbance to determine the presence or absence of nesting bird species. If vegetation removal is proposed during the avian breeding season, then this pre-construction nesting bird survey should be conducted no more than five days prior to the beginning of project-related activities. For passerines and small raptors, surveys shall be conducted within a 250-foot radius of the work area. For large raptors, surveys shall be conducted within a 500-foot radius of the work area. If such nesting birds are not found, then project-related activities may proceed during the avian breeding season. However, if such nesting birds are found, then the avian biologist will need to decide whether the construction activities can proceed without harm to the nest or if a buffer or construction monitoring will be necessary to protect the active nest. The results of the nesting bird survey shall be detailed in a short report provided to the City of Menifee for their concurrence.

b) Less-than-Significant Impact. No direct or indirect permanent or temporary impacts to waters of the U.S. (WOUS) or waters of the state (WOS) because they do not occur on site. Indirect impacts to MSHCP riparian habitat will be “less than significant” as standard BMPs implemented by the Storm Water Pollution Prevention Plan (SWPPP) will prevent non-storm runoff from discharging into riparian habitat. The Project site is not expected to have a substantial adverse effect on any riparian habitat. Impacts would be less than significant.

c) Less-than-Significant Impact. The subject property is completely developed with urban uses and does not contain riparian/riverine areas or vernal pools as defined in Section 6.1.2 of Volume I of the MSHCP (Dudek 2003a). Specifically, for riparian/riverine areas, there are no trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby water source on the property. As discussed above, the Project site would not result in an adverse effect on state or federally-protected wetlands. Impacts would be less than significant.

d) Less-than-Significant Impact. The 2.01-acre subject property is not mapped within a core area or linkage, nor Criteria Cell, in the MSHCP. In addition, the site contains developed land. It is an in-fill property that is surrounded by commercial and residential development. As such, the property does not function as a wildlife movement corridor. Impacts would therefore be less than significant.

e) Less-than-Significant Impact. There will be no direct, indirect, permanent impacts to heritage trees because of the project. Temporary impacts to heritage trees, if they occur, will be less than significant. The project's design will not impact locations where large mature trees are located. If an unplanned tree removal is required, the City's standard measures that are a part of their Conditions of Approval (COA) for the grading permit will be implemented under Municipal code chapter 9.86.020. It provides regulations to compensate for tree removals by tree replacement.

f) Less-than-Significant Impact. Core areas are defined in the MSCHP-Volume I as "a block of Habitat of appropriate size, configuration, and vegetation characteristics to generally support the life history requirements of one or more Covered Species". These core areas serve as the cornerstones of the MSHCP conservation area. To ensure connectivity between the core areas, linkages have also been identified for protection. These linkages provide "Live-In" habitat for certain species and habitat for movement between core areas. A third term, wildlife movement corridor, is used in the MSHCP to describe typically linear, unobstructed paths that provide adequate cover for species moving from place to place. The Project site is not mapped within a core area or linkage in the MSHCP. In addition, the site contains land developed with urban uses. It is an in-fill property that is surrounded by commercial and residential development. Therefore, no conflicts with provision of an adopted HCP or NCCP or other approved conservation plan would occur with the proposed Project and there would be a less-than-significant impact.

Mitigation Measures

No mitigation measures are required.

V. CULTURAL RESOURCES

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

Sources

1. City of Menifee General Plan, adopted December 18, 2013
    - Chapter 10 – Open Space and Resource Conservation Element
2. Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013
    - Section 5.5 – Cultural Resources

Applicable General Plan Policies

OCS-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.

OCS-5.3: Preserve sacred sites identified in consultation with the appropriate Native American tribes whose ancestral territories are within the city, such as Native American burial locations, by avoiding activities that would negatively impact the sites, while maintaining the confidentiality of the location and nature of the sacred site.

OCS-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.

OCS-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city

OCS-5.6: Develop strong government-to-government relationships and consultation protocols with the appropriate Native American tribes with ancestral territories within the city in order to ensure better identification, protection and preservation of cultural resources, while also developing appropriate educational programs, with tribal participation, for Menifee residents.

Analysis of Project Effect and Determination of Significance

a) No Impact. As part of the current review process, a cultural resources evaluation was prepared for the project site (Recuerdos Research 2023). A search of the Sacred Lands File at the California Native American Heritage Commission is pending as of November 3, 2023. A review of California Inventory of Historic Resources (March 1976) and National Register of Historic Places (National Park Service 2013) indicated that there are no inventoried historic properties within the Project APE and a 1-mile radius. Therefore, the Project would have no impact on a historical resource.

V. CULTURAL RESOURCES

b) No Impact. A records search was conducted at the Eastern information Center on October 23, 2023. Results were negative; no archaeological or historical resources were previously recorded on or near the subject parcel. Given previous disturbances to the parcel which included construction of the existing mall and substantial grading, trenching for underground utility lines, and improvements associated with nearby freeway off ramps and roads, the proposed Project is unlikely to impact or adversely affect any significant cultural resources. Due to the low sensitivity of the Project site for buried prehistoric and historic-period resources, impacts to cultural resources are not expected to occur.

c) Less-than-Significant Impact. No human remains are anticipated to be discovered during project construction due to the lack of burial sites recorded on the site. However, in the event that excavation and grading activities of the proposed Project were to encounter human remains, the Project would be subject to the following: Health and Safety Code section 7050.5, CEQA section 15064.5(e), and Public Resources Code section 5097.98. Current regulations state that if any human remains are discovered, all work would be halted in the vicinity of the discovery, the appropriate authorities would be notified, and standard procedures for the respectful handling of human remains would be adhered to. Adherence to current state and local regulations would serve to reduce impacts to below a level of significance.

Mitigation Measures

No mitigation measures are required.

VI. ENERGY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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

1. Final Environmental Impact Report City of Menifee General Plan, certified December 18, 2013
    - Section 5.3 – Air Quality
2. Air Quality/Greenhouse Gas/Energy Technical Study for the Home2Suites Project, Bluescape Environmental. November 2023 (Appendix A).

Applicable General Plan Policies

OCS-4.1: Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.

OCS-4.2: Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.

OCS-4.3: Advocate for cost-effective and reliable production and delivery of electrical power to residents and businesses throughout the community.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. The following is based on the energy analysis completed for the Project (Bluescape Environmental 2023). Project construction energy demand includes gasoline and diesel fuel demand. Construction fuel demand was calculated based on CalEEMod emissions outputs and GHG emission factors from the EPA GHG Emissions Factors Hub (EPA 2023). Project gasoline use for construction worker trips was estimated to be 4,631 gallons. Total Project diesel use for construction vendor and haul trips and construction equipment use was estimated to be 45,171 gallons.

Construction Energy Use

In 2024 and 2025, Californians are anticipated to use approximately 27.8 billion gallons of gasoline and approximately 6.4 billion gallons of diesel fuel. Riverside County gasoline fuel use in 2024 and 2025 is anticipated to be 1.4 billion gallons and diesel use would be approximately 518 million gallons (CARB 2021). Total Project construction gasoline fuel would represent less than 0.001 percent of gasoline used in the County in 2024 and 2025, and total Project construction diesel fuel would represent approximately 0.009 percent of diesel used in the County in 2024 and 2025. Total Project construction gasoline and diesel fuel would also represent less than 0.0001 percent of the state's fuel use. Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, current crude oil production would be sufficient to meet demand until 2050 (US EIA 2023). As such, it is expected that existing and planned transportation fuel supplies would be sufficient to serve the Project's temporary construction demand. Based on the total Project's relatively low construction fuel use proportional to annual County use, the Project would not substantially affect existing energy fuel supplies or resources.

VI. ENERGY

There are no unusual Project characteristics that would necessitate the use of less energy-efficient construction equipment than at comparable construction sites in the region or state. It is expected that construction fuel use associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. Therefore, potential energy impacts associated with construction are considered less than significant.

Operational Energy Use

Operational natural gas use and electricity use are presented in Table 5. Approximately 20% of the hotel's electricity energy demand will be provided by an onsite solar PV system.

Table 5
Operational Energy Use

Land Use	Natural Gas (kBtu/yr)	Electricity (kWh/yr)
Hotel	1,300,000	843,713
Parking Lot	0	32,517
Total	***1,300,000***	***876,230***

Mobile Operational Emissions

The Project would have an estimated annual vehicle mile traveled (VMT) of 1,626,872 miles. The average daily trip rate is 466 trips per day. Total mobile source CO_2e is 608 Metric Tons per year. CalEEMod assumes 92% of VMT burns gasoline while the remaining 8% burn diesel. Thus, of the estimated 608 MT of annual mobile emissions, 559.4 MT is generated by gasoline combustion and 48.64 MT from diesel combustion. The Project would have an estimated annual gasoline demand of 63,708 gallons and an estimated annual diesel demand of 4,764 gallons.

Operational Energy Use Analysis

Californians used 287,826 gigawatt hours (GWh) of electricity in 2022, of which Riverside County used 17,781 GWh (CEC 2022). The Project's operational electricity use would represent a nominal portion of electricity used in the state and Riverside County. In addition, the Project applicant would install solar photovoltaic (PV) panels. Regarding natural gas, Californians used 11.7 billion therms of natural gas and 431 million therms of natural gas in Riverside County in 2022 (CEC 2022). The Project's operational natural gas use would contribute to less than 0.001 percent natural gas use in the state and less than 0.01 percent in the County.

Riverside County annual gasoline fuel use in 2026 is anticipated to be 679 million gallons and diesel fuel is anticipated to be 260 million gallons (CARB 2021). Expected Project operational gasoline and diesel consumption would represent approximately 0.009 percent of gasoline use and 0.001 percent of diesel use in the County.

Project operations would not substantially affect existing energy supplies or resources. The Project would comply with applicable energy standards and new capacity would not be required. Energy impacts associated with operations would be less than significant.

b) Less-than-Significant Impact. As discussed in Section VIII Greenhouse Gas Emissions, the Project will comply with all energy efficiency measures, building standards, and state and local plans for reducing greenhouse gas emissions (GHGs). The Project will also include several additional GHG and energy-reducing measures discussed below. Therefore, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Sources

1. City of Menifee General Plan, certified December 18, 2013
   City of Menifee General Plan Exhibit S-3 “Liquefaction and Landslides”
2. Final Environmental Impact Report City of Menifee, certified December 18, 2023
   - Section 5.6 – Geology and Soils
     - Figure 5.6-1 – Geologic Map
     - Figure 5.6-2 – Fault Zones
     - Figure 5.6-3 – Seismic Hazards
     - Figure 5.5-1 Paleontological Resources Sensitivity

3. Report of Preliminary Geotechnical Investigation and Infiltration Feasibility Study. Chris Wheeler Engineering, 2023.

Applicable General Plan Policies

S-1.1: Require all new habitable buildings and structures to be designed and built to be seismically resistant in accordance with the most recent California Building Code adopted by the city.

S-2.1: Require all new developments to mitigate the geologic hazards that have the potential to impact habitable structures and other improvements.

S-2.2: Monitor the losses caused by geologic hazards to existing development and require studies to specifically address these issues, including the implementation of measures designed to mitigate these hazards, in all future developments in these areas.

S-2.3: Minimize grading and modifications to the natural topography to prevent the potential for man-induced slope failures.

Analysis of Project Effect and Determination of Significance

a.i) Less-than-Significant Impact. Projects near *Holocene-active faults* are regulated by the Alquist-Priolo Earthquake Fault Zoning Act of 1972. The Act prohibits the development of structures for human occupancy across the surface trace of an active fault in California, with certain exceptions. Faults determined by the CGS as *sufficiently active* and *well-defined* are identified on Alquist-Priolo regulatory maps as *Active Fault Traces* and bounded by buffers called *Earthquake Fault Zones*. Sites within these zones are required to undergo fault hazard studies as part of the geotechnical investigation. Review of the local Alquist-Priolo regulatory maps indicates that the Project site is not underlain by a known active fault and is not within an Earthquake Fault Zone (Chris Wheeler Engineering 2023). Consequently, the risk of surface rupture is low and impacts would be less than significant.

a.ii) Less-than-Significant Impact. The active San Jacinto Fault Zone is located approximately 12 miles northeast of the subject site. The Elsinore Fault Zone is 7.5 miles southwest of the site. Other active fault zones in the region that could produce a seismic event affecting the site include the Newport-Inglewood-Rose Canyon, Coronado Bank, San Diego Trough, and San Clemente Fault Zones to the southwest, the Whittier and Cucamonga Fault Zones to the northwest, and the San Andreas Fault Zone to the northeast (Chris Wheeler Engineering 2023). Given the proximity of the site to active fault zones in the region, earthquakes large enough to result in moderate ground shaking is possible. Seismic risks are significantly higher in areas closer to the region's major faults, and a moderate or major earthquake could result in potentially damaging ground shaking. The Project would be required to utilize proper engineering design and standard construction practices satisfactory to the City Building Official which would be verified during the citywide plan check processing. Compliance with the latest building and fire codes would mitigate potential adverse effects to humans resulting from strong seismic ground shaking events. This would ensure that the potential for impacts from local/regional geologic hazards would be less than significant.

a.iii) Less-than-Significant Impact. Based on a review of readily available, pertinent geologic and geotechnical literature, as documented in the Project's geotechnical report, it was determined that the site is generally underlain by topsoil, subsoil, and older alluvium. As part of the analysis, the City of Menifee General Plan Exhibit S-3 "Liquefaction and Landslides" (Chris Wheeler Engineering 2023) was reviewed. The site is not located within a landslide seismic hazard area. The site and general vicinity are relatively flat with only a minor graded slope running along the western edge of the site. Based on the geologic report, there is no risk of landslide hazards at the site.

Soil liquefaction is the loss of soil strength during seismic events. Sites susceptible to liquefaction are generally characterized as underlain by geologically young unconsolidated sediments, loose cohesionless sands and silts, and shallow groundwater conditions. The alluvial materials underlying the site are not considered subject to liquefaction due to the cohesive soils having a significant clay content and relatively stiff to very stiff soil consistency and medium dense relative density. Furthermore, shallow groundwater conditions do not exist at the site. The site is not within liquefaction hazard area on the City of Menifee General Plan Exhibit S-3 "Liquefaction and Landslides" (Chris Wheeler Engineering 2023).

Project development would be required to utilize proper engineering design and standard construction practices as outlined in the project geotechnical report and satisfactory to the City Engineer. These project requirements would be verified during review of construction-level development plans and would ensure that the potential for impacts from seismic ground shaking would be less than significant.

a.iv) Less-than-Significant Impact. Based on a review of readily available, pertinent geologic and geotechnical literature, as documented in the Project's geotechnical report (Chris Wheeler Engineering 2023), it was determined that the site is generally underlain by artificial fill soils (Qaf) over old alluvial fan deposits (Qof_a). As part of the analysis, the City of Menifee General Plan Exhibit S-3 "Liquefaction and Landslides" (Chris Wheeler Engineering 2023) was reviewed. The site is not located within a landslide seismic hazard area. The site and general vicinity are relatively flat with only a minor graded slope running along the western edge of the site. Based on the geologic report, there is no risk of landslide hazards at the site. Project development would be required to utilize proper engineering design and standard construction practices as outlined in the project geotechnical report and satisfactory to the City Engineer. These project requirements would be verified during review of construction-level development plans and would ensure that the potential for impacts from seismic ground shaking would be less than significant.

b) Less-than-Significant Impact. The following soils are known to occur within the project area (Chris Wheeler Engineering (2020):

- **ARTIFICAL FILL (Qaf):** Artificial fill soils were encountered underlying the site. The fill soils range in thickness from about 6 feet to 8 feet below existing grade. However, fill soil thicknesses may be deeper in areas of the site not investigated. The fill soils appear to have been placed during the original mass grading and development of the site and general vicinity. The fill materials consist of brown, moist, clayey sands and clayey sands with gravel (SC). The relative density of the fill soils appears to be loose to medium dense. The fill soils tested were found to have a low expansion potential and the prevailing foundation soils have a medium expansion index.
- **OLD ALLUVIAL FAN DEPOSITS (Qof_a):** Late to middle Pleistocene-aged alluvial fan materials were encountered underlying the fill soils across the entire site. These materials extend to the maximum depth of exploration at about 25 feet below existing grade. The alluvial materials consist of interbedded layers of moist, light to dark brown to reddish brown, stiff to very stiff sandy lean clays (CL), and medium dense sandy silts (ML), silty sands (SM) and clayey sands (SC).

Development of the Project site would disturb the site during grading and construction and expose the underlying soils, which would temporarily increase erosion susceptibility. In the long-term, development of the subject property would increase the extent of impervious surface cover and landscaping on the Project site, thereby reducing the potential for erosion and loss of topsoil. The Project would be required to adhere to standard regulatory requirements, including but not limited to requirements imposed by the City of Menifee's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (State Water Resources Control Board Order No. 99-08-DWQ) and a project-specific Water Quality Management Plan (WQMP) that includes Best Management Practices (BMPs) to minimize water pollutants including sedimentation in stormwater runoff. With mandatory compliance with the City of Menifee's NPDES Municipal Stormwater Permit and the Project's WQMP, the Project's potential to result in substantial soil erosion of the loss of topsoil would be less than significant. Adherence to the City's grading and erosion control measures would ensure implementation of appropriate measures during grading and construction activities to reduce soil erosion impacts to below levels of significance.

c) Less-than-Significant Impact. The Project site is underlain by topsoil, subsoil, and Older Alluvium, which are relatively stable. The Project would be required to utilize proper engineering design and standard construction practices which would be verified by City staff during Citywide plan check processing of construction- level documents. Impacts associated with off-site landslides, lateral spreading, subsidence, liquefaction, or collapse are expected to be less than significant.

d) Less-than-Significant Impact. The near surface soils within the project area generally consist of dry, loose, silty sand to moist medium dense, clayey sand. As stated in the Project's geotechnical report, the near surface on-site soils are determined to possess a low expansive potential (Expansion Index ranging from 21 to 50). Through standard conditions of approval, the proposed Project would be required by the City to incorporate the recommendations contained within the Project geotechnical report into the grading plan for the Project. As such, implementation of the Project would result in less-than-significant impacts associated with expansive soils and would not create substantial risks to life or property.

e) No Impact. No septic or alternative wastewater systems are proposed. The project site is in an urbanized area with infrastructure systems (i.e., municipal water, sewer, and storm water facilities) in place, which would not be affected by the Project. No impact would occur.

f) Less than Significant. As shown in Figure 5.5-1 of the City's FEIR (page 5.5-13, Paleontological Sensitivity), the majority of the City is primarily classified with a high paleontological sensitivity rating. Impacts would most likely occur in native soil that has not been previously disturbed. Many areas that are classified with a high paleontological sensitivity rating, such as the Project site, have already been developed. Published geological reports (e.g., Morton and Miller 2006) covering the Project area indicate that the proposed Project has the potential to impact Quaternary very old alluvial fan deposits. While the overall potential for paleontological or unique geological resources is considered low given the developed nature of the site, ground-disturbing activities still have the potential to disturb previously unknown resources. Therefore, adherence to the City's standard condition of approval, GEO-1 shall be implemented. Implementation of the following standard condition of approval would result in less than significant impacts to paleontological resources.

Standard Condition of Approval

> **GEO-1:** In areas of high sensitivity for paleontological resources, each project shall retain a qualified paleontologist to monitor ground disturbing activity. Should any potentially significant fossil resources be discovered, no further grading shall occur in the discovery area until the Community Development Director is satisfied that adequate provisions are in place to protect these resources. Unanticipated discoveries shall be evaluated for significance by a professional paleontologist. If significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates, and other special studies; submit materials to a museum for permanent curation; and provide a comprehensive final report including catalog with museum numbers to the City of Menifee Community Development Director.

Mitigation Measures

No mitigation measures are required.

VIII. GREENHOUSE GAS EMISSIONS

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

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2023
    - Section 5.7 – Greenhouse Gas

Applicable General Plan Policies

OCS-9.1: Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.

OCS-9.2: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.

OCS-9.3: Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

OCS-9.4: Support the Riverside County Regional Air Quality Task Force, the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy, and the South Coast Air Quality Management District's Air Quality Management Plan to reduce air pollution at the regional level.

OCS-9.5: Comply with the mandatory requirements of Title 24 Part 1one of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. Construction activity is assumed to occur over a period of 18 months beginning in May 2024 and concluding in October 2025. Based on the GHG analysis conducted for the project (Bluescape Environmental 2023), construction activity for the Project would generate an estimated 500 metric tons of CO_2e, as shown in Table 6. Amortized over a 30-year period (the assumed life of the Project), construction of the proposed Project would generate 16.6 metric tons of CO_2e per year.

Operational GHG emissions are long-term emissions related to energy use, solid waste, water use, and transportation. Each source is discussed below and includes the emissions associated with existing development and the anticipated emissions that would result from the proposed Project.

VIII. GREENHOUSE GAS EMISSIONS

Table 6
Construction Greenhouse Gas Emissions

Year	Annual Emissions (Metric tons CO_2e)
2024	247
2025	254
Total Project	500
Amortized over 30 years	**16.6**

Bluescape Environmental, Attachment A.

Mobile Source Emissions

Mobile source GHG emissions were estimated using the average daily trips from the Home 2 Suites Traffic Assessment Letter (Rick Engineering 2023). The screening letter states that the Project would generate 466 daily trips. The Project would generate approximately 607.6 metric tons per year of CO_2e associated with new vehicle trips.

Area Emissions

Emissions from landscaping equipment, architectural coatings, and household consumer products are considered area sources. Estimated annual GHG emissions from area sources for the Project would be 1.3 MT CO_2e per year.

Energy Use

Operation of onsite development would consume both electricity and natural gas. The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. Natural gas emissions were calculated using Project specific natural gas usage information. Onsite solar energy use was assumed in the modelling, reducing Project electricity demand by 20%. The overall energy use at the Project site would result in approximately 281.4 metric tons of CO_2e per year.

Water Use Emissions

The Project would use approximately 1,859,132 gallons of water per year. Based on the amount of electricity generated to supply and convey this amount of water, the Project would generate approximately 4.36 metric tons of CO_2e per year.

Solid Waste Emissions

For solid waste generated onsite, the GHG analysis results indicate that the Project would result in approximately 18.1 metric tons of CO_2e per year associated with solid waste disposed within landfills.

Refrigerant Emissions

Operation of building air conditioning and refrigeration equipment generates fugitive GHG emissions. The refrigerant use at the Project site would result in approximately 16.9 metric tons of CO_2e per year.

Stationary Emissions

Emissions from operation of the onsite emergency engine were estimated assuming the engine uses diesel fuel and meets SCAQMD Rule 1470 emissions standards; results indicate that the Project would result in approximately 8.77 metric tons of CO_2e per year associated with operation of this equipment.

Table 7
Operational Greenhouse Gas Emissions

Emission Source	Annual Emissions (Metric tons CO_2e/yr)
Mobile Source	607.6
Area	1.33
Energy	281.4
Water Use	4.36
Solid Waste	18.1
Refrigerants	16.9
Stationary	8.77
Total Operational	***938.5***

Table 8 shows the combined net new construction, operational, and mobile GHG emissions associated with the proposed Project. As discussed above, temporary emissions associated with construction activity are amortized over 30 years (the anticipated life of the Project).

As shown in Table 8, total GHG emissions from construction and operation of the Project do not exceed the threshold of 3,000 MT CO_2e/year. Impacts associated with GHG emissions would be less than significant.

Table 8
Combined Annual Greenhouse Gas Emissions

Year	Annual Emissions (Metric tons CO_2e)
Construction (amortized)	16.6
Operational	938.5
Total	***955.1***
SCAQMD GHG Threshold	*3,000*
Exceeds Threshold?	**No**

See Appendix B for annual CalEEMod emission results files.

b) Less-than-Significant Impact. The principal state plan and policy adopted to reduce GHG emissions is AB 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2022 Scoping Plan, which outlines a framework to achieve SB 32's 2030 target, emphasizes innovation, adoption of existing technology, and strategic investment to support its strategies. Statewide plans and regulations in support of these strategies, such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources, are being implemented at the statewide level; as such, compliance at a project level would occur as implementation continues statewide.

As mentioned above, Senate Bill 375, signed in August 2008, is a state-level policy directing each of California's 18 major MPOs to prepare an SCS that contains a growth strategy to meet emission targets for inclusion in the RTP. The applicable MPO for the Project site is SCAG, and project consistency with the goals contained in SCAG's 2020 RTP/SCS is discussed below.

SCAG 2020 RTP/SCS

SCAG's 2020 RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375. The proposed hotel development project would not conflict with any of the SCAG's 2020 RTP/SCS goals, as outlined in Table 15 of the AQ/GHG report prepared for the project (See Attachment A).

The City of Menifee General Plan

The City's Open Space and Conservation Element of the General Plan establishes goals to have efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations as well as an environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions. The proposed hotel development project would not conflict with the applicable General Plan policies.

Mitigation Measures

No mitigation measures are required.

IX. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2023
    - Section 5.8 – Hazards and Hazardous Materials

Applicable General Plan Policies

S-5.2: Ensure that the Fire Department can continue to respond safely and effectively to a hazardous materials incident in the city, whether it is a spill at a permitted facility, or the result of an accident along a section of the freeway or railroads that extend across the city.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. The Project site consists of a developed parcel of land with a paved parking lot. Development of the Project would require standard transport, use, and disposal of hazardous materials and wastes. If the use of these materials does not adhere to established federal, state, and local laws and regulations, workers, building occupants and residents, the public, and/or the environment could be exposed to hazardous materials.

Construction

Heavy construction equipment (e.g., dozers, excavators, tractors) would be operated for development of the Project. The equipment would be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored, handled, or transported. Other materials used—such as paints, adhesives, and solvents—could also result in accidental releases or spills that could pose risks to people and the environment. These risks are standard, however, on all construction sites, and the Project would not cause greater risks than would occur on other similar construction sites. Construction contractors would be required to comply with federal, state, and local laws and regulations regarding the transport, use, and storage of the hazardous materials. Applicable laws and regulations include CCR Title 8, Section 1529 (pertaining to ACM) and Section 1532.1 (pertaining to LBP); CFR Title 40, Part 61, Subpart M (pertaining to ACM); CCR Title 23, Chapter 16 (pertaining to UST); CFR Title 29, Hazardous Waste Control Act; CFR Title 49, Chapter I; and Hazardous Materials Transportation Act requirements as imposed by the USDOT, Cal/OSHA, CalEPA and DTSC. Additionally, construction activities would require a Stormwater Pollution Prevention Plan (SWPPP), which is mandated by the National Pollution Discharge Elimination System General Construction Permit and enforced by the Santa Ana RWQCB. The SWPPP will include strict onsite handling rules and BMPs to minimize potential adverse effects to workers, the public, and the environment during construction, including but not limited to:

- Establishing a dedicated area for fuel storage and refueling activities that includes secondary containment protection measures and spill control supplies;
- Following manufacturers' recommendations on the use, storage, and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel tanks;
- Properly containing and removing grease and oils during routine maintenance of equipment; and
- Properly disposing of discarded containers of fuels and other chemicals.

Mandatory compliance with applicable laws and regulations related to the routine transport, use, and disposal of hazardous materials during construction activities at the Project site would limit potentially significant hazards to construction workers, the public, and the environment. Impacts would be less than significant.

Operation

The Project site would be developed with a hotel and surface parking area, which would involve routinely using hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Therefore, operation of the Project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

b) Less-than-Significant Impact. The proposed hotel use would have guest rooms that are for transient human occupancy which are not a use known to create any significant hazard to the public or the environment. As such, no long-term hazards are anticipated. Construction of the Project would involve the use of common, but potentially hazardous materials, including vehicle fuels, paints, cleaning materials, and caustic construction compounds. The transport and handling of these materials would occur in accordance with California Occupational Safety and Health Administration (Cal OSHA) guidelines. Further, such materials would be disposed of in accordance with California Department of Toxic Substance Control (DTSC) and County Regulations. Compliance with applicable OSHA, Cal OSHA and DTSC regulations for the handling of hazardous materials and any spill cleanup procedures (in the event of any accidental spill) would prevent significant hazards to the public and the environment. Therefore, potential impacts would be considered less than significant.

c) Less-than-Significant Impact. Paloma Valley High School is located 1.25 miles southwest of the Project site and Mt. San Jacinto Junior college is 0.25 mile to the south. However, the Project would not involve the use or transport of substantial amounts of hazardous materials and the Project would not create a significant hazard to schools in the area. Impacts would therefore be less than significant.

d) Less-than-Significant Impact. The site was evaluated using appropriate databases including the California Department of Toxic Substances Control EnviroStor database (DTSC 2023a) which, pursuant to Government Code Section 65962.5, lists Federal Superfund, State Response, Voluntary Cleanup, School Cleanup, Hazardous Waste Permit, and Hazardous Waste Corrective Action sites, and the California State Waterboard's GeoTracker (DTSC 2023b), which lists LUFT sites. A LUFT site is an undergoing cleanup due to an unauthorized release from an underground storage tank system. According to the EnviroStor database, there are no active listings for the Project site. However, the GeoTracker website identified a closed LUFT site 0.34 miles north of the Project site (30107 Antelope Road). The land use is an existing Shell Gas Station. A leaking tank with gasoline was reported in 2008. Site remediation consisted of soil cleanup and well monitoring. Cleanup efforts were completed in 2011 and a no further action" clearance letter was filed. Impacts would be less than significant.

e) Less-than-Significant Impact. The project site is located 6.4 miles southeast of the Perris Valley Airport and is not within the boundaries of the runway approach. Therefore, the proposed Project would not pose a safety hazard to people working in the area. Impacts would be less than significant.

f) Less-than-Significant Impact. The Project does not include activities or structures that would impair implementation of, or physically interfere with, an emergency response plan, or result in the closure or any roadways. The proposed development is not expected to result in the need for additional emergency and fire facilities. Any development of the site would be required to comply with all applicable Fire, Building, and Health and Safety Codes. During construction and long-term operation, the proposed Project would be required to maintain adequate emergency access for emergency vehicles as required by the City. Because the proposed Project would not interfere with an adopted emergency response or evacuation plan, impacts would be less than significant.

g) No Impact. According to City of Menifee General Plan Figure S-8, Very High Fire Hazard Severity Zones and Public Facilities, the Project site is not located in an area of moderate to very high fire risk. The Project site is located in an area that has been largely developed, with commercial, residential uses and major transportation corridors such as I-215 to the west of the Project site. No wildlands are located on or adjacent to the Project site and the Project site is largely devoid of vegetation and surrounded on all sides by developed properties (except for a detention basin immediately to the west),215, and paved roads. Thus, implementation of the proposed Project would not 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. No impact would occur.

Mitigation Measures

No mitigation measures are required.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere 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; or	☐	☐	☒	☐
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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.9 – Hydrology & Water Quality
3. Preliminary Hydrology Report, April 26, 2024
4. FEMA Flood Map, Panel 06065C2070H (8/18/2014). https://msc.fema.gov/portal/search?AddressQuery=City%20of%20Menifee%20California

Applicable General Plan Policies

S-3.1: Require that all new developments and redevelopments in areas susceptible to flooding (such as the 100-year floodplain and areas known to the City to flood during intense or prolonged rainfall events) incorporate mitigation measures designed to mitigate flood hazards.

S-3.2: Reduce flood hazards in developed areas known to flood.

S-3.3: Use technology to identify flood-prone areas and to notify residents and motorists of impending flood hazards and evacuation procedures.

S-3.4: Develop floodplains as parks, nature trails, equestrian parks, golf courses, or other types of recreational facilities or joint-use facilities that can withstand periodic inundation wherever feasible.

S-3.5: Encourage neighboring jurisdictions to require development occurring adjacent to the city to consider the impact of flooding and flood control measures on properties within Menifee.

S-3.6: Coordinate with FEMA to ensure that flood mapping and flood risk information is current and available.

S-3.7: When feasible locate new essential public facilities outside of flood risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities or identify other methods to minimize damage if these facilities are located in flood hazard zones.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. The discussion and analysis in this section is based on the Project Specific Water Quality Management Plan and Preliminary Hydrology Report prepared by Hariya Inc. on April 26, 2024..

The California State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards regulate the quality of surface water and groundwater bodies throughout California. For the City of Menifee, including the Project site, the Santa Ana Regional Water Quality Control Board (SARWQCB) is responsible for implementation of the Water Quality Control Plan. Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the Federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is mandated by state and federal statutes and regulations. Locally, the NPDES program is administered by the SARWQCB and any construction activities, including grading, that would result in the disturbance of one acre or more of land would require compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity (Construction General Permit). The proposed Project would result in the disturbance of approximately 2.1 acres and therefore would be required to comply with the Construction General Permit.

Construction

Construction of the Project would require grading and excavation of soils, which would loosen sediment, which would then have the potential to mix with surface water runoff and degrade water quality. Pollutants of concern during Project construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and transport of sediment downstream compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. In addition, construction-related pollutants, such as chemicals, liquid and petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste, could be spilled, leaked, or transported via stormwater runoff into adjacent drainages and into downstream receiving waters.

The City adopted Chapter 15.01 (Storm Water/Urban Runoff) of the Municipal Code requiring preparation and adoption of a Project-specific Water Quality Management Plan (WQMP). The WQMP identifies Best Management Practices (BMPs) to be implemented to ensure that water quality of receiving waters is not degraded due to Project implementation. Projects in the City of Menifee are required to prepare and submit to the City for review a Preliminary WQMP for land use permit approvals. A Final WQMP must be submitted to the City for review and approval prior to the issuance of grading/building permits.

Adherence to the existing requirements and implementation of the appropriate BMPs are ensured through the City's construction permitting process, which would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and impacts would be less than significant.

Operation

The operation of a new hotel development would introduce pollutants such as chemicals from household cleaners, nutrients from fertilizer, pesticides and sediments from landscaping, domestic trash and debris, and oil and grease from vehicles. These pollutants could potentially discharge into surface waters and result in degradation of water quality. Thus, the Project would be required to comply with existing regulations that limit the potential for pollutants to discharge from the site. As stated above, the proposed Project would be required to incorporate a Water Quality Management Plan (WQMP) based on the anticipated pollutants that could result from the Project. The BMP would include pollutant source control features and pollutant treatment control features.

The majority of the Project site consists of pervious surface area. Currently, storm water generally sheet flows over the parking areas and driveway aisle into the curb and gutter system and finally discharges into the west side of the boundary through a curb cut opening. The proposed Project is expected to maintain the existing drainage pattern. The runoff from the basin will sheet flow over the parking areas and driveway aisle into the curb and gutter system and get intercepted at Flogard catch basins. The runoff will then be pumped partially into the modular wetland system for treatment and the remaining runoff will be stored in the 12” CMP circular pipe storage. The excess runoff from the drainage system will be discharged on to the northwest side of the property. The modular wetlands would treat stormwater runoff pursuant to the City’s MS4 permit.

With implementation of the operational source and treatment control BMPs that are outlined in the Project’s Water Quality Management Plan (Hariya Inc. 2023), which would be reviewed and approved by the City during the permitting and approval process, potential pollutants would be reduced to the maximum extent feasible, and implementation of the proposed Project would not substantially degrade water quality.

Standard Condition: The following Standard Condition (compliance with Chapter 15.01 [Storm Water/Urban Runoff] and City MS4 Permit) are regulatory requirements implemented as a routine action by the City to ensure compliance with SARWQCB water quality standards.

- **Standard Condition H-1:** The Project Applicant shall comply with the Santa Ana Regional Water Quality Control Board Storm Water permit requirements, including the Chapter 15.01 (Storm Water/Urban Runoff) of the Menifee Municipal Code. The Project Applicant shall prepare and implement a Final Water Quality Management Plan (FWQMP) for the Project. The FWQMP shall be submitted to the Planning Manager of the City of Menifee Planning Department for review and approval prior to issuance of any permits for ground disturbing activities. The FWQMP would act as the overall program document designed to provide measures to mitigate potential water quality impacts associated with the operation of the proposed Project. At a minimum, the FWQMP for the Project shall include:
  - An inventory and accounting of existing and proposed impervious areas.
  - Low Impact Development (LID) design details incorporated into the Project. Specific LID design may include but is not limited to using pervious pavements and green roofs, dispersing runoff to landscaped areas, and/or routing runoff to the storm water detention/retention chamber system that would be developed on site as part of the Project design.
  - Measures to address potential storm water contaminants. These may include measures to cover or control potential sources of storm water pollutants at the Project site.

Implementation of Standard Condition H-1 would occur pursuant to Chapter 15.01 [Storm Water/Urban Runoff] and the City’s MS4 Permit to ensure the proposed Project does not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water capacity. Impacts would be less than significant, and mitigation is not required.

b) Less-than-Significant Impact. As shown on the City of Menifee General Plan FEIR Figure 5.9-2, *Groundwater Basins*, the Project site is located within the Perris South and Menifee Management Zones of the San Jacinto Groundwater Basin. There are few domestic uses for groundwater within the City, due to salinity/water quality issues, and the City primarily relies on imported water from EMWD for its domestic water supply. The Project does not propose the installation of any water wells that would directly extract groundwater. The Project would not withdraw groundwater or otherwise substantially interfere with long-term groundwater recharge or the groundwater table level. Although the increase in impervious surface cover that would occur with development of the site could reduce the amount of water percolating down into the underground aquifer that underlies the Project site and a majority of the city, and as noted in the City’s General Plan Final EIR, “there are no percolation basins or other areas in the City used for intentional recharge of groundwater basins”. Additionally, the proposed Project would install an onsite storm drain system that would convey runoff modular wetland system for treatment to collect stormwater runoff and for treatment prior to discharging into existing drainage facilities. the proposed Project would be subject to Standard Condition H-1, which requires development and implementation of a Final Water Quality Management Plan (FWQMP) to identify BMPs to retain the site's minimum design capture volume and hydromodification volume. Storm water shall be captured on the site such that post-development storm water runoff volume or time of concentration will not exceed pre-development storm water runoff. Additional project design features designed to maximize groundwater infiltration, such as roof downspouts draining into pervious, landscaped areas and maintenance of existing surface flows across the Project site into the proposed on-site modular wetlands would further facilitate groundwater recharge. Periodic maintenance of any required basins and landscaped areas during project occupancy and operation shall be in accordance with the schedule outlined in the FWQMP. Through compliance with Standard Condition H-2, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that it impedes sustainable groundwater management of the basin. Impacts would be less than significant.

c) Less-than-Significant Impact. See discussion c (i) through c(iii) below.

c.i) Less-than-Significant Impact.

Construction

Construction of the Project would require grading and excavation of soils, which would loosen sediment and could result in temporary erosion or siltation impacts. Approximately 2.01 acres would be disturbed as part of Project construction. The proposed Project would comply with the City's Grading and Erosion Control regulations (Chapter 8.26 of the Municipal Code), which establishes grading and erosion control regulations. Adherence to the existing requirements and implementation of the required BMPs per the plan check and permitting process would ensure that erosion and siltation associated with construction activities would be minimized, and impacts would be less than significant.

Operation

The Project site is currently a developed parcel of land with an existing paved parking lot. The proposed Project would replace the existing impervious surfaces with the hotel structure and surface parking lot. The site would be paved or landscaped so that exposed soils would not occur on the site. Post development design and permanent BMPs would ensure operational impacts (storm water and non-storm water runoff) from the Project would have less-than-significant impacts to downstream receiving waters. In addition, the Project is required to implement a WQMP that would provide operational BMPs to ensure that operation of the Project would not result in long term erosion or siltation. Proposed stormwater infrastructure would slow and retain stormwater, which would also limit the potential for erosion or siltation. With implementation of these regulations, impacts related to erosion or siltation onsite or off-site would be less than significant.

c.ii) Less-than-Significant Impact. According to FEMA's FIRM Flood Map, the Project site is classified as Zone X, an area determined to be outside of the 0.2 percent annual chance of flood hazard. The Project applicant would be required to obtain a development permit prior to construction of the Project. The City would review the permit application to ensure development conforms to local ordinances regulating grading and drainage such that the Project would not be subject to significant flood hazard and structures would be flood proofed. Thus, the proposed Project would not impede or redirect flood flows, and impacts would not occur.

c.iii) Less-than-Significant Impact. As described in the previous responses, the proposed Project would be required to implement a WQMP during construction that would implement BMPs, such as the use of silt fencing, fiber rolls, and gravel bags, that would ensure that runoff would not substantially increase during construction, and that pollutants would not discharge from the Project site, which would reduce potential impacts to drainage systems and water quality to a less-than-significant level.

The Project would replace the existing impervious surfaces with the hotel building and surface parking lot.

Proposed drainage improvements would be sized to capture, filter, and infiltrate runoff from the 85th percentile 24-hour storm event. Development of the proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems and impacts would be less than significant.

d) Less-than-Significant Impact. The City's General Plan EIR indicates parts of the City are within existing inundation areas for up to three dams at Diamond Valley Lake and for Lake Perris Dam. However, each of these dams has been engineered to withstand earthquakes of 7.5 magnitude along the San Jacinto Fault and 8.0 magnitude along the San Andreas Fault, and the Metropolitan Water District continuously monitors these dams and their foundations for deformation, which would reduce impacts from dam failure to less than significant through buildout of the General Plan.

As discussed in X(c)(ii), the Project site is classified as Zone X, an area determined to be outside of the 0.2 percent annual chance of flood hazard. A WQMP would be prepared and implemented as part of the Project to ensure pollutants are contained and would not be released from the Project site during construction. Post construction stormwater infrastructure would ensure capture and treatment of storm flows up to the 85th percentile 24-hour storm. Therefore, the Project would not be subject to a significant flood hazard.

The Project site is located approximately 31 miles northeast of the Pacific Ocean and separated by the Santa Ana Mountains. Therefore, the Project is not located within a tsunami zone and no impacts would occur. Similarly, a seiche is the sloshing of a closed body of water from earthquake shaking. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. Menifee Lakes are artificial waterbodies located approximately 1,880 feet east of the site and are separated from the site by residential uses and Antelope Road that have incorporated storm drain improvements to convey water towards Salt Creek to the north. Therefore, the risk of inundation from a seiche is low and impacts would be less than significant.

e) Less-than-Significant Impact. As described previously, the Project would be required to have an approved WQMP, which would include construction BMPs to minimize the potential for construction related sources of pollution. For operations, the proposed Project would be required to implement source control BMPs to minimize the introduction of pollutants; and treatment control BMPs to treat runoff. With implementation of the operational source and treatment control BMPs that would be required by the City during the permitting and approval process, potential pollutants would be reduced to the maximum extent feasible, and implementation of the proposed Project would not obstruct implementation of a water quality control plan.

California's Sustainable Groundwater Management Act of 2014 (SGMA) provides a framework for sustainable management of groundwater supplies by local authorities. Local agencies involved in the implementation must form local groundwater sustainability agencies within two years. For agencies in basins deemed high or medium priority, groundwater sustainability plans must be adopted by January 31, 2022. By 2042, groundwater sustainability agencies in medium and high-priority basins should achieve sustainable groundwater management to avoid undesirable impacts, such as seawater intrusion, chronic depletion of groundwater, reduction of groundwater storage, degradation of water quality, depletion of surface water, or land subsidence.

The City has one groundwater basin that is governed by SGMA legislation, the West San Jacinto Groundwater Basin. Because pumping in the groundwater basin is managed, which limits the allowable withdrawal of water from the basin by water purveyors, and the Project does not involve groundwater pumping (as water supplies would be provided by the EMWD and no new water pumping stations are anticipated as part of the project), the proposed Project would not conflict with or obstruct a groundwater management plan, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.10 – Land Use and Planning

Applicable General Plan Policies:

LU-1.1: Concentrate growth in strategic locations to help preserve rural areas, create place and identity, provide infrastructure efficiently, and foster the use of transit options.

LU-1.8: Ensure new development is carefully designed to avoid or incorporate natural features, including washes, creeks, and hillsides.

Analysis of Project Effect and Determination of Significance

a) No Impact. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying area. For instance, the construction of an interstate highway or railroad track through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside the community.

The property involves the development of an existing paved parking lot to hotel use. Properties adjacent to the Project site to the north, south and east have been developed with retail and multi-family residential uses; I-215 and a detention basin are to the west. Development of the hotel use on the site would contribute to the existing pattern of retail/commercial development along Antelope Road. The Project would not result in the permanent closure of any streets or sidewalks or the separation of uses and/or disruption of access between land use types. The Project's construction (on-site grading of the existing parcels and the development of the hotel) would not create any new land use barriers nor preclude the development of surrounding parcels. Therefore, no impact would occur with the Project as it relates to the physical division of an established community.

b) No Impact. The City of Menifee General Plan land use designation for the Project site is Specific Plan (SP) and zoned as Menifee Village Specific Plan. The general pattern of land uses within the Menifee Village SPA includes mixed retail, commercial and residential uses east of the I-215 corridor. The development would introduce a hotel land use that is generally compatible with the surrounding retail and commercial land uses. Accordingly, the Project proposed as a hotel development conforms with the City's General Plan and Zoning designations. The Project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No Impact would occur.

Mitigation Measures

No mitigation measures are required.

XII. MINERAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
   - Section 5.11 – Mineral Resources

Applicable General Plan Policies

OCS-4.4: Require that any future mining activities be in compliance with the State Mining Reclamation Act, federal and state environmental regulations, and local ordinances.

OCS-4.5: Limit the impacts of mining operations on the city's natural open space, biological and scenic resources, cultural resources and landscapes, and any adjacent land uses.

Analysis of Project Effect and Determination of Significance

a) No Impact. The Surface Mining and Reclamation Act (SMARA) of 1975 established classification of lands that have the potential to generate mineral resources. SMARA's classification system for such lands was established as four Mineral Resource Zones (MRZs) as follows:

- MRZ-1: These are areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2: These are areas where the available geologic information indicates that there are significant mineral deposits or that there is a likelihood of significant mineral deposits. However, the significance of the deposit is undetermined.
- MRZ-3: These are areas where the available geologic information indicates that mineral deposits are inferred to exist; however, the significance of the deposit is undetermined.
- MRZ-4: These are areas where there is not enough information available to determine the presence or absence of mineral deposits.

As shown on Figure 5.11.1 of the City of Menifee General Plan EIR, the proposed Project site is not located on land designated as an MRZ. No known mineral extraction has occurred historically or is currently conducted on the site or immediate vicinity. The project site is an existing parking lot and surrounded by retail and multi-family residential uses. The City of Menifee General Plan Land Use Map designates the Project site Specific Plan and the zoning designation is Scenic Highway/Commercial. Mineral resources extraction is not a use compatible with the existing on-site and surrounding land uses, nor is the site sufficient in size or location to support productive or cost-effective mineral extraction. Implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impact would occur.

XII. MINERAL RESOURCES

b) No Impact. According to the City's General Plan EIR the Project site and vicinity are not located on land where known mineral resources exist or are likely to exist, and significant mineral resources are unlikely to be designated in the City through build-out of the General Plan. Mineral resources extraction would conflict with the intent of the City General Plan, which does not identify the site as an area for mineral resource recovery. Implementation of the proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No impact would occur.

Mitigation Measures

No mitigation measures are required.

XIII. NOISE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project result in:				
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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.12 – Noise
3. Acoustical Analysis Report for Home2Suites Project, Eilar Associates, October 11, 2023

Applicable General Plan Policies

N-1.1: Assess the compatibility of proposed land uses with the noise environment when preparing, revising, or reviewing development project applications.

N-1.2: Require new projects to comply with the noise standards of local, regional, and state building code regulations, including but not limited to the city's Municipal Code, Title 24 of the California Code of Regulations, the California Green Building Code, and subdivision and development codes.

N-1.3: Require noise abatement measures to enforce compliance with any applicable regulatory mechanisms, including building codes and subdivision and zoning regulations, and ensure that the recommended mitigation measures are implemented.

N-1.7: Mitigate exterior and interior noises to the levels listed in the table below to the extent feasible, for stationary sources adjacent to sensitive receptors.

N-1.8: Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state, and city noise standards and guidelines as a part of new development review.

N-1.12: Minimize potential noise impacts associated with the development of mixed use projects (vertical or horizontal mixed-use) where residential units are located above or adjacent to noise-generating uses.

N-1.13: Require new development to minimize vibration impacts to adjacent uses during demolition and construction.

N-1.17: Prevent the construction of new noise-sensitive land uses within airport noise impact zones. New residential land uses within the 65 dBA CNEL contours of any public-use or military airports, as defined by the Riverside County Airport Land Use Commission, shall be prohibited.

Analysis of Project Effect and Determination of Significance

The following analysis is based on the acoustical analysis report prepared for the Project (Eilar & Associates 2023).

a) Less-than-Significant Impact. Operational noise impacts calculated for the Project (Eilar & Associates 2023) are not expected to generate a substantial permanent increase in ambient noise levels in the vicinity of the project site. A substantial increase would be considered an increase of three decibels or more, which would represent a doubling of sound energy. The minimum 10-minute average ambient noise level measured near residential receivers (65.8 dBA at NML 2) was combined with the project-generated noise impacts to determine the cumulative noise impact and the increase in ambient noise levels at residential receivers resulting project operations. Results are shown in Table 9.

Table 9
Calculated Cumulative Noise Impacts at Nearest Residential Receiver

Receiver Number	Receiver Location	Noise Level (dBA $L_{EQ\ (10\text{-minute})}$)				Impact
		Ambient	Project-Generated	Cumulative	Ambient Increase	
R1	Residential – East (across Antelope Road)	65.8	41.5	65.8	< 0.1	Less than Significant

The results in Table 9 demonstrate that the increase in ambient noise levels from on-site operations (including roof-mounted HVAC equipment and people in outdoor use areas) will be less than 3 dBA.

Project-Generated Traffic Noise

Project-generated traffic impacts were evaluated in the acoustical report to determine whether noise impacts from the Project site would be significant. Calculations were performed to determine the approximate change in noise levels because of project-generated traffic. A significant direct impact occurs when project traffic combines with existing traffic and causes a doubling of sound energy, which is an increase of 3 dB. Direct impacts were assessed by comparing the traffic volume of Antelope Road with project-generated traffic volumes. Project-generated traffic noise increases are shown in Table 10.

Table 10
Anticipated Traffic Noise Level Increase due to Project-Generated Traffic

Traffic Volume (ADT)			Increase in Traffic Noise Level (dB)
Antelope Road	Project-Generated	Total	
27,300	466	***27,766***	0.1

As shown in Table 10, the noise level increase from project-generated traffic is expected to be less than 3 dB. For this reason, project-generated traffic noise levels are expected to be less than significant.

Temporary Construction Noise Impacts

The City of Menifee Municipal Code states that construction activities shall be limited to 6:30 a.m. to 7:00 p.m., Monday through Saturday; there shall be no construction activity on Sundays or nationally recognized holidays. Though the City of Menifee does not give a quantitative noise limit for construction noise, a typically acceptable noise limit of 75 dBA LEQ or less at surrounding residential properties was applied for this project. Construction noise levels were calculated using at the nearest residential receivers to the east. Construction equipment was evaluated as being located near the center of the proposed building footprint, to account for the average equipment location as it moves around on site. Any other potentially noise-sensitive receivers are located at a greater distance from construction activity, and therefore would be exposed to lesser noise impacts due to distance attenuation and shielding provided by intervening structures. Additionally, noise calculations consider typical duty cycles of equipment, to account for periods of activity and inactivity on the site. Noise levels for each phase of construction are shown in Table 11.

Table 11
Temporary Construction Noise Levels at Nearest Residential Receiver

Activity Stage	Equipment	Construction Noise Level (dBA L_{EQ})
Demolition/Grading/Compaction	Backhoe, Bulldozer, Dump Truck, Excavator, Water Truck, Vibratory Roller	68.6
Building Construction/Utilities	Concrete Mixer Truck, Concrete Pump Truck, Excavator, Forklift	65.6
Paving	Paver, Vibratory Roller	62.3

As shown above, construction noise levels are not expected to exceed the typically acceptable construction noise threshold of 75 dBA LEQ. Any other surrounding otherwise noise-sensitive receivers are located at a greater distance from proposed construction activity, and therefore will be exposed to lesser noise impacts due to additional distance attenuation and shielding provided by intervening structures.

Even though noise impacts are expected to remain in compliance with typically accepted construction noise limits, the following “good practice” measures should still be practiced as a courtesy to off-site receivers.

1. Turn off equipment when not in use.
2. Limit the use of enunciators or public address systems, except for emergency notifications.
3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.
4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.
5. Use equipment with effective mufflers.
6. Minimize the use of backup alarms.

Additionally, no construction activity may take place during the more sensitive nighttime hours when ambient noise levels tend to be lower, as per City of Menifee requirements. As demonstrated above, the project is not expected to cause a substantial permanent or temporary increase in ambient noise levels, and therefore, this impact would be less than significant.

b) Less-than-Significant Impact. The Demolition/Grading/Compaction and Paving stages of construction have the potential to generate the highest vibration levels of any phase of construction, as activities would take place closest to sensitive receivers and may consist of the use of a vibratory roller. Based on the acoustical analysis conducted for the project, construction vibration is not anticipated to cause damage to off-site buildings and will only exceed the threshold of “barely perceptible” vibration for a short period of time when work is performed near the eastern boundary of the property, therefore temporary construction vibration impacts were not determined to be “excessive”. Once construction is completed, the proposed hotel entails a land use that is not known for creating any groundborne vibration or groundborne noise levels. Therefore, this impact would be less than significant.

c) No Impact. The Perris Valley Airport (located at 2091 Goetz Road in the City of Perris) is located 6.46 miles northwest of the Project site, and March Air Reserve Base is located 15.5 miles north of the Project site. The Project is not located in land use compatibility zones or 55 dBA CNEL noise contours for either the Perris Valley Airport or March Air Reserve Base. The project site is not located within 2 miles of any public airport or public use airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels from such uses. No impacts would occur.

Mitigation Measures

No mitigation measures are required.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
   - Section 5.13 – Population & Housing

Applicable General Plan Policies

ED-1.1: Focus economic development efforts on the primary objective of increasing the number of jobs that pay above-average wages and salaries.

ED-1.2: Diversify the local economy and create a balance of employment opportunities across skill and education levels, wages and salaries, and industries and occupations.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. The Project proposes the construction of 106 hotel rooms with no permanent residences. The Project would not generate demand for housing at a rate that was not envisioned in the General Plan. The proposed Project would result in a net increase of jobs in the city, with approximately 12 new staff positions at the hotel. Further, the hotel would exclusively service short-term occupants on business and leisure travel.

Construction of the hotel at the subject site represents an “in-fill” development, within an urbanized area, where no new roads or other infrastructure are needed to accommodate the new development. The Project would, therefore, not result in substantial unplanned population growth in the area. Impacts would be less than significant.

b) No Impact. There are no housing units or residences onsite, therefore, the Project would not displace substantial numbers of existing housing and would not necessitate the construction of replacement housing elsewhere. No impact would occur.

Mitigation Measures

No mitigation measures are required.

XV. PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☒	☐

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.14 – Public Services

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. Fire protection services to the Project site are provided by the Riverside County Fire Department (RCFD). There are four Riverside County Fire Department (RCFD) fire stations in the City. These include the following:

- Quail Valley Station #5, 28971 Goetz Road
- Sun City Station #7, 28349 Bradley Road
- Menifee Station #68, 26020 Wickerd Road
- Menifee Lakes Station #76, 29950 Menifee Road

Each of the stations is equipped and staffed with a minimum of one Type 1 fire engine and a three-person engine company (City 2013).

The proposed Project is required to provide a minimum of fire safety and support fire suppression activities, including type of building construction, fire sprinklers, a fire hydrant system and paved access. Menifee Lakes Station (Station No. 76) is located approximately 1.3 roadway mile to the northeast of the Project site. Secondary service would be provided by Sun City (Station No. 7) located approximately 3.3 miles to the northwest of the Project site. The Project site is in an urban setting already served by the RCFD. Since first responders already patrol the project vicinity, compliance with California Vehicle Code 21806(A)(1), which requires all vehicles to yield to emergency vehicles, would ensure implementation of the proposed Project would not adversely affect travel time between the nearest fire station and the Project site.

Additionally, the proposed Project is required to comply with the provisions of the City of Menifee Development Impact Fee (DIF) which requires a fee payment that the City applies to the funding of public facilities, including fire protection facilities. Mandatory compliance with the DIF Ordinance would be required prior to the issuance of a building permit.

For these reasons, the proposed Project would receive adequate fire protection services and would not result in the need for new or physically altered fire protection facilities. Impacts to fire protection facilities would be less than significant.

b) Less-than-Significant Impact. The subject site is served by the Menifee Police Department consisting of a patrol division, SWAT division, traffic division, and K9 division. It is located at 29714 Haun Road, approximately 0.78 miles northwest of the Project site. The Project would introduce approximately 169 hotel occupants (assume 2 persons per room at 80 percent occupancy) and 12 staff to the Project site which would result in an incremental increase in demand for police protection services.

The proposed Project could increase law enforcement calls for service to the site, as it would be developed from an existing parking lot to hotel use. The proposed Project would implement Crime Prevention through Environmental Design (CPTED) techniques that would discourage and or reduce crime from occurring on site. Such CPTED techniques would include, but not be limited to, surface drive aisle lighting, building façade lighting, low-lying landscaping designed to minimize opportunities for concealment, continued maintenance activities on the site, deadbolts/locks on building exterior doors, and perimeter retaining walls.

An incremental increase in law enforcement calls to the Project site could occur; however, such calls would be consistent to the types of calls the Menifee Police Department responds to at similar hotel developments in the City. Additionally, the Project site is an infill site surrounded by existing development and therefore is located in an area of the City already patrolled by the Menifee Police Department. As detailed in response to Checklist Question 5.14(a), implementation of the proposed Project is consistent with planned growth within the City and would not induce substantial population growth in the City or region. Therefore, the project's increase in demand of new or expanded police services would be negligible. Additionally, through the execution of mutual aid agreements maintained with neighboring jurisdictions, the City would have additional police services to provide assistance during major emergencies. Prior to the issuance of building permits, the Project applicant would be required to comply with the provisions of the City's Development Impact Fee (DIF) which requires a fee payment that the City applies to the funding of public facilities, including police protection facilities. Mandatory compliance with the DIF Ordinance would be required prior to the issuance of a building permit. For these reasons, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered police protection facilities. Impacts to police protection facilities would, therefore, be less than significant.

c) No Impact. The project site is served by the Menifee Union School District and the Perris Union High School District and is within the attendance boundaries of the following schools: Callie Kirkpatrick Elementary School, Southshore Elementary School. However, the Project is a proposed hotel development and would not introduce permanent residents. Hence, the Project would not generate new student enrollment nor affect existing levels of public services. Therefore, no impacts to schools are anticipated to occur with project development.

d) No Impact. The public and semi-public recreational uses in the neighborhood and larger vicinity include Wheatfield Park, and Pepita Square Valley Wide Recreation and Park District. The proposed Project does not include any permanent residences. It is reasonable to anticipate the future employees and occupants may use nearby parks. However, given the minimal number of employees and occupants, the increase in use at City of Menifee recreational facilities would be marginal. Furthermore, future occupants visiting for business and leisure purposes are likely to distribute their recreational activities regionally throughout the City of Menifee area, further reducing the intensity of use at local parks. Accordingly, as the Project would not substantially increase demand at any one particular park, no construction or expansion of park facilities would be required that could result in adverse physical impacts. No adverse impacts to existing parks and recreation facilities are anticipated.

e) Less-than-Significant Impact. While employees and patrons of the site may utilize nearby public facilities, such as libraries and community centers, they would not place a physical burden or a substantial increase in demand on these facilities such that it would result in the need for new facilities. The project will not generate new residents moving to the City of Menifee and will merely increase the daytime population of transient residents. As such, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

XVI. RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.15 – Recreation

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) No Impact. As stated above, Project implementation is not anticipated to result in population growth; therefore, the construction of off-site recreational facilities or expansion of existing facilities would not be required. It is reasonable to anticipate the future employees and short-term occupants may use nearby recreational facilities, such as parks and community centers; however, the increase in use at these facilities would be negligible. Furthermore, future occupants visiting for business and leisure purposes are likely to distribute their recreational activities regionally throughout the City of Menifee, further reducing the intensity of use of local recreational facilities. For these reasons, the proposed Project would not increase the use of parks or other recreational facilities to the extent that physical deterioration of the facilities would occur or be accelerated. No adverse impacts to existing parks and recreation facilities are anticipated.

b) No Impact. See response in XVI(a) above. The Project does not include recreational facilities or requires the construction or expansion of recreational facilities. No adverse impacts are anticipated.

Mitigation Measures

No mitigation measures are required.

XVII. TRANSPORTATION

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

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
    - Section 5.16 – Transportation and Traffic
3. Home2SuitesTraffic Assessment Letter, RICK, October 19, 2023; revised 12/28/2023
4. City of Menifee LOS Traffic Study Guidelines, October 2020
5. City of Menifee Traffic Impact Analysis Guidelines for Vehicle Miles traveled, June 2020

Applicable General Plan Policies

C-1.2: Require development to mitigate its traffic impacts and achieve a peak hour Level of Service (LOS) D or better at intersections, except at constrained intersections at close proximity to the I-215 where LOS E may be permitted.

C-2.3: Require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, transit facilities, and other key destination points.

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. A traffic assessment was prepared to evaluate potential operational deficiencies and transportation improvements that may need to be considered in association with the traffic generated by the proposed Project. Per the City of Menifee LOS Traffic Study Guidelines (October 2020), the City requires a traffic study for any development which could have a significant impact on the City's transportation network. At a minimum, intersections where the proposed project will add 50 or more peak hour trips should be studied and roadway segments where the project would add 500 or more daily trips (ADT) would require roadway segment analysis. Based on the Institute of Transportation Engineers (ITE) 11th Edition trip generation rates for All Suites type of lodging, the project falls below the 500 ADT and the 50 peak hour trip thresholds. However, the City requested additional analysis for the intersection of Antelope Road and Newport Road. This is a significant intersection per the City's general plan and the section of Antelope Road in which the project is fronting is adversely impacted by traffic, thus, requiring LOS analysis for the Project.

Intersection Analysis Findings

Based on the results of the analysis, all the studied intersections currently operate at acceptable levels of service (LOS D or better) and are expected to continue to operate at LOS D or better with the proposed project added.

Queuing Analysis Findings

The results of the queuing analysis for the Existing plus Project scenario at the project driveways showed that the 95th percentile queue lengths are anticipated to fall within the existing or proposed storage.

Transit Services

Riverside Transit Agency's (RTA) Route 61 provides transit service along Antelope Road, adjacent to the Project site. By introducing hotel uses in proximity to an existing bus stop, the Project would facilitate increased transit mobility in the Project vicinity. The proposed Project would be site specific and would not require new transit stops. The project may require the relocation of the existing bus stop in front of the project site to approximately 300 feet north, in front of the Living Spaces commercial lot. Relocation of the existing RTA bus stop is not expected to adversely affect transit services. Implementation of the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the transit services system.

Bicycle Facilities

Dedicated Class II bike lanes are present along Antelope Road. Development of the Project would not affect existing bike lanes. Implementation of the proposed Project would not conflict with a program, plan, ordinance, or policy addressing Menifee's bicycle facilities system.

b) Less-than-Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b) establishes "vehicle miles traveled" (VMT) criteria in lieu of LOS for analyzing transportation impacts and was signed into law as Senate Bill (SB) 743 in 2013. The City of Menifee Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT Guidelines) was adopted on June 3, 2020. A VMT screening evaluation was conducted based on City's screening criteria, to determine if the project will be required to conduct a full VMT analysis. The criteria listed below was utilized to determine if the project would be screened out from VMT analysis due to project characteristics and/or location.

Transit Priority Area (TPA) Screening

Projects located within a TPA may be presumed to have a less-than-significant impact. A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Currently, no TPA's exist in the City of Menifee, therefore, this project is not screened out under this criterion.

Low VMT Area Screening

Per City's guidelines, WRCOG screening tool can be utilized to identify if a project is in a low VMT generating area. The screening tool shows that the proposed Project is located within a low VMT generating area and is presumed to have a less-than-significant impact. Therefore, this project is screened out of this criterion and subsequently screened out of a detailed VMT analysis.

Project Type Screening

Local-serving projects may be presumed to have less-than-significant impact. The City of Menifee provides a list of uses that are local serving in nature, which includes a local-serving hotel. Based on this, the proposed all-suites hotel project is also screened out of this criterion and subsequently screened out of a detailed VMT analysis. Accordingly, the proposed Project would not conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b). Impacts would be less than significant.

c) Less-than-Significant Impact. The Project is located on the west side of Antelope Road and approximately 1,973 feet south of Newport Road. Antelope Road is classified as a Major, 4-lane divided road in the City's General Plan Circulation Element (Exhibit C-3, Roadway Network). Regional access to the Project area is available via the I-215 Freeway located west of the site with on- and off-ramps approximately 0.36 miles west at

Newport Road. There are no existing roadway geometry constraints in the Project area since the major roadways are high-volume capacity streets on a grid system. The Project site is in an urban area so no conflicts with incompatible uses are anticipated.

Roadways must provide adequate sight distance and traffic control, and these provisions are normally achieved through standard roadway design to facilitate vehicular traffic flow. Roadway improvements within and adjacent to the Project site would be designed and constructed to satisfy all City requirements for street widths, corner radii, intersection controls, etc. Adherence to applicable City and Specific Plan requirements would ensure the proposed development would not include any sharp curves or dangerous intersections. Therefore, no substantial increase in hazards due to a design feature would occur, resulting in less-than-significant impacts.

d) Less-than-Significant Impact. The Project includes access via Antelope Road, a public roadway. Traffic associated with Project construction may have a temporary effect on existing traffic circulation patterns, including emergency access. The proposed Project will comply with all the City’s requirements for emergency access and sight distances. Therefore, the Project area would have adequate circulation to accommodate emergency services. Due to the proximity of emergency services, the urban setting, and ready access to the site, impacts to emergency access will be less than significant.

Mitigation Measures

No mitigation measures are required.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a Cultural Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Sources

1. Letter Report for a Negative Cultural Resources overview of the Home2Suites Project, Recuerdos Research, November 3, 2023.

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. A records search was conducted at the Eastern Information Center on October 23, 2023, by Recuerdos Research. Results of the records search were negative; no archaeological or historical resources were previously recorded on or near the subject parcel. The nearest archaeological site was a site recorded in 1976 by Ike Eastvold near the intersection of I-215 and Newport Road. On the sparse site form no indication of artifacts or cultural materials was noted, A field survey conducted in 1981 failed to relocate the site and noted that whatever may have previously existed, was destroyed by freeway and road improvements. Field surveys for projects within a half-mile radius of the current project did not result in the discovery or recordation of any cultural resources. No impacts to listed historical resources are therefore expected to occur with Project development.

b) Less-than-Significant Impact. As stated in response to Section XVIII(a), the subject site does not qualify for listing in the California Register of Historical Resources in that it does not meet any of the criteria for listing. Notwithstanding, the Project entails site development and adoption of a Mitigated Negative Declaration. As such, the Project is subject to tribal consultation requirements under Senate Bill (SB) 18 and Assembly Bill (AB) 52. Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change to a defined Tribal Cultural Resource (TCR) may result in a significant effect on the environment. AB 52 requires tribes interested in development projects within a traditionally and culturally affiliated geographic area to notify a lead agency of such interest and to request notification of future projects subject to CEQA prior to determining if a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. The lead agency is then required to notify the tribe within 14 days of deeming a development application subject to CEQA complete to notify the requesting tribe as an invitation to consult on the project. AB 52 identifies examples of mitigation measures that will avoid or minimize impacts to a TCR. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California PRC, relating to Native Americans. The tribal consultation requirements of SB18 require the City to notify all tribes that are listed on the California Native American Heritage Commission's list of associated tribes who may have knowledge of cultural resources in the project area and extend an offer of consultation.

On June 1, 2023, as part of the City's compliance with SB18 and AB52, the City sent notices and an offer of consultation to all the following tribal governments:

- Pechanga Band of Luiseño Indians;
- Rincon Band of Luiseño Indians;
- Soboba Band of Luiseño Indians; and
- Agua Caliente Band of Cahuilla Indians.

Of these tribes, Pechanga Band of Luiseño Indians and Agua Caliente Band of Cahuilla Indians requested consultation with the City of Menifee pursuant to Public Resources Code 21080.3.1. The Rincon Band of Indians did not request consultation, but sent e-mails to the City on October 17, 2022, and October 26, 2022, wherein they expressed a concern that Tribal Cultural Resources could be buried underneath the site improvements and they requested copies of cultural resources documentation. As part of the ongoing coordination, the City provided copies of the cultural resources documentation to the Tribes on December 8, 2023. As a result of the consultation effort, the City prescribes Standard Conditions of Approval TCR-1 through TCR-7 to protect tribal cultural resources.

SCA TCR-1: Cultural Resources Disposition. If Native American cultural resources are discovered during the course of ground-disturbing activities (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

A. One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Menifee Community Development Department:

   i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.

   ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

   iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, items of Native American Cultural Patrimony, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

SCA TCR-2: Inadvertent Archaeological Find. If during ground-disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s):

A. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the developer, the archaeologist, the tribal representative(s) and the Community Development Director to discuss the significance of the find.

B. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

C. Grading of further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed.

D. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan (CRMP) and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or reburial on the Project property so they are not subject to further disturbance in perpetuity as identified in Nondisclosure of Reburial Condition.

E. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project. Pursuant to California Public Resources Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the Project archaeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council.

SCA TCR-3: Human Remains. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the “most likely descendant.” The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

SCA TCR-4: Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254 (r)., parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).

SCA TCR-5: Archaeologist Retained. Prior to issuance of a grading permit the Project applicant shall retain a Riverside County qualified archaeologist to monitor all ground disturbing activities to identify any unknown archaeological resources. The Project Archaeologist and the Tribal monitor(s) shall manage and oversee monitoring for all initial ground-disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition, etc. The Project Archaeologist and the Tribal monitor(s), shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special-interest or tribal monitors. The developer/permit holder shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition. In addition, the Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site.

A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB 52. Details in the Plan shall include:

A. Project grading and development scheduling.

B. The Project archaeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis.

C. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

SCA TCR-6: Native American Monitoring (Pechanga Band of Luiseño Indians). Tribal monitor(s) shall be required on site during all ground-disturbing activities, including grading, stockpiling of materials, engineered fill, rock crushing, etc. The land divider/permit holder shall retain a qualified tribal monitor(s) from the Pechanga Band of Luiseño Indians. Prior to issuance of a grading permit, the developer shall submit a copy of a signed contract between the above-named Tribe and the land divider/permit holder for the monitoring of the Project to the Community Development Department and to the Engineering Department. The Native American Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

SCA TCR-7: Archaeology Report – Phase III and IV. Prior to final inspection, the developer/permit holder shall prompt the Project Archaeologist to submit two copies of the Phase III Data Recovery report (if required for the Project) and the Phase IV Cultural Resources Monitoring Report that complies with the Community Development Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Community Development Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Community Development Department shall clear this condition. Once the report(s) are determined to be adequate, two copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one copy shall be submitted to the Consulting Tribe(s) Cultural Resources Department(s).

With implementation of SCAs TRC-1 through TRC-7, impacts to tribal cultural resources would remain less than significant.

Mitigation Measures

See Standard Conditions of Approval.

XIX. UTILITIES AND SERVICE SYSTEMS

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

Sources

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013
   - Section 5.17 – Utilities and Service Systems

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) Less-than-Significant Impact. The Project site plans prepared by the applicant indicate that EMWD provides water and sewer service to the Project site, The Southern Cal Gas Company provides natural gas to the Project site, Southern California Edison (SCE) provides electricity to the site, and Spectrum provides telephone and cable service to the site. The Project would be located within an urban setting that has access to water, sewer, electricity, and storm water infrastructure.

Wastewater

EMWD provides wastewater treatment to the City of Menifee. Wastewater from most of Menifee – except the north and south ends of the City – is collected at the Sun City Regional Wastewater Reclamation Facility (RWRF) and sent to the Perris Valley RWRF for treatment. The Sun City RWRF intakes 2.4 million gallons/day of wastewater and has a capacity of 3 million gallons/day. It will be ultimately developed to intake 15 to 21 million gallons/day. The Perris Valley RWRF intakes 13.8 million gallons per day, has a capacity of 22 million gallons per day, and will be ultimately developed to treat 100 million gallons of wastewater per day. An existing sewer line is located on the private driveway between the project site and the existing commercial lot to the northwest and would serve the Project site.

Implementation of the Project would not interrupt existing sewer service to the Project site or other surrounding development. The Project is not anticipated to generate significant amounts of wastewater. Wastewater facilities used by the Project would be operated in accordance with the applicable wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (RWQCB). Thus, impacts would be less than significant.

Water Service

The EMWD provides potable and non-potable water to the City of Menifee and the Project site. The projected net increase in water demands by buildout of the General Plan – about 15.0 mgd, or 16,800 acre-feet per year - is within EMWD forecasts of increases in its water supplies over the 2015-2035 period. EMWD forecasts that its total water supplies will increase by 88,300 acre-feet per year over that period. There are adequate forecast water supplies in the region for General Plan buildout, and no additional water supplies would be needed (City of Menifee Final EIR 2013)

A water line is located along Antelope Road in proximity to the site. The proposed Project would connect to the existing water infrastructure to provide both potable and non-potable water to the site. The Project would generate approximately 169 hotel occupants and 12 employees that would result in an increase in water demand. The Project includes design features that would reduce the Project's water demands. The Project would comply with Title 24 requirements, as well as the California Green Building Code standards. Drought tolerant landscaping, drip irrigation, and low impact development would also be incorporated into the Project design.

Electric Power

Southern California Edison (SCE) will provide electricity to the site and the power distribution system located adjacent to the site will be able to supply sufficient electricity. The effort to connect to the existing electrical system, and to install electricity connections within the Project site to serve hotel residents with electricity is not anticipated to result in significant impacts, as evidenced by the discussions in preceding sections. Therefore, development of the Project would not result in a significant environmental effect related to the relocation or construction of new or expanded electric power facilities. Impacts are less than significant.

Natural Gas

Natural gas will be supplied by Southern California Gas. The site will connect to the existing natural gas line adjacent to the Project site. The effort to connect to the existing gas line within the adjacent roadway, and to install natural gas lines within the Project site to serve hotel residents with natural gas is not anticipated to result in significant impacts, as evidenced by the discussions in preceding sections. Therefore, development of the Project would not result in a significant environmental effect related to the relocation or construction of new or expanded natural gas facilities. Impacts are less than significant.

Telecommunications

Development of the Project would require a connection to telecommunication services, such as wireless internet service and phone service. This can be accomplished through connection to existing services that are available to the developer at the Project site. Therefore, development of the Project would not result in a significant environmental effect related to the relocation or construction of new or expanded telecommunications facilities. Impacts are less than significant.

b) Less-than-Significant Impact. The Project site is located within Eastern Municipal Water District's water service area. Project implementation would result in approximately 169 hotel occupants and 12 employees, with a resultant increase in water demand. The Project includes design features that would reduce the project's water demands. The Project would comply with Title 24 requirements, as well as the California Green Building Code standards. The project area currently receives water service from Eastern Municipal Water District (EMWD), and adequate services are available to serve the new hotel building without requiring new or expanded entitlements. As such, impacts would be less than significant.

c) Less-than-Significant Impact. Wastewater collection will be provided by EMWD and the Project will connect to the sewer main adjacent to the project site. Municipal wastewater is delivered to one of EMWD's five regional water reclamation facilities which treat approximately 499,000 acre-feet of wastewater and recycles approximately 34,000 acre-feet of wastewater within its service area The District is responsible for the collection, transmission, treatment, and disposal of wastewater within its service area, which includes the City of Menifee. The Project would connect to EMWD's existing wastewater collection system within the adjacent private driveway. Existing wastewater treatment facilities would be adequate to serve the Project's wastewater treatment needs. As such, impacts would be less than significant.

d) Less-than-Significant Impact. Implementation of the proposed Project would generate an incremental increase in solid waste volumes requiring off-site disposal during short-term construction and long-term operational activities. This waste would be disposed of in conformance with all applicable local and state regulations pertaining to solid waste including permitting capacity of the landfill servicing the project area. Long-term operation of the proposed residential unit is anticipated to generate typical amounts of solid waste associated with hotel use. The Project would be required to comply with City of Menifee regulations which require a minimum of 50 percent of all construction waste and debris to be recycled. Additionally, the Project would be required to comply with mandatory waste reduction requirements as described below in Item XVII(g). Information from CalRecycle's Disposal Rates Detail for hotels (1.76 pounds per day per person) was used to calculate the amount of solid waste potentially generated by the proposed Project (CalRecycle 2023).

According to the projected number of hotel residents and staff, the Project is anticipated to generate an estimated population of 181 persons. Based on the city's residential waste disposal rates and the Project's estimated number of hotel residents, approximately 58 tons of solid waste would be generated by the Project per year at project buildout. All solid waste generated by the Project would be disposed of at one of the landfills used for collecting solid waste generated in the city. Solid waste generated by the proposed Project would be disposed at the El Sobrante Landfill and the Badlands Sanitary Landfill.

The Badlands Landfill

The Badlands disposal site is located at 31125 Ironwood Ave, Moreno Valley 92373. According to the State of California's Solid Waste Information System, the landfill is active and permitted with a projected closure date of January 1, 2026. The site is currently permitted to a capacity of 34,400,000 cubic yards with a remaining capacity of 7,800,000 cubic yards and permitted throughput of 4,800 tons per day.

El Sobrante Landfill

El Sobrante Sanitary Landfill is located at 10910 Dawson Canyon Road east of Interstate 15 in the Gavilan Hills. According to the State of California's Solid Waste Information System, the landfill is active and permitted with a projected closure date of January 1, 2051. The site is currently permitted to a capacity of 209,910,000 cubic yards with a remaining capacity of 143,977,170 cubic yards and permitted to accept 16,054 tons per day.

The above facilities have a combined daily capacity of 25,854 tons per day. Solid waste capacity has been expanded to provide adequate disposal capacity for cumulative demand over at least the next five years. Combined with the City's mandatory source reduction and recycling program, the proposed Project is not forecast to cause a significant adverse impact to the waste disposal system due to the available capacities at nearby landfills. The project is also required to ensure construction waste is disposed of at the appropriate facilities. The proposed Project would have a less than significant potential to generate solid waste more than state or local standards, or more than the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Less-than-Significant Impact. Solid waste generated during project operation would be managed pursuant to the California Integrated Waste Management Act of 1989 (AB 939), which requires each city or county's source reduction and recycling element to include an implementation schedule demonstrating at least 50 percent diversion of solid waste from landfill disposal or transformation on and after January 1, 2000. In addition, construction waste would be subject to Part 11 of the Title 24 Building Energy Efficiency Standards (also referred to as the California Green Building Standards Code, or CALGreen), which requires a minimum of 65 percent of construction waste be diverted from landfills for reuse and/or recycling. Project compliance with the CALGreen Program is required as a matter of regulatory policy. The proposed Project must comply with the City's waste disposal requirements as well as the California Green Building Code and, as such, would not conflict with any federal, state, or local regulations related to solid waste. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

XX. WILDFIRE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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

1. City of Menifee General Plan, certified December 18, 2013
2. Final Environmental Impact Report City of Menifee, certified December 18, 2013

- Section 5.8 – Hazards and Hazardous Materials

  Exhibit 5.8-3, High Fire Hazard Areas

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) No Impact. The Project does not include activities or structures that would impair implementation of, or physically interfere with an emergency response plan, or result in the closure or any roadways. The proposed development is not expected to result in the need for additional emergency and fire facilities. Any development of the site would be required to comply with all applicable Fire, Building, and Health and Safety Codes. During construction and long-term operation, the proposed Project would be required to maintain adequate emergency access for emergency vehicles as required by the City. Because the proposed Project would not interfere with an adopted emergency response or evacuation plan, impacts would be less than significant.

b) No Impact. The subject site is not located within a High Fire Hazard Zone as indicated on the City's General Plan Final EIR, Figure 5.8-3, *High Fire Hazard Areas*. The property is surrounded by urban uses and is not located in proximity to native habitat areas nor undeveloped wildland areas. Additionally, the project design would incorporate appropriate enhanced construction for the building and will be subject to review by the Fire Department during the plan check review process. Appropriate site design, implementation of management practices, removal of overgrown vegetation and use of fire-resistant landscaping would minimize potential wildfire risks that may include exposure of project occupants to pollutant concentrations from wildfire. Implementation of these measures would reduce potential risks associated with wildland fires to a less-than-significant level.

c) No Impact. The Project will require associated infrastructure in support of the Project operations/occupancy as follows:

- The project will require a potable water connection to the Eastern Municipal Water District's service area.
- The project will require a wastewater connection to the sewer main to the north.
- Electricity provided by Southern California Edison will require the power lines in front of the property along Antelope Road to be installed underground.
- The site will connect to the existing natural gas line in Antelope Road.

This portion of the City is highly urbanized, and the Project site is surrounded by commercial development with multi-family residential development to the east of the site. Therefore, given that the proposed Project is not located within a very high fire hazard severity zone, the Project would not have a significant potential to exacerbate wildfire risk or to result in temporary or ongoing impacts to the environment. Impacts under this issue are considered less than significant.

d) No Impact. See discussion above. Since the Project site is surrounded by urban development and is not within a Very High Fire Hazard Severity Zone, no impact would occur.

Mitigation Measures

No mitigation measures are required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("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?	☐	☐	☒	☐

Sources

Applicable General Plan Policies

Analysis of Project Effect and Determination of Significance

a) Less than Significant. Implementation of Standard Conditions of Approval SCA-TCR-1 through SCA-TCR-7 and SCA-GEO-1 would ensure that potential impacts to tribal and paleontological sources that could be uncovered during construction activities would result in less than significant impacts. Implementation of Standard Condition of Approval SCA-BIO-1 would ensure that potential impacts to nesting birds would be less than significant. Therefore, with the incorporation of these Standard Conditions of Approval, development of the proposed Project would not (1) degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife species population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; (5) reduce the number or restrict the range of a rare or endangered plant or animal; or (6) eliminate important examples of the major periods of California history.

b) Less-than-Significant Impact. Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the project. The Project would be in a developed area that is largely built out.

As documented in this Initial Study, the Project may have the potential to degrade the environment because of tribal resource impacts, which may have cumulatively considerable impacts when viewed in connection with the effects of other potential projects in the area. As such, standard conditions of approval have been identified to avoid significant impacts to tribal resources. Other future projects within the surrounding area would be required to comply with applicable local, state, and federal regulations to reduce potential impacts to less than significant, or to the extent possible.

The Project would result in less-than-significant impacts to aesthetics, air quality, energy use, geology and soils, hazardous waste, hydrology and water quality, land use, noise, population and housing, transportation, public services, and recreation with implementation of conditions of approval and best management practices. Furthermore, potential impacts associated with these resource areas are accounted for in the City of Menifee General Plan and the Menifee General Plan EIR.

Under CEQA Guidelines section 15152(f), where a lead agency has determined that a cumulative effect has been adequately addressed in a prior EIR, the effect is not treated as significant for purposes of later environmental review and need not be discussed in detail. Additionally, the Project would not impact agricultural or forestry resources or mineral resources, therefore there is no potential for cumulative impacts to these resources. Nor are there any cumulative impacts associated with wildfire risk, as the Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.

c) Less-than-Significant Impact. The Project is consistent with the planning objectives of the community in which it is located, and the proposed use of the property is not a use known to create any hazardous effects to human beings.

As discussed throughout this document, it is anticipated that the demolition, construction, and operation of the Project would not cause environmental effects that would significantly directly or indirectly impact human beings. Incorporation of standard conditions of approval would serve to reduce impacts to Tribal Cultural Resources and potential impact to nesting birds. For this reason, all environmental effects fall below the thresholds established by the City of Menifee. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

XXIII. REFERENCES

Additional Studies Performed

Attachment A – Air Quality/Greenhouse Gas/Energy Report
Attachment B – MSHCP Consistency and Habitat Suitability Report
Attachment C – Cultural Resources Letter Report (under separate cover)
Attachment D – Noise Report

Attachment E- Traffic Study

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AIR QUALITY, GREENHOUSE GAS & ENERGY TECHNICAL STUDY

HOME2SUITES DEVELOPMENT PROJECT

30141 ANTELOPE ROAD, MENIFEE

Prepared for*:*

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November 17, 2023

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GLOSSARY OF TERMS AND ACRONYMS

Acronym	**Description**
AB	Assembly Bill
ACC	Advanced Clean Cars
ADTs	Average Daily Trips
APCD	Air Pollution Control District
APS	Alternate Planning Strategy
AQMP	Air Quality Management Plan
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	California Commercial End Use Survey
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
CUP	Conditional Use Permit
cy	Cubic Yards
DPM	Diesel Particulate Matter
DWR	Department of Water Resources
EIRs	Environmental Impact Reports
EO	Executive Order
EV	Electric Vehicle
EVCS	Electric Vehicle Charging Station
Gal	Gallon
GHG	Greenhouse Gas
GWh	Gigawatt hours
g/L	grams per Liter
HAPs	Hazardous Air Pollutants
HFCs	Hydrofluorocarbon
HRA	Health Risk Assessment
HSC	Health and Safety Code
IPCC	Intergovernmental Panel on Climate Change
lb/day	Pounds per Day
lb/yr	Pounds per Year
Kg	Kilogram
KW	Kilowatt

GLOSSARY OF TERMS AND ACRONYMS

Acronym	**Description**
KBTU	One-thousand British Thermal Units
LCFS	Low Carbon Fuel Standard
LEV	Low Emission Vehicle
LST	Localized Significance Threshold
MACT	Maximum Achievable Control Technologies
MMT	Million Metric Tons
$\mu g/m^3$	Micrograms per cubic meter
MPO	Metropolitan Planning Organizations
MT	Metric Tons
MDAB	Mojave Desert Air Basin
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
OSC	Open Space and Conservation Element
O_3	Ozone
OPR	Office of Planning and Research
Pb	Lead
PFCs	Perfluorocarbons
PM	Particulate Matter
PM_{10}	Particulate Matter less than or equivalent to 10 microns in diameter
$PM_{2.5}$	Particulate Matter less than or equivalent to 2.5 microns in diameter
ppb	Parts Per Billion
ppm	Parts Per Million
PHEV	Plug-in Hybrid Vehicle
PV	Photovoltaics
RASS	Residential Appliance Saturation Survey
RTP	Regional Transportation Plan
SDAB	San Diego Air Basin
C-P-S	Scenic Highway Commercial
SB	Senate Bill
SCCAB	South Central Coast Air Basin
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_x	Oxides of Sulfur

GLOSSARY OF TERMS AND ACRONYMS

Acronym	**Description**
sq ft	Square Feet
SRA	Source Receptor Area
TACs	Toxic Air Contaminants
US	United States
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
yr	Year
ZEV	Zero Emission Vehicle

1.0 INTRODUCTION

This report provides a technical analysis of the potential air quality, greenhouse gas (GHG) and energy impacts associated with the proposed Home2Suites Development Project (Project) located at 30141 Antelope Road in the City of Menifee, California. This report has been prepared by BlueScape Environmental (BlueScape), to support preparation of the environmental documentation pursuant to the City of Menifee Environmental Review Guidelines and Guidelines for Implementing the California Environmental Quality Act (CEQA; City of Menifee 2021). This study analyzes the potential for permanent impacts associated with operation of the proposed Project and temporary impacts associated with construction activities in close proximity to the site.

Air quality, GHG and energy use impacts will be attributable to Project construction and operations. This report presents an evaluation of existing conditions at the site, thresholds of significance, and potential air quality, GHG and energy impacts associated with construction and operation of the Project.

1.1 Project Location and Description

The Project area encompasses approximately 2.01 acres, located east of Interstate 215, west of Antelope Road, south of Newport Road and north of La Piedra Road, in the City of Menifee within Riverside County, which is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Approximately 500 cubic yards (cy) of fill material and 500 cy of cut material will be necessary to achieve proper grading. The Project consists of a four-story, 65,463 square foot hotel, consisting of 106 rooms with an extended stay option, and 108 parking spaces, 27 of which are located within the existing shopping center project site via a reciprocal parking agreement. The Project is located to the south of a Living Spaces furniture store within the Menifee Village Shopping Center. The Project includes one 250 kW emergency engine which is subject to SCAQMD review and will require an authority to construct prior to installation. The Conceptual Site Plan, for the Home2Suites Hotel Development Project, is provided in Appendix A. Figure 1 shows the regional location of the Project, while Figure 2 shows the orientation of the Project site.

FIGURE 1: REGIONAL LOCATION OF THE PROJECT

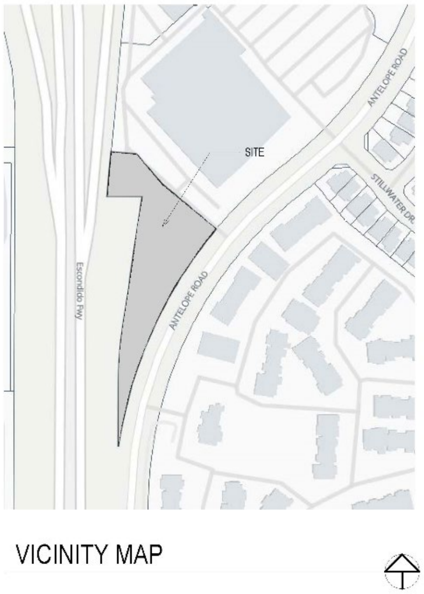

FIGURE 2: PROJECT LOCATION

1.2 Existing Conditions

The Project site is located in an urban area directly east of Interstate 215 and south of Newport Road. The nearest residential area is located across Antelope Road to the east and the nearest offsite worker is a furniture store, Living Spaces, directly north of the site. The site has a topography that varies between 1435 feet and 1440 feet above sea level. The Project site is currently developed with an overflow parking lot and associated landscaping that serve the existing retail shopping center to the north.

1.2.1 Climate and Meteorology

The Project site is located in the South Coast Air Basin (SCAB), which is bordered by the San Diego Air Basin (SDAB) to the south, Mohave Desert Air Basin (MDAB) to the east, and the South Central Coast Air Basin (SCCAB) to the north. The SCAB is on a coastal plain connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth’s surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the “ocean effect” is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Regional wind patterns are dominated by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.0 AIR QUALITY STUDY

The regional and local air quality impacts on sensitive receptors due to construction and operation of the Project have been quantified and compared to California Environmental Quality Act (CEQA) thresholds that the City of Menifee has designated as acceptable for CEQA studies. These thresholds are those recommended by the SCAQMD as quantitative regional CEQA significance thresholds for temporary construction activities and long-term project operation in the South Coast Air Basin (SCAB) (SCAQMD 2023b).

2.1 Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (USEPA) regulates at the national level; the California Air Resources Control Board (CARB) regulates at the state level; and the SCAQMD regulates air quality in Riverside County. CARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local air districts are responsible for enforcing standards and regulating stationary sources. CARB has established fifteen (15) air basins statewide. The western portion of Riverside County is located in the SCAB, which is under the jurisdiction of the SCAQMD.

The SCAQMD is the agency responsible for achieving compliance with the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS), including criteria pollutants and their precursors. To that effect, the SCAQMD and the Southern California Association of Governments (SCAG) adopted the *2022 Air Quality Management Plan* (AQMP) in December 2022 (SCAQMD 2022b). The AQMP addresses the SCAQMD's planning and progress for regional maintenance or attainment of the NAAQS and CAAQS. The AQMP forms the basis for the most recent California State Implementation Plan (SIP) update, as it contains documentation on emission inventories and trends, the SCAQMD's emission control strategy, and an attainment demonstration to show that the Basin will come into attainment with the NAAQS and CAAQS.

For the proposed Project to be consistent with the AQMP, the pollutants emitted from the Project should not exceed the SCAQMD daily thresholds or cause a significant impact on air quality. Additionally, if feasible mitigation measures are implemented and are shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP. A project may be considered significant under CEQA, on a regional basis, if its emissions exceed the SCAQMD thresholds for volatile organic compounds (VOCs), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), or particulate matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$).

2.1.1 Federal Regulations

The federal and state governments have been empowered by respective federal and state Clean Air Acts (CAA) to regulate the emissions of airborne pollutants and have established ambient air quality standards for the protection of public health. The federal CAA requires the USEPA to set NAAQS for pollutants that are common in outdoor air, considered harmful to public health and environment, and that come from numerous and diverse sources. In California, the California Environmental Protection Agency (CalEPA), has delegated the oversight of air quality management to CARB, which is a department of the CalEPA. Local control over air quality management is provided by CARB through multi-county and county-level Air Pollution Control Districts (APCDs) (also referred to as Air Quality Management Districts). The federal and state standards are summarized in Table 1 (provided after Section 2.1.3) (CARB 2016). The federal "primary" standards have been established to protect the public health. The federal "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare. The SCAQMD is the designated air quality control agency in the SCAB, which is a non-attainment area for the federal standards for ozone and $PM_{2.5}$. The SCAB is designated unclassifiable or in attainment for all other federal standards.

2.1.2 State Regulations

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (CCAA), meeting state requirements of the federal Clean Air Act and establishing the CAAQS. It is also responsible for setting emission standards for vehicles sold in California and for other emission sources such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications and oversees the functions of local APCDs and air quality management districts, which in turn administer air quality activities at the regional and county level. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level. Similar to the federal

CAA, the CCAA classifies specific geographic areas as either "attainment" or "non-attainment" areas for each pollutant, based on the comparison of measured data within the CAAQS. The SCAB is a non-attainment area for the state standards for ozone, PM_{10} and $PM_{2.5}$ (SCAQMD 2018).

2.1.3 Local Regulations

Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. Each SCAQMD AQMP is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2022 AQMP, was adopted on December 2, 2022 (SCAQMD 2022b). It addresses the requirements for meeting the more stringent NAAQS standard for primary and secondary ozone levels, finalized in 2015, to 70 parts per billion (ppb). The AQMP includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The plan also demonstrates strategies for attainment of the new federal 8-hour ozone standard and vehicle miles traveled (VMT) emissions offsets, pursuant to recent USEPA requirements (SCAQMD 2022b).

The City of Menifee General Plan (City of Menifee 2013) contains the following goals and policies that address air quality:

Policies:

OCS-9.1: Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.

OCS-9.2: Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.

OCS-9.3: Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.

OCS-9.4: Support the Riverside County Regional Air Quality Task Force, the Southern California Association of Government's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and the South Coast Air Quality Management District's Air Quality Management Plan to reduce air pollution at the regional level.

OCS-9.5: Comply with the mandatory requirements of Title 24 Part 1 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

TABLE 1
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 $\mu g/m^3$)		0.070 ppm (137 $\mu g/m^3$)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	12.0 $\mu g/m^3$	15 $\mu g/m^3$	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 $\mu g/m^3$)	Gas Phase Chemiluminescence	100 ppb (188 $\mu g/m^3$)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m^3$)		0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 $\mu g/m^3$)	Ultraviolet Fluorescence	75 ppb (196 $\mu g/m^3$)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 $\mu g/m^3$)	
	24 Hour	0.04 ppm (105 $\mu g/m^3$)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 $\mu g/m^3$	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 $\mu g/m^3$ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 $\mu g/m^3$		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 $\mu g/m^3$	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography			

See footnotes on next page …

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

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

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

2.1.4 State Implementation Plan

The federal CAA Amendments (CAAA) mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. SIPs are comprehensive plans that describe how an area will attain NAAQS. SIPs are a compilation of new and previously submitted plans, programs (i.e., monitoring, modeling and permitting programs), district rules, state regulations and federal controls and include pollution control measures that demonstrate how the standards will be met through those measures.

The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220. On September 22, 2022, CARB adopted the most recent state SIP strategy, which includes additional measures and information needed to support nonattainment area SIPs (CARB 2022a).

As the regional air quality management district, the SCAQMD is responsible for preparing and implementing the portion of the SIP applicable to the SCAB. The APCD for each county adopts rules, regulations, and programs to attain federal and state air quality standards and appropriates money (including permit fees) to achieve these objectives (SCAQMD 2023a).

2.1.5 Air Pollutants of Concern

2.1.5.1 Criteria Air Pollutants

The seven criteria air pollutants regulated under the National Ambient Air Quality Standards (NAAQS) are as follows: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (or particulate matter with an aerodynamic diameter of 10 microns or less, PM_{10}), fine particulate matter (or particulate matter with an aerodynamic diameter of 2.5 microns or less, $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. Areas that do not meet the NAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant.

CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain air quality in the state. CARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The California Clean Air Act of 1988 (CCAA) provides the state with the ability to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards, or more stringent.

Through the CCAA, CARB has established the CAAQS for six criteria air pollutants also regulated by the NAAQS and has also established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. The SCAB is currently classified as a non-attainment area under the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. It should be noted that CARB does not differentiate between attainment of the 1-hour and 8-hour CAAQS for O_3; therefore, if an air basin records an exceedance of either standard, the area is considered non-attainment for the CAAQS for O_3. The SCAB has recorded exceedances of both the 1-hour and 8-hour CAAQS for O_3.

Table 2 shows the long- and short-term health impacts due to exposure to these criteria air pollutants and lists the main sources of these pollutants.

TABLE 2
SUMMARY OF SOURCES AND HEALTH EFFECTS ASSOCIATED WITH CRITERIA AIR POLLUTANTS

Pollutant	Sources	Effects on Health
Ozone (O_3)	• Photochemical oxidant (not emitted directly); instead, chemically formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_X) react in the presence of ultraviolet light; • Many VOCs are released as fugitive sources; and • VOCs and NO_X are combustion by-products.	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue
$PM_{2.5}$ (particulate matter [PM] less than 2.5 microns in aerodynamic diameter)	• Fugitive dust PM primarily composed of PM_{10} with a small fraction consisting of $PM_{2.5}$; • PM from combustion sources primarily composed of $PM_{2.5}$ with a small fraction consisting of particles larger than $PM_{2.5}$ and smaller than PM_{10}.	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits • Increased symptoms, increased inhaler usage
PM_{10} (particulate matter less than 10 microns in aerodynamic diameter)	• See $PM_{2.5}$.	• Premature death & hospitalization, primarily for worsening of respiratory disease
Nitrogen Oxides (NO_X)	• All combustion sources; especially a by-product of higher temperature combustion.	• Lung irritation • Enhanced allergic responses
Carbon Monoxide (CO)	• All combustion sources; especially a by-product of incomplete combustion.	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Sulfur Oxides (SO_X)	• Coal- or oil-burning power plants and industries; • Refineries; and • Diesel-/gasoline-fired engines.	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits

TABLE 2
SUMMARY OF SOURCES AND HEALTH EFFECTS ASSOCIATED WITH CRITERIA AIR POLLUTANTS

Pollutant	Sources	Effects on Health
Lead (Pb)	• Metal smelters; • Resource recovery; • Leaded fuels (esp. aircraft, racing); and • Deterioration of lead-based paint.	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage
Hydrogen Sulfide (H_2S)	• Landfills and sewer gas; • Geothermal power plants; and • Petroleum production and refining.	• At high concentrations: headache & breathing difficulties
Sulfates	• Fully-oxidized, ionic form of sulfur; • See SO_X. • SO_X converted to sulfate compounds in the atmosphere.	• Same as $PM_{2.5}$; particularly worsening of asthma and other lung diseases
Vinyl Chloride	• Primarily results from microbial breakdown of chlorinated solvents, especially in: ○ Landfills; ○ Sewage plants; and ○ Hazardous waste sites.	• Central nervous system effects, such as dizziness, drowsiness & headaches • Long-term exposure: liver damage and liver cancer

The SCAQMD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment" (SCAQMD 2018). The SCAB is listed as a federal non-attainment area for ozone (1-hour and 8-hour standards) and $PM_{2.5}$, and a state non-attainment area for ozone (1-hour and 8-hour standards), PM_{10} and $PM_{2.5}$. As shown in Table 3, the SCAB is in attainment for the state and federal standards for nitrogen dioxide, carbon monoxide, sulfur dioxide and lead.

TABLE 3
SUMMARY OF SOUTH COAST AIR BASIN (SCAB) FEDERAL AND STATE ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Non-attainment	Non-attainment
Ozone (1-Hour)	Non-attainment	Non-attainment
Carbon Monoxide	Attainment (Maintenance)	Attainment
PM_{10}	Attainment (Maintenance)	Non-attainment
$PM_{2.5}$	Non-Attainment	Non-attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment

TABLE 3
SUMMARY OF SOUTH COAST AIR BASIN (SCAB)
FEDERAL AND STATE ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
Lead	Attainment*	-
Sulfates	-	Attainment
Hydrogen Sulfide	-	Attainment
Visibility	-	Attainment

* Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

2.1.5.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are controlled under a different regulatory process than criteria pollutants. Because no safe level of emissions can be established for TACs region-wide, the regulation of TACs is based on the levels of cancer risk and other health risks posed to persons who may be exposed.

Under federal law, 188 substances are listed as Hazardous Air Pollutants (HAPs) that are TACs. Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) program. The USEPA establishes regulatory schemes for specific source categories and requires implementation of Maximum Achievable Control Technology (MACT) for major sources of HAPs in each source category.

State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program, and is aimed at HAPs that are a concern in California. The state has formally identified more than 200 substances as TACs and has adopted appropriate control measures for each. Once adopted at the state level, each air district is required to adopt a measure that is equally or more stringent. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act [Assembly Bill (AB) 2588 or AB 2588] enacted in 1987 requires certain applicable facilities in the SCAB to quantify the emissions of TACs, and in some cases, conduct a Health Risk Assessment (HRA), and to notify the public, while developing risk reduction strategies. SCAQMD implements AB 2588 requirements through Rule 1402, which includes additional requirements beyond the state law, including a program to encourage facilities to voluntarily reduce risk, and to compel high risk facilities to reduce toxic emissions much more quickly than previously required. Rule 1402 implements the public notification and risk reduction requirements of AB 2588 and requires facilities to reduce risks to acceptable levels within 2 - 2.5 years. In addition, SCAQMD Rule 1402 establishes acceptable risk levels, and emission control requirements for new and modified facilities that may emit TACs.

An example of TAC emissions would be the proposed Project's generation of diesel exhaust emissions from construction-related vehicles and equipment and operational phases. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances in addition to some noncancer hazards. On August 27, 1998, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease (CARB 1998).

2.2 Background Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards.

The monitoring station closest to the Project, the Perris monitoring station, located at 237 1/2 N. D Street in Perris, did not report data for 2022. Therefore, information was obtained from the nearest stations reporting the most current and comprehensive data sets for the years 2020 to 2022. The Winchester monitoring station located 8.75 miles southeast of the Project site at 33700 Boreal Road in Murietta was used to report data for hourly ozone. The Riverside-Rubidoux monitoring station located 26 miles northwest of the Project site at 5888 Mission Boulevard in Rubidoux was used to report data for $PM_{2.5}$ and PM_{10} standards.

Table 4 indicates the number of days that each of the federal and state standards have been exceeded at monitoring stations near the Project site in each of the last three years for which data is available. In the vicinity of the Project site, the federal and state 8-hour ozone standards were exceeded each year from 2020 to 2022, and the state worst hour ozone standard was exceeded from 2020 to 2021. In addition, the PM_{10} state standards were exceeded each year and the $PM_{2.5}$ federal standards were exceeded each year. Other pollutants are unclassified or in attainment and as such, have not been included in Table 4.

TABLE 4
AMBIENT AIR BACKGROUND POLLUTANT CONCENTRATIONS/EXCEEDANCES/STANDARDS

Pollutant	**2020**	**2021**	**2022**
Ozone (O_3)			
State maximum 1-hour concentration (ppm)	**0.108**	**0.095**	0.087
National maximum 8-hour concentration (ppm)	**0.091**	**0.083**	**0.079**
State maximum 8-hour concentration (ppm)	**0.091**	**0.084**	**0.079**
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	5	1	0
CAAQS 8- hour (>0.070 ppm)/NAAQS 8-hour (>0.070 ppm)	39 / 37	11 / 10	4 / 3
Respirable Particulate Matter (PM_{10})			
National maximum 24-hour concentration (µg/m^3)	142.2	76.5	153.6
State maximum 24-hour concentration (µg/m^3)	**137.7**	**114.3**	**61.9**
State annual average concentration (µg/m^3)	--	**33.2**	**30.0**
Annual or Days Standard Exceeded *			
NAAQS 24-hour (>150 µg/m^3)	0	0	0
CAAQS 24-hour (>50 µg/m^3)/Annual (>20 µg/m^3)	115 / --	75 / Yes	5 / Yes
Fine Particulate Matter ($PM_{2.5}$)			
National Maximum 24-hour concentration (µg/m^3)	**59.9**	**82.1**	**38.5**
State maximum 24-hour concentration (µg/m^3)	61.9	82.1	38.5
State Annual average concentration (µg/m^3)	14.1	**13.2**	**10.9**
Annual or Days Standard Exceeded *			
NAAQS 24-hour (>35 µg/m^3)/Annual (>12.0 µg/m^3)	12 / Yes	11 / Yes	1 / Yes
CAAQS Annual (>12 µg/m^3)	Yes	Yes	Yes

TABLE 4
AMBIENT AIR BACKGROUND POLLUTANT CONCENTRATIONS/EXCEEDANCES/STANDARDS

Pollutant	2020	2021	2022

Notes:

$\mu g/m^3$ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million.

CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard.

BOLD value indicates greater than standard.

O_3 and California $PM_{2.5}$ measured at the Winchester monitoring station, approximately 8.75 miles to the southeast.

PM_{10} and $PM_{2.5}$ measured at the Riverside-Rubidoux monitoring station, approximately 26 miles to the northwest.

* In the case of an Annual standard a No or Yes response is provided.

Sources: CARB 2023; https://www.arb.ca.gov/adam/topfour/topfourdisplay.php

2.2.1 Sensitive Receptor Exposure

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools, hospitals, and residences.

Sensitive receptors that may be affected by air quality impacts associated with Project construction and operation include single-family residences located just east of the Project site across Antelope Road; with the nearest residence approximately 120 feet east of the Project site western boundary. Schools within two kilometers (1.24 miles) of the Project site include, Santa Rosa Academy, 0.5 miles southwest of the Project site, Bell Mountain Middle School, 0.5 miles southeast of the Project site, Callie Kirkpatrick Elementary School, 0.8 miles east of the Project site, and Chester West Morrison Elementary School, 0.95 miles west of the Project site. The closest medical centers include the Rancho Family Medical Center, 0.3 miles southwest of the Project site and HOPE Medical Center, 0.5 miles north of the Project site. The closest child care facilities include Gandarilla Family Child Care, 1 mile west of the Project site, JuJu’s Daycare, 1 mile northwest of the Project site and Little Angels Child Care, 1.1 miles south west of the Project site. The closest elderly care facility is BrightStar Care of Central Western Riverside Co, 0.6 miles northwest of the Project site. Menifee library is 0.8 miles southeast of the Project site.

2.3 Air Quality Analysis Significance Criteria

The City of Menifee is within the SCAQMD jurisdiction, which establishes air quality thresholds of significance and methodology guidance defined under CEQA. SCAQMD is in the process of developing an “Air Quality Analysis Guidance Handbook” to replace the CEQA Air Quality Handbook approved by the SCAQMD Governing Board in 1993.

In the meantime, SCAQMD has published supplemental information, such as air quality significance thresholds (SCAQMD 2023b) and localized significance thresholds (SCAQMD 2009), to assist in CEQA air quality analyses.

2.3.1 CEQA Air Quality Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

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

A significant adverse air quality impact may occur when a project individually or cumulatively interferes with progress toward the attainment of the ozone standard by generating emissions that equal or exceed the established long-term quantitative thresholds for pollutants or exceed a state or federal ambient air quality standard for any criteria pollutant. If a project is found to have a significant effect, the project would have to incorporate mitigation measures.

2.3.2 SCAQMD Air Quality Significance Thresholds

To determine whether a project would (1) conflict with or obstruct implementation of the applicable air quality plan (that is, SCAQMD AQMP), or (2) result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$ or exceed quantitative thresholds for ozone precursors (i.e., NO_X and VOCs) or (3) expose sensitive receptors to substantial pollutant concentrations, or (4) result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, project emissions may be evaluated based on the quantitative emission thresholds established by the SCAQMD (SCAQMD 2023b).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The SCAQMD recommends quantitative regional CEQA significance thresholds for criteria pollutants for temporary construction activities and long-term project operation in the SCAB, in order to maintain or achieve attainment for the criteria pollutants. The significance thresholds are shown in Table 5.

TABLE 5
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Construction Threshold (lb/day)	Operational Threshold (lb/day)
Respirable Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Nitrogen (NO_X)	100	55
Oxides of Sulfur (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Volatile Organic Compounds (VOC)	75	55

Source: SCAQMD 2023b

The SCAQMD also sets CEQA significance threshold limits for health risk impacts on sensitive receptors due to emissions of TACs during construction and operation of a project. Sensitive receptors include locations such as residences, schools, hospitals, child daycare centers, and nursing homes where more sensitive individuals in the population could be exposed to a project’s emissions, leading to health impacts. To determine impacts to sensitive receptors, if a project emits substantial TAC emissions from construction and/or operations, the health risk impacts at the nearest sensitive receptors are estimated and compared to the SCAQMD CEQA health risk significance thresholds. These CEQA significance thresholds are listed in Table 6.

TABLE 6
SCAQMD REGIONAL CEQA SIGNIFICANCE EMISSIONS THRESHOLDS
FOR TOXIC AIR CONTAMINANTS

Risk Type	Significance Threshold
Maximum Incremental Cancer Risk	10 in one million
Chronic or Acute Hazard Index	1.0
Cancer Burden	0.5

Source: SCAQMD 2023b

SCAQMD Rule 402 addresses odors as a possible nuisance to people nearby, but it specifically states that the provisions of Rule 402 do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. Therefore, any unreasonable odor due to agricultural operations discernible at the property line of sensitive receptors would not be considered a significant odor impact.

In addition to the regional daily thresholds for air pollutants, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board’s Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality 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), distance to the sensitive receptor, and project size (SCAQMD 2009). LSTs have been developed for emissions in construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008a). As such, LSTs are typically applied only to construction emissions because the majority of operational emissions are associated with project-generated vehicle trips.

SCAQMD provides LST lookup tables for project sites that measure one, two, or five acres. If a site is greater than five acres, SCAQMD recommends a dispersion analysis be performed. Lot acreage for the Project is approximately 2.0 acres; therefore, this analysis determines an applicable LST based on the project site area and the LST lookup values for two-acre construction sites. LSTs are provided for receptors at distances of 25 to 500 meters (82 to 1,640 feet) from the project disturbance boundary to the sensitive receptors. Construction activity would occur approximately 98.4 feet (30 meters) west of the closest sensitive receptors, an existing single-family residence. Therefore, the analysis below conservatively uses the LST values for 25 meters. In addition, the Project is located in SRA-24 (Perris Valley). LSTs for construction in SRA-24 on a 2-acre site with a receptor 25 meters away are shown in Table 7.

TABLE 7
SCAQMD LST FOR CONSTRUCTION
(SRA-24)

Pollutant	Allowable Emissions (lb/day)
Gradual Conversion of NO_X to NO_2	170
Carbon Monoxide (CO)	883
Respirable Particulate Matter (PM_{10})	7
Fine Particulate Matter ($PM_{2.5}$)	4

Source: SCAQMD 2009

2.4 Air Quality Analysis Methodology

Air quality modeling for the Project development was performed to identify construction and operational emissions associated with the Project. Criteria pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2022.1.1.20 which incorporates current air emissions data, planning methods and protocols approved by CARB (CAPCOA 2022).

As referenced, construction activities would include demolition, site preparation, grading, construction of the buildings/utilities and related improvements as well as paving parking areas. Construction activities would require the use of equipment that would generate criteria air pollutant emissions. For modeling purposes, it was assumed that all construction equipment would be diesel-powered. Construction emissions associated with the development of the Project site were calculated based on default equipment amounts and types. There is currently approximately 1 acre of pavement and landscaping on the parcel, so standard demolition activities would be conservative. Construction emissions were analyzed using the regional and localized thresholds published by the SCAQMD (SCAQMD 2023b and 2009).

Operational emissions from the Project would include mobile source emissions, energy emissions, area source emissions, and emergency generator emissions. Mobile source emissions would be generated by motor vehicle trips associated with operation of the Project site. Emissions attributable to energy use include electricity and natural gas consumption for space and water heating. Area source emissions would be generated by landscape maintenance equipment, use of consumer products and painting. Emergency generator emissions would occur only in the event of a power outage or during engine testing and maintenance. To determine whether a regional air quality impact would occur from this development, the increases in emissions were compared with the operational thresholds published by the SCAQMD (SCAQMD 2023b).

2.4.1 Construction Emissions

Construction of the development would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) from soil disturbance and exhaust emissions (NO_x, CO, and SO_2) from heavy construction vehicles. As noted, construction would generally consist of demolition, site preparation and lot grading, construction of the building and related improvements, paving and the application of architectural coating (painting).

Table 8 shows the construction schedule assumed for each of the construction phases at the site. A five-day workweek was assumed with some construction phases overlapping, as shown in Table 8. Default values were assumed for the number and types of construction equipment for each construction phase.

TABLE 8 CONSTRUCTION SCHEDULE – HOME2SUITES HOTEL DEVELOPMENT	
Construction Phase	**Estimated Dates**
Site Preparation	May 1st, 2024 - May 31st 2024
Demolition	June 3rd, 2024 - June 28th, 2024
Grading	June 3rd, 2024 - July 26th, 2024
Building Construction	July 29th, 2024 - September 26th, 2025
Paving	September 1st, 2025 - September 26th, 2025
Architectural Coating	September 29th, 2025 - October 31st, 2025

Site preparation and grading would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. 500 cy of cut material and 500 cy of fill material was assumed for import/export of soil for grading and site preparation. Any development would be required to comply with SCAQMD Rule 403, which identifies fugitive dust standards and is required to be implemented at all construction sites located within the SCAB. Therefore, the following assumptions 1 through 5, are established as Project design measures, which generally reduce fugitive dust emissions. Assumption 2 was included in CalEEMod as watering twice per day for site preparation and grading phases of construction. Assumption 6 was included in CalEEMod for the architectural coating phase of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.

2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least three times daily, preferably at the start of each morning, mid-day, and after work is completed for the day. For modeling purposes, it was conservatively assumed that watering would occur two times daily, during the construction of this development.

3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.

4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds.

5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

6. **Architectural Coatings.** Construction contractors shall use low-VOC paint (50 g/L for interior and exterior coatings for residential and non-residential buildings, and 100 g/L for parking lot paint) as required by SCAQMD Rule 1113.

2.4.2 Operational Emissions

Operational emissions for the Project include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment, evaporative emissions as the structures are repainted over the life of developments at the Project site, and the 250-kW emergency engine. The majority of operational emissions would be associated with vehicle trips to and from the development. Average daily trips (ADTs) from the Home2Suites Traffic Assessment Letter (Rick Engineering 2023) were used in the CalEEMod modeling. The Project is expected to generate approximately 466 ADTs. The first year of operations for the Project will likely be in 2025.

The CalEEMod modeling for operational emissions considered the design conditions listed below:

1. **Architectural coatings.** The use of low-VOC paint (50 g/L for interior and exterior coatings and 100 g/L for parking lot paint) as required by SCAQMD Rule 1113.

2. **Fireplaces and Woodstoves**. No fireplaces or woodstoves would be installed.

3. **Operational Equipment**. The Project includes a 250-kW emergency diesel engine. The emergency engine would only be used in the event of a power failure and would not be part of the Project's normal daily operations. The emergency engine will comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines). Per Rule 1470, a maximum of 50 hours per year for testing and maintenance was modeled.

2.5 Air Quality Analysis Results

The Project would generate both construction and operational emissions. Initial construction emissions would include emissions associated with the site development and grading of the site. Operational emissions would include emissions from truck and vehicle traffic, area sources, energy consumption, and the emergency engine.

The construction and operational impacts are evaluated and compared to significance criteria in this section.

2.5.1 Consistency with Air Quality Plans and Standards

Will the project conflict with or obstruct implementation of the applicable air quality plan?

For the proposed Project to be consistent with the AQMP, the pollutants emitted from the Project should not exceed the SCAQMD daily thresholds or cause a significant impact on air quality. The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving state and national air quality standards. The AQMPs are a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the USEPA. The pollutant control strategies in the AQMP are based on the latest scientific and technical information and planning assumptions, including SCAG's 2020 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local plans.

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

- Consistency Criterion No. 1: The 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 AQMPs.

- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMPs or increments based on the years of the Project build-out phase.

According to the SCAQMD's CEQA Air Quality Handbook, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS. The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in Tables 9, 10, and 11 the proposed Project would not exceed construction or operational emission standards. Thus, the Project is consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMPs contain air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The project site's existing land use designation is Menifee Village Specific Plan and is zoned C-P-S (Scenic Highway Commercial). The Project's proposed land uses would be consistent with the approved land use and zoning designations (Riverside County 2019). Therefore, the Project would be compliant with the Menifee Village Specific Plan and City's Zoning Code. Furthermore, the Project will also be designed to be consistent with all applicable planning policies and design standards as set forth within the Menifee Municipal Code and the City's Industrial

Good Neighbor Policies. The AQMPs contain air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project would not result in a change of land use designations reflected in the AQMPs. Therefore, the Project is assumed to be consistent with the AQMPs regional emissions inventory for the SCAB. Thus, the Project is consistent with the second criterion.

Given the aforementioned, the Project would be consistent with the AQMP and would have a less than significant impact. Therefore, the proposed Project would not conflict with or obstruct implementation of the air quality plans, and impacts are **less than significant** in this regard.

2.5.2 Cumulative Impacts

Will the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Pursuant to CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state Clean Air Acts. If the project's mass regional emissions do not exceed the applicable SCAQMD thresholds, then the project's criteria pollutant emissions would not be cumulatively considerable. As demonstrated in the tables in this section, the Project's regional emissions do not exceed the SCAQMD thresholds. Therefore, the cumulative impacts are **less than significant**.

2.5.3 Construction Emissions Impacts

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) from soil disturbance and exhaust emissions (NO_X and CO) from heavy construction vehicles. For the purpose of estimating emissions, it was assumed that 2.01 acres will be graded and developed for overall construction. As noted, construction would generally consist of site preparation and grading, construction of the buildings and related improvements, paving of the parking lot and the application of architectural coating (painting).

Table 9 summarizes the estimated maximum daily emissions of pollutants associated with construction of the proposed Project. As shown below, VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD regional thresholds. The CalEEMod emission estimates and assumptions for operations are included in Appendix B.

TABLE 9
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

	Maximum Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Maximum Day	12.7	32.2	33.0	0.05	4.88	2.79
SCAQMD Regional Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See *Appendix B for CalEEMod ver. 2022.1.1.20 computer model output for the construction emission estimates for the proposed development; the higher value of summer or winter, are shown.*

Table 10 summarizes the maximum daily on-site emissions of pollutants associated with construction of the proposed Project. As shown below, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD LSTs.

TABLE 10
ESTIMATED MAXIMUM ON-SITE DAILY CONSTRUCTION EMISSIONS

	Maximum Emissions (lbs/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum On-Site Emissions	31.5	31.4	4.52	2.69
SCAQMD LSTs	*170*	*883*	*7*	*4*
Threshold Exceeded?	**No**	**No**	**No**	**No**

See *Appendix B for CalEEMod ver. 2022.1.1.20 computer model output for the construction emission estimates for the proposed development; the higher value of summer or winter, are shown.*

As shown in Table 9 and 10, criteria pollutant emissions would not exceed SCAQMD regional thresholds or LSTs. Because the Project would not exceed SCAQMD's regional construction thresholds or LSTs, Project construction would not result in a cumulatively considerable net increase of a criteria pollutant and impacts would be less than significant. As such, air quality impacts from Project-related construction activities would be **less than significant**. Because maximum NO_x and VOC emissions from construction would not exceed the SCAQMD CEQA significance thresholds, the impacts from these non-attainment pollutants are not expected to have a cumulatively considerable net increase, and therefore, **less than significant**.

2.5.4 Operational Emissions Impacts

Operational emissions associated with the hotel development include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment and evaporative emissions as the structures are repainted over the life of the Project. The majority of operational emissions are associated with vehicle trips to and from the Project site.

The CalEEMod emission estimates and assumptions for operations are included in Appendix B.

TABLE 11
ESTIMATED OPERATIONAL EMISSIONS

	Maximum Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Proposed Project						
Mobile	1.96	1.85	15.7	0.04	3.19	0.83
Area	1.96	0.02	2.85	<0.01	0.01	<0.01
Energy	0.02	0.35	0.29	<0.01	0.03	0.03
Stationary	0.75	2.10	1.92	<0.01	0.11	0.11
Daily Total	4.69	4.31	20.7	0.04	3.33	0.97
SCAQMD Regional Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix B for CalEEMod ver. 2022.1.1.20 computer model output; the higher value of summer or winter, daily emissions are shown.

As shown in Table 11, the associated emissions would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_2, PM_{10} or $PM_{2.5}$. Therefore, the Project's regional air quality impacts (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would be **less than significant**. Because maximum NO_x and VOC emissions from operations would not exceed the SCAQMD CEQA significance thresholds, the impacts from these non-attainment pollutants are not expected to have a cumulatively considerable net increase, and are therefore, **less than significant**.

2.6 Sensitive Receptor Exposure

Will the project expose sensitive receptors to substantial pollutant concentrations?

2.6.1 Toxic Air Contaminants

Sensitive receptors in the Project vicinity include a single-family residential area across Antelope Road to the east of the Project site. The closest single-family residence to the Project site is approximately 120 feet from the Project fence line. As described in section 2.2.1, there are several sensitive receptors within two kilometers of the Project site, including schools, daycare centers, an elderly care facility, and a library.

Construction-related activities would result in temporary Project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. Due to the short-term construction duration, the limited construction emissions, and the mostly commercial and residential land use surrounding the Project site, there is very low potential for fugitive dust or DPM to impact sensitive receptors during construction. The total Project construction DPM ($PM_{2.5}$ generated by exhaust) emissions are not of a magnitude and duration that could create significant air toxic risks to the nearest receptors during construction. Of all construction phases, the days when the demolition and grading phases overlap generate the highest daily emissions of DPM, 1.3 lbs/day, which is well below the SCAQMD LST threshold of 4 lbs/day. The demolition and grading phases are estimated to overlap for only 20 workdays. Compliance with the SCAQMD rules and regulations would reduce the fugitive dust emissions during Project construction and associated impacts to sensitive receptors.

The Project includes a 250-kW emergency diesel engine with DPM emissions associated with periodic reliability testing. The emergency engine would only be used in the event of a power failure and would not be part of the Project’s normal daily operations. Additionally, a permit will be required from the SCAQMD prior to installation and emergency engines must meet SCAQMD’s Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines). SCAQMD Rule 1470 establishes emissions standards for emergency diesel engines meant to limit toxics emissions and protect human health. Due to the engine’s limited operation and minimized emissions, there is very low potential for toxic emissions from the emergency engine to impact sensitive receptors.

The operating emissions of other sources will be negligible and would not have the potential to impact sensitive receptors. Therefore, the Project’s construction and operation air pollutant emissions would not expose sensitive receptors to substantial pollutant concentrations and would result in a **less than significant** impact.

2.6.2 Local Carbon Monoxide Emissions and CO Hotspots

The proposed Project would result in CO emissions of approximately 20.7 pounds per day, well below the 550 pounds per day threshold. Based on the low background level of CO in the Project area, improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the Project’s low level of operational CO emissions, the Project would not create new hotspots or contribute substantially to existing hotspots.

The Lake Elsinore monitoring site is the closest station to the Project site that provides CO data. The maximum 8-hour CO level recorded in 2022 was 0.6 parts per million (ppm). Concentrations are below 9 ppm, the state and federal 8-hour standard. The maximum 1-hour CO level recorded in 2022 was 0.9 ppm (SCAQMD 2022a). Concentrations are below 20 ppm and 35 ppm, the state and federal 1-hour standards, respectively.

The SCAB was re-designated as attainment for CO in 2007 and is no longer addressed in the SCAQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations (SCAQMD 2003). As part of the SCAQMD CO Hotspot Analysis, the Wilshire Boulevard and Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's CO Hotspot Analysis. As the CO hotspots were not experienced at the Wilshire Boulevard and Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any intersections in the Project vicinity resulting from 466 additional daily vehicle trips attributable to the Project. Therefore, impacts would be **less than significant.**

2.7 Objectionable Odors

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

For construction activities, odors would be temporary in nature and are subject to SCAQMD Rule 402, Nuisance. The closest receptors are residences approximately 120 feet east of the Project fence line, across Antelope Road. Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the proposed Project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be **less than significant**.

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed Project, a hotel, would not include any of these uses. Solid waste generated by the proposed on-site uses would be stored on-site and collected by a municipal waste hauler, thereby managing and collecting on-site waste in a manner to prevent the proliferation of odors. Operational odor impacts would be **less than significant**.

3.0 GREENHOUSE GAS STUDY

A greenhouse gas (GHG) analysis was performed to evaluate potential environmental impacts associated with the emissions of GHGs and the effects of global climate change with the proposed Project. This study analyzes the potential for climate change impacts associated with construction activity and operation of the proposed Project.

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). California Health and Safety Code Section 38505(g) defines GHGs to include the following compounds: CO_2, CH_4, N_2O, chlorofluorocarbons (CFCs), HFCs, and SF_6.

Based upon the CARB California Greenhouse Gas Inventory, 2022 edition, (CARB 2022b), California produced 369.2 million metric tons (MMT) CO_2 equivalent (CO_2e) in 2020. The major source of GHGs in California is transportation, contributing 38 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 23 percent of the state's GHG emissions (CARB 2022b).

3.1 GHG Regulatory Setting

3.1.1 Federal GHG Regulations

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address global climate change. The federal government's early efforts have focused on public-private partnerships to reduce GHG intensity through energy efficiency, renewable energy, methane and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions.

The USEPA is required to regulate carbon dioxide and other GHGs as pollutants under Section 202(a)(1) of the federal Clean Air Act. The first step in implementing its authority was the Mandatory Reporting Rule that required inventory data collection commencing on January 1, 2010, with first reports due March 2011. Effective January 2, 2011, the USEPA required new and existing sources of GHG emissions of 75,000 tons per year to obtain a permit under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit Program.

The main federal regulatory program for automobiles is the Corporate Average Fuel Economy (CAFE) program, which has been in place since 1975. Under previous administrations, CAFE was the primary means of limiting mobile source carbon emissions. Rules finalized in 2012 put in place binding standards through Model Year 2021 and offered estimated standards through 2024. The federal light-duty vehicle standards were developed in two phases that harmonized with California standards through 2016 (Phase 1) and 2025 (Phase 2) and developed the first ever federal GHG standards for medium-duty and heavy-duty vehicles. At the time, the USEPA estimated that the new standards in this rule would reduce CO_2 emissions by approximately 270 MMT and save 530 million barrels of oil over the life of vehicles sold during the 2014 through 2018 model years.

In June 2013, President Obama approved the nation's first Climate Action Plan that lays out a series of executive actions to reduce carbon pollution, prepare the nation for the impacts of climate change, and lead international efforts to address global climate change. The Plan reiterated the President's 2009 pledge to reduce United States GHG emissions by 17 percent below 2005 levels by 2020. The United States is also a part of the Paris Climate Agreement, which is an agreement among countries to reduce global GHG emissions resulting from the 2015 United Nations Climate Change Conference. Currently, the USEPA is engaged in research into approaches to reduce the U.S. contribution to climate change. Areas of climate research include economic analyses of regulatory policy instruments (e.g., emissions trading, estimation of GHG reduction benefits, the role of uncertainty, and modeling the economic impacts of ocean acidification). In addition, many U.S. states and companies are putting in place their own commitments to reduce global climate change by enacting local climate action plans, policies, and standards.

On August 16, 2022, President Biden signed the Inflation Reduction Act of 2022. This regulation has important climate change components, expected to lower energy costs, increase cleaner production, and reduce carbon emissions by roughly 40% by 2030 (WH 2022). Specific provisions of the regulation include financing and expediting deployment of clean energy technologies, by extending Production Tax Credits and Investment Tax Credits, providing $27 billion for the Greenhouse Gas Reduction Fund and $40 billion in loan authority to guarantee loans for innovative clean energy projects; by revitalizing American manufacturing to build the clean energy economy which includes up to $250 billion in new loan authority for Energy Infrastructure Reinvestment Financing; investing in reliable clean energy in rural America and on tribal lands; incentivizing and supporting deployment of clean vehicles and use of cleaner transportation fuels; expanding leadership in industrial decarbonization and carbon management; investing in clean hydrogen; and other initiatives.

3.1.2 California GHG Regulations

Executive Orders (EO) S-3-05 and B-30-15 are orders from the State’s Executive Branch for the purpose of reducing GHG emissions. Executive Order S-3-05’s goal to reduce GHG emissions to 1990 levels by 2020 was adopted by the Legislature as the 2006 Global Warming Solutions Act (AB 32) and codified into law in Health and Safety Code (HSC) Division 25.5. Executive Order B30-15’s goal to reduce GHG emissions to 40 percent below 1990 levels by 2030 was adopted by the Legislature in SB 32 and also codified into law in HSC Division 25.5. In September 2022, AB 1279, The California Crisis Act, was approved and codified the carbon neutrality target as 85 percent below 1990 levels by 2045 (California Crisis Act 2022).

In support of HSC Division 25.5, the State has promulgated specific laws and strategies aimed at GHG reductions applicable to the Project. The primary focus of many of the statewide and regional plans, policies and regulations is to address worldwide climate change. Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Project’s increase in annual GHG emissions would cause a measurable change in global GHG emissions necessary to influence global climate change. Newer construction materials and practices, energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago; however, the net effect is difficult to quantify. The GHG emissions of the Project alone would not likely cause a direct physical change in the environment. According to the California Air Pollution Control Officers Association (CAPCOA), “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.”

(CAPCOA 2008). It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone.

AB 32 requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008, and updated on November 16, 2022, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures (CARB 2022c). The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms. Executive Order S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020. CARB’s Scoping Plan builds on this 2020 goal by listing strategies that will further reduce California’s reliance on carbon fuels by 2030.

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is an environmental issue that requires analysis under CEQA. SB 97 directed the Governor’s Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010. Pursuant to the requirements of SB 97 as stated above, on December 30, 2009, the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.

- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies or recommended by experts.

- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in *Appendix F: Energy Conservation* of the CEQA Guidelines.

- OPR emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.

- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the state’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

California Code of Regulations (CCR) Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and the Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. The California Energy Commission updates the Building Energy Efficiency Standards every three years. The 2022 Building Energy Efficiency Standards apply to new construction of, and additions and alterations to, residential and nonresidential buildings and have been incorporated into the most recent CalEEMod model. All buildings for which an application for a building permit is submitted on or after January 1, 2023 must comply with the 2022 standards. The 2022 commercial standards are more efficient than the 2019 standards and include increased space and water heating efficiency and ventilation standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

27 CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated

with energy consumption. CCR Title 24, Part 11 (CCR 2022), also known as CALGreen, has been updated periodically since 2001, with the most recent updates made in 2022 and effective as of January 1, 2023. CALGreen is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. The CALGreen Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided, they provide a minimum 50 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings must meet for occupancy certification. Enforcement is generally through the local building official. The 2022 CALGreen code now requires 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. One focus of CALGreen is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CALGreen has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

Senate Bill 375 (SB 375) was adopted in September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. Additionally, SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

On April 29, 2015, Governor Brown issued Executive Order B-30-15 to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 - the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half. This executive action set the stage for the important work being done on climate change by the Legislature. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments.

California has met or exceeded the current target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 85 percent from 1990 levels by 2045.

SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate change–based activities and expand dissemination of GHG and other air quality–related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies which is comprised of at least three members of the Senate and three members of the Assembly that provide ongoing oversight over implementation of the state's climate policies. AB 197 added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

On September 16, 2022, Governor Newsom approved AB 1279, the California Climate Crisis Act and SB 1020, the Clean Energy, Jobs, and Affordability Act mentioned above. AB 1279 codified the carbon neutrality target as 85 percent below 1990 levels by 2045. SB 1020 requires CARB to prepare and approve a scoping plan and to update the scoping plan at least once every 5 years. SB 1020 requires CARB to prepare and approve a scoping plan and to update the scoping plan at least once every 5 years. CARB approved the 2022 Final Scoping Plan for achieving carbon neutrality in December 2022. The 2022 Scoping Plan identifies strategies for achieving the state's GHG emission reduction targets and calls for measures such as all new commercial buildings to have all electric appliances by 2029 (CARB 2022c).

The Zero Emission Vehicle (ZEV) and Low Emission Vehicle (LEV) programs of California's Advanced Clean Cars (ACC) regulations, originally enacted in 2012 for model years 2015 to 2025 for light-duty and medium-duty vehicles, have been effective policies for creating and growing the market for electric vehicles (EVs) and reducing road transport greenhouse gas and criteria pollutant emission. California adopted the new Advanced Clean Cars II regulations (ACC II) in August 2022. The ACC II sets annual ZEV and plug-in hybrid vehicle (PHEV) sales requirements from model years 2026 to 2035 (ZEV program) and increasingly more stringent exhaust and evaporative emission standards (LEV program) to ensure automakers gradually phase out new sales of internal combustion engine vehicles.

3.1.3 Local GHG Regulations and CEQA Requirements

Since passage of SB 375 in 2008, CARB has required MPOs to develop and adopt SCSs. SCAG serves as the MPO for the Riverside region.

Southern California Association of Governments: RTP/SCS

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California regarding compliance with the federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated MPO for the six-county Southern California region, SCAG is required by law to develop transportation activities that conform to, and are supportive of, the goals of regional and state air quality plans to attain NAAQS.

In addition, SCAG is a co-producer with the SCAQMD of the transportation strategy and transportation control measure sections of the AQMP for the Basin. With regard to future growth, SCAG adopted the 2020 RTP/SCS in September 2020, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2020 RTP/SCS are based in part on projections originating under county and city general plans. Previous growth projections were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2022 AQMP.

City of Menifee General Plan

The City of Menifee General Plan [Open Space and Conservation Element (OSC)] has goals to reduce impacts to air quality at the local level by minimizing pollution (General Plan Goal OSC-9). The OSC also includes goals to have efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations (General Plan Goal OSC-4), a reliable and safe water supply that effectively meets current and future user demand (General Plan Goal OSC-7), as well as an environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions (General Plan Goal OSC-10). Policies to meet these goals include:

- OSC-4.1 Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.

- OSC-4.2 Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.

- OSC-7.2 Encourage water conservation as a means of preserving water resources.
- OSC-10.1 Align the City's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.
- OSC-10.2 Align the City's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.
- OSC-10.3 Participate in regional greenhouse gas emission reduction initiatives.
- OSC-10.4 Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.

Adherence to these goals for the Project is discussed in section 3.4.2.

3.1.4 Project Specific Guidelines and GHG Thresholds of Significance

The City of Menifee has not adopted project-specific significance thresholds, and instead relies on SCAQMD's recommended screening thresholds to determine the significance of a Project's GHG emissions. On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year CO_2e. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use projects. This 3,000 MT/year recommendation has been used as a numerical guideline for this analysis.

Based on Appendix G of the *CEQA Guidelines*, impacts related to GHG emissions from the Project would be significant if the Project would:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*
2. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

For purposes of this analysis, the two Appendix G checklist questions set forth above are utilized as the thresholds of significance when evaluating the environmental effects of the Project's GHG emissions.

In addition, *CEQA Guidelines* Section 15064.4(b) states that a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;

- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions.

The Project is evaluated for its compliance with applicable policies in Section 3.4.

CEQA Guidelines Section 15064.4(a) states that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. Therefore, GHG emissions as estimated by CalEEMod are provided for informational purposes.

3.2 Greenhouse Gas Analysis Methodology

GHG emissions associated with construction and operation of the proposed Project and existing development have been estimated using California Emissions Estimator Model (CalEEMod) version 2022.1.1.20 (CAPCOA 2022).

3.2.1 Construction GHG Emissions Calculation Methodology

Construction of the proposed Project would generate temporary GHG emissions primarily associated with the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest emission quantities because the use of heavy equipment is greatest during this phase of construction. Emissions associated with the construction period were estimated based on the projected maximum amount of equipment that would be used onsite at one time. Pursuant to SCAQMD Guidance, total construction GHG emissions, resulting from the Project, are amortized over 30 years and added to operational GHG emissions (SCAQMD 2008b). Complete CalEEMod GHG modeling for construction, results and assumptions are included in Appendix B.

3.2.2 Operational GHG Emissions Calculation Methodology

Default values used in CalEEMod version 2022.1.1.20 are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO_2, N_2O and CH_4. This methodology has been subjected to peer review by numerous public and private stakeholders, and in particular by the CEC; and therefore, is considered reasonable and reliable for use in GHG impact analysis pursuant to CEQA.

Emissions associated with area sources (i.e., consumer products, landscape maintenance, and architectural coating) were calculated in CalEEMod based on standard emission rates from CARB, USEPA, and district supplied emission factor values. Emissions from waste generation were also calculated in CalEEMod and are based on the Intergovernmental Panel on Climate Change's (IPCC's) methods for quantifying GHG emissions from solid waste using the degradable organic content of waste. Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from a study published by The Pacific Institute (Sziniai et. al. 2021) using the average values for Northern and Southern California. Emissions from mobile sources were quantified based on trip generation estimates included in CalEEMod.

3.3 Estimate of GHG Emissions

3.3.1 Construction GHG Emissions

Construction activity is assumed to occur over a period of 18 months beginning in May 2024 and concluding in October 2025. Based on CalEEMod results, construction activity for the Project would generate an estimated 500 metric tons of CO_2e, as shown in Table 12. Amortized over a 30-year period (the assumed life of the Project), construction of the proposed Project would generate 16.6 metric tons of CO_2e per year.

TABLE 12
CONSTRUCTION GREENHOUSE GAS EMISSIONS

Year	**Annual Emissions (Metric Tons CO_2e)**
2024	247
2025	254
Total Project	501
Amortized over 30 years	**16.7**

See Appendix B for annual CalEEMod emission results files.

3.3.2 Operational GHG Emissions

Operational GHG emissions are long-term emissions related to energy use, solid waste, water use, an emergency diesel engine, and transportation. Each source is discussed below and includes the emissions associated with existing development and the anticipated emissions that would result from the proposed Project.

The CalEEMod modeling for operational emissions considered the GHG emission reducing design measures listed below:

- T-14: Provide Electric Vehicle Charging Infrastructure. The Project will include 25 EV capable parking spaces and 5 electric vehicle charging stations (EVCS).
- T-34: Provide Bike Parking.
- E-10-B: Establish Onsite Renewable Energy Systems: Solar Power.

Approximately 20% of the Project's electricity demand will be provided by a solar PV system.

- E-25: Install Electric Heat Pumps.
- W-4: Require Low-Flow Water Fixtures. The Project will include low-flow toilets, showerheads, and faucets.
- W-5: Design Water-Efficient Landscapes. The Project will include drought tolerant landscaping with drip irrigation.

Measures T-14, T-34, and E-25 are qualitative or supporting measures and are not included in CalEEMod emission quantification.

Mobile Source Emissions

Mobile source GHG emissions were estimated using the average daily trips from the Home2Suites Traffic Assessment Letter (Rick Engineering 2023). The screening letter states that the Project would generate 466 daily trips. The Project would generate approximately 608 MT CO_2e per year associated with new vehicle trips. Of the 81 new parking spaces proposed for the Project, 25 will be EV capable parking spaces and 5 will be EV charging stations. This exceeds the nonresidential mandatory measures in the 2022 CALGreen Code, requiring 17 EV capable spaces and 4 EV charging stations for new developments with 76-100 spaces (CCR 2022).

Area Emissions

Emissions from landscaping equipment, architectural coatings, and household consumer products are considered area sources. Estimated annual GHG emissions from area sources for the Project would be 1.33 MT CO_2e per year.

Energy Use

Operation of onsite development would consume both electricity and natural gas (see Appendix B for CalEEMod results). The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. Natural gas emissions were calculated in CalEEMod using Project specific natural gas usage information. An estimated 1,300,000 kBTU/yr of natural gas will be used for hotel operations and was input into CalEEMod. Onsite solar energy use was implemented into CalEEMod, reducing Project electricity demand by 20%. The overall energy use at the Project site would result in approximately 281 MT CO_2e per year.

Water Use Emissions

The Project would use approximately 1,859,132 gallons of water per year. Based on the amount of electricity generated to supply and convey this amount of water, the Project would generate approximately 4.36 MT CO_2e per year.

Solid Waste Emissions

For solid waste generated onsite, the CalEEMod results indicate that the Project would result in approximately 18.1 MT CO_2e per year associated with solid waste disposed within landfills.

Refrigerant Emissions

Operation of building air conditioning and refrigeration equipment generates fugitive GHG emissions. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime. The refrigerant use at the Project site would result in approximately 16.9 MT CO_2e per year.

Stationary Emissions

Emissions from operation of the onsite emergency engine were estimated using CalEEMod assuming the engine uses diesel fuel and meets SCAQMD Rule 1470 emissions standards; results indicate that the Project would result in approximately 8.77 MT CO_2e per year associated with the maintenance and testing of this equipment.

TABLE 13
OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	**Annual Emissions (Metric Tons CO_2e/yr)**
Mobile Source	608
Area	1.33
Energy	281
Water Use	4.36
Solid Waste	18.1
Refrigerants	16.9
Stationary	8.77
Total Operational	**939**

See Appendix B for CalEEMod emission results files.

Total operational GHG emissions associated with the Project are estimated to be 939 MT CO_2e on an annual basis.

3.3.3 Combined Construction and Operational Emissions

Table 14 shows the combined net new construction, operational, and mobile GHG emissions associated with the proposed Project. As discussed above, temporary emissions associated with construction activity are amortized over 30 years (the anticipated life of the Project).

TABLE 14
COMBINED ANNUAL GREENHOUSE GAS EMISSIONS

Phase	**Annual Emissions (Metric Tons CO_2e)**
Construction (amortized)	16.7
Operational	939
Total	**956**
SCAQMD GHG Threshold	**3,000**
Exceeds Threshold?	**No**

See Appendix B for annual CalEEMod emission results files.

As shown in Table 14, total GHG emissions from construction and operation of the Project do not exceed the threshold of 3,000 MT CO_2e/year. Therefore, the Project would result in **less than significant cumulative GHG impacts**.

3.4 Consistency with Applicable Plans and Policies

The principal state plan and policy adopted to reduce GHG emissions is AB 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2022 Scoping Plan, which outlines a framework to achieve SB 32's 2030 target, emphasizes innovation, adoption of existing technology, and strategic investment to support its strategies. Statewide plans and regulations in support of these strategies, such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources, are being implemented at the statewide level; as such, compliance at a project level would occur as implementation continues statewide.

As mentioned above, Senate Bill 375, signed in August 2008, is a state-level policy directing each of California's 18 major MPOs to prepare an SCS that contains a growth strategy to meet emission targets for inclusion in the RTP. The applicable MPO for the Project site is SCAG, and project consistency with the goals contained in SCAG's 2020 RTP/SCS is discussed below.

3.4.1 SCAG 2020 RTP/SCS

SCAG's 2020 RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375 (SCAG 2020). The proposed hotel development project would not conflict with any of the SCAG's 2020 RTP/SCS goals, as outlined in Table 15.

TABLE 15
CONSISTENCY WITH APPLICABLE SCAG RTP/SCS GHG EMISSION REDUCTION STRATEGIES

Strategy / Action	Project Consistency
Land Use and Transportation	
Plan for growth around livable corridors. The Livable Corridors strategy seeks to create neighborhood retail nodes that would be walking and biking destinations by integrating three different planning components: 1. Transit improvements 2. Active transportation improvements (i.e., improved safety for walking and biking) 3. Land use policies that include the development of mixed-use retail centers at key nodes and better integrate different types of ritual uses.	**Consistent.** The Project site is located in a commercial and residential area, providing employment to nearby existing residential neighborhoods. Nearby employment areas would shorten vehicle trip lengths and reduce VMT.
Provide more options for short trips. 38 percent of all trips in the SCAG region are less than three miles. The RTP/SCS provides two strategies to promote the use of active transport for short trips. Neighborhood Mobility Areas are meant to reduce short trips in a suburban setting, while "complete communities" support the creation of mixed-use districts in strategic growth areas and are applicable to an urban setting.	**Consistent.** The Project site is located in a commercial and residential area, providing employment to nearby existing residential neighborhoods. Nearby employment areas would shorten vehicle trip lengths and reduce VMT.
Transit Initiatives	
Develop first-mile/last-mile strategies on a local level to provide an incentive for making trips by transit, bicycling, walking, or neighborhood electric vehicle or other ZEV options.	**Consistent.** The Project would be developed directly adjacent to the Antelope FS Menifee Town Center Bus Stop on Riverside Transit Agency Routes 61 and 74. This would allow for easy access to public transportation for Project customers and employees to reduce VMT.
Other Initiatives	
Reduce emissions resulting from a project through implementation of project features, project design, or other measures. Incorporate design measures to reduce energy consumption and increase use of renewable energy.	**Consistent.** The design and implementation of the proposed Project would comply with all requirements of the 2022 Title 24 standards, which include measures to reduce emissions. The Project would also incorporate low-flow water fixtures, onsite solar energy, electric vehicle parking and charging, bike parking, electric heat pumps, and drought tolerant landscaping.

3.4.2 The City of Menifee General Plan

The City's Open Space and Conservation Element (OSC) of the General Plan establishes goals to have efficient and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations as well as an environmentally aware community that is responsive to changing climate conditions and actively seeks to reduce local greenhouse gas emissions. The proposed hotel development project would not conflict with the applicable General Plan policies, as shown in Table 16.

TABLE 16
CONSISTENCY WITH APPLICABLE CITY OF MENIFEE GENERAL PLAN POLICIES

Measure	Project Consistency
OSC-4.1: *Apply energy efficiency and conservation practices in land use, transportation demand management, and subdivision and building design.*	**Consistent.** The Project would comply with all applicable elements in the California Energy Code, Title 24, Part 6 Building Energy Efficiency Standards and Part 11 CALGreen Standards. Thus, the Project would not conflict with General Plan Policy OSC-4.1.
OSC-4.2: *Evaluate public and private efforts to develop and operate alternative systems of energy production, including solar, wind, and fuel cell.*	**Consistent.** The Project would incorporate, onsite solar energy which will supplement approximately 20% of the Project electricity demand. Thus, the Project would not conflict with General Plan Policy OSC-4.2.
OSC-7.2: *Encourage water conservation as a means of preserving water resources.*	**Consistent.** The Project would implement low-flow water fixtures and drought tolerant landscaping. Thus, the Project would not conflict with General Plan Policy OSC-7.2.
OSC-9.5: *Comply with the mandatory requirements of Title 24 Part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Energy Efficiency Standards.*	**Consistent.** The Project would be conditioned to implement the applicable elements of the California Energy Code, Title 24, Part 6 Building Energy Efficiency Standards and Part 11 CALGreen Standards. The Project would be consistent with OSC-9.5.
OSC-10.1: *Align the City's local GHG reduction targets to be consistent with the statewide GHG reduction target of AB 32.*	**Consistent.** The Project would not conflict with the GHG reduction measures associated with AB 32. Thus, the Project would not conflict with General Plan Policy OSC-10.1
OSC-10.2: *Align the City's long-term GHG reduction goal consistent with the statewide GHG reduction goal of Executive Order S-03-05.*	**Consistent.** The Project would not conflict with the state’s implementation of S-03-05 and would not exceed the applicable SCAQMD 3,000 MT CO_2e per year numeric threshold. Thus, the Project would not conflict with General Plan Policy OSC-10.2.
OSC-10.3: *Participate in regional greenhouse gas emission reduction initiatives.*	**Consistent.** The Project would comply with all applicable regional GHG reduction activities, including those in the SCAG RTP/SCS. Thus, the Project would not

TABLE 16
CONSISTENCY WITH APPLICABLE CITY OF MENIFEE GENERAL PLAN POLICIES

Measure	Project Consistency
	conflict with General Plan Policy OSC-10.3.
OSC-10.4: *Consider impacts to climate change as a factor in evaluation of policies, strategies, and projects.*	**Consistent.** The Project has considered impacts to climate change as a factor in the evaluation of the Project, as demonstrated throughout Sections 3.3 and 3.4. Furthermore, the Project incorporates a number of mitigation measures and design regulations that would serve to reduce climate change-related impacts. Thus, the Project would not conflict with General Plan Policy OSC-10.4.

The Project is consistent with state and local policies aimed at reducing GHG emissions. Therefore, the Project would have a **less than significant** impact with respect to GHG emissions and climate change.

4.0 ENERGY ANALYSIS

State CEQA Guidelines Appendix G contains the Environmental Checklist Form, which includes questions concerning energy. The questions presented in the Environmental Checklist Form have been utilized as significance criteria in this section. Accordingly, the Project would have a significant effect on the environment if it would:

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

To analyze Project consumption of energy resources, sections 4.1 and 4.2 present energy use on three sources of energy consumption relevant to the Project, including electricity, natural gas, and transportation fuel for vehicle trips associated with the hotel development’s construction and operation.

As discussed in the Section 3.0 Greenhouse Gas Study, the Project will comply with all energy efficiency measures, building standards, state and local plans for reducing GHGs. The Project will also include several additional GHG and energy-reducing measures discussed in Section 3.3.2. Therefore, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.1 Construction Energy Use

Project construction energy demand includes gasoline and diesel fuel demand from worker, vendor, and hauling vehicle trips, and onsite construction equipment usage. Section 4.1.1 quantifies total fuel demand for Project construction and Section 4.1.2 evaluates construction energy demand adherence to the applicable CEQA significance criteria.

4.1.1 Construction Fuel Demand

Construction fuel demand was calculated based on CalEEMod emissions outputs and GHG emission factors from the USEPA GHG Emissions Factors Hub (USEPA 2023). Construction worker vehicles are estimated using the motor gasoline emission factor. Construction vendor, construction hauling, and construction onsite equipment line items are estimated using the diesel fuel emission factor. Vehicle miles traveled per day (VMT/day) was generated from trip numbers and trip lengths estimated in the CalEEMod output. Construction fuel demand for these line items is provided in Tables 17-20.

TABLE 17
CONSTRUCTION WORKER GASOLINE FUEL DEMAND

Year	Phase	Days	VMT/day	CO_2e (kg/yr)	kg CO_2/gal EF	Gallons
2024	Demolition	20	160	1,070	8.78	122
	Site Preparation	23	96	740	8.78	84
	Grading	40	128	1,710	8.78	195
	Building Const.	112	352	13,100	8.78	1,492
2025	Building Const.	193	352	22,200	8.78	2,528
	Paving	20	192	1,260	8.78	144
	Arch. Coating	25	70.4	580	8.78	66
2024 Total (gal gasoline/year)						**1,893**
2025 Total (gal gasoline/year)						**2,738**

TABLE 18
CONSTRUCTION VENDOR DIESEL FUEL DEMAND

Year	Phase	Days	VMT/day	CO_2e (kg/yr)	kg CO_2/gal EF	Gallons
2024	Demolition	20	0	0	10.21	0
	Site Preparation	23	0	0	10.21	0
	Grading	40	0	0	10.21	0
	Building Const.	112	89.1	14,500	10.21	1,420
2025	Building Const.	193	89.1	24,700	10.21	2,419
	Paving	20	0	0	10.21	0
	Arch. Coating	25	0	0	10.21	0
2024 Total (gal diesel/year)						**1,420**
2025 Total (gal diesel/year)						**2,419**

TABLE 19
CONSTRUCTION HAUL DIESEL FUEL DEMAND

Year	Phase	Days	VMT/day	CO_2e (kg/yr)	kg CO_2/gal EF	Gallons
2024	Demolition	20	125	4,170	10.21	408
	Site Preparation	23	54.8	2,100	10.21	206
	Grading	40	31.4	2,100	10.21	206
	Building Const.	112	0	0	10.21	0
2025	Building Const.	193	0	0	10.21	0
	Paving	20	0	0	10.21	0
	Arch. Coating	25	0	0	10.21	0
2024 Total (gal diesel/year)						**820**
2025 Total (gal diesel/year)						**0**

TABLE 20
CONSTRUCTION EQUIPMENT DIESEL FUEL DEMAND

Year	Phase	Days	Equipment Units	CO_2e (kg/yr)	kg CO_2/gal EF	Gallons
2024	Demolition	20	5	22,700	10.21	2,223
	Site Preparation	23	3	28,400	10.21	2782
	Grading	40	4	44,700	10.21	4378
	Building Const.	112	8	112,000	10.21	10,970
2025	Building Const.	193	8	193,000	10.21	18,903
	Paving	20	6	11,300	10.21	1,107
	Arch. Coating	25	1	1,520	10.21	149
2024 Total (gal diesel/year)						**20,353**
2025 Total (gal diesel/year)						**20,159**

Total Project gasoline use for construction worker trips is an estimated 4,631 gallons. Total Project diesel use for construction vendor and haul trips and construction equipment use is an estimated 45,171 gallons.

4.1.2 Construction Energy Use Analysis

In 2024 and 2025, Californians are anticipated to use approximately 27.8 billion gallons of gasoline and approximately 6.4 billion gallons of diesel fuel. Riverside County gasoline fuel use in 2024 and 2025 is anticipated to be 1.4 billion gallons and diesel use would be approximately 518 million gallons (CARB 2021). Total Project construction gasoline fuel would represent less than 0.001 percent of gasoline anticipated to be used in the County in 2024 and 2025, and total Project construction diesel fuel would represent approximately 0.009 percent of diesel fuel anticipated to be used in the County in 2024 and 2025. Total Project construction gasoline and diesel fuel would also represent less than 0.0001 percent of the State's anticipated fuel use. Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, current crude oil production would be sufficient to meet demand until 2050 (US EIA 2023). As such, it is expected that existing and planned transportation fuel supplies would be sufficient to serve the Project's temporary construction demand. Based on the total Project's relatively low construction fuel use proportional to annual County use, the Project would not substantially affect existing energy fuel supplies or resources per State CEQA Guidelines Appendix F (II)(C)(2).

There are no unusual Project characteristics that would necessitate the use of less energy-efficient construction equipment than at comparable construction sites in the region or state. It is expected that construction fuel use associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. Therefore, potential energy impacts associated with construction are considered **less than significant**.

4.2 Operational Energy Use

The analysis of the Project's electricity and natural gas use is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use. The CaEEMod output is shown in Appendix B. Modeling related to Project electricity energy use was based primarily on the default settings in CalEEMod. Natural gas energy use was provided and used as a non-default option in CalEEMod. The amount of operational fuel use was estimated using CalEEMod outputs for the Project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in Riverside County.

4.2.1 Operational Energy Use

Operational natural gas use and electricity use are presented in Table 21 below. Approximately 20% of the hotel's electricity energy demand will be provided by an onsite solar PV system.

TABLE 21
OPERATIONAL ENERGY USE

Land Use	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
Hotel	1,300,000	843,713
Parking Lot	0	32,517
Total	**1,300,000**	**876,230**

4.2.2 Mobile Operational Emissions

The Project would have an estimated annual vehicle miles traveled (VMT) of 1,626,872 miles. The average daily trip rate is 466 trips per day. Total mobile source CO_2e is 608 Metric Tons per year. CalEEMod assumes 92% of VMT burns gasoline while the remaining 8% burns diesel. Thus, of the estimated 608 MT of annual mobile emissions, 559.4 MT is generated by gasoline combustion and 48.64 MT from diesel combustion. The Project would have an estimated annual gasoline demand of 63,708 gallons and an estimated annual diesel demand of 4,764 gallons.

4.2.3 Operational Energy Use Analysis

Californians used 287,826 gigawatt hours (GWh) of electricity in 2022, of which Riverside County used 17,781 GWh (CEC 2022). The Project's operational electricity use would represent a nominal portion of electricity used in the state and Riverside County. In addition, the Project applicant would install solar photovoltaic (PV) panels. Regarding natural gas, Californians used 11.7 billion therms of natural gas and 431 million therms of natural gas in Riverside County in 2022 (CEC 2022). The Project's operational natural gas use would contribute to less than 0.001 percent natural gas use in the State and less than 0.01 percent in the County.

Riverside County annual gasoline fuel use in 2026 is anticipated to be 679 million gallons and diesel fuel is anticipated to be 260 million gallons (CARB 2021). Expected Project operational gasoline and diesel consumption would represent approximately 0.009 percent of gasoline use and 0.001 percent of diesel use in the County.

Project operations would not substantially affect existing energy supplies or resources. The Project would comply with applicable energy standards and new capacity would not be required. Energy impacts associated with operations would be **less than significant**.

5.0 FINDINGS AND CONCLUSIONS

The Project-specific evaluation presented in the preceding analysis demonstrates that short-term emissions from construction of the Project are below all applicable SCAQMD regional daily thresholds of significance and LSTs. Therefore, air quality emissions from Project construction, as well as cumulative impacts with Project construction, are considered **less than significant**.

Emissions of all criteria pollutants from Project operation are below all applicable daily thresholds of significance. Thus, the Project would not conflict with plans, violate an air quality standard, or contribute to an existing or projected violation, result in a cumulatively considerable increase in ozone or particulate matter emissions or expose receptors to substantial pollutant concentrations. Therefore, air quality emissions from Project operation are considered **less than significant**.

Based on the Greenhouse Gas Study, the Project would neither conflict nor interfere with the state's implementation of SB 32's target of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030. The Project will yield 939 MT CO_2e on an annual basis, which is below the SCAQMD recommended numerical threshold of 3,000 MT/yr. The Project will be consistent with the applicable emission reduction strategies and measures. Therefore, the Project would result in **less than significant cumulative GHG impacts**.

Based on the Energy Analysis, the Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project's energy use would be **less than significant.**

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APPENDIX A

PROPOSED SITE PLAN FOR THE HOME2SUITES DEVELOPMENT

NOAA
group
architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

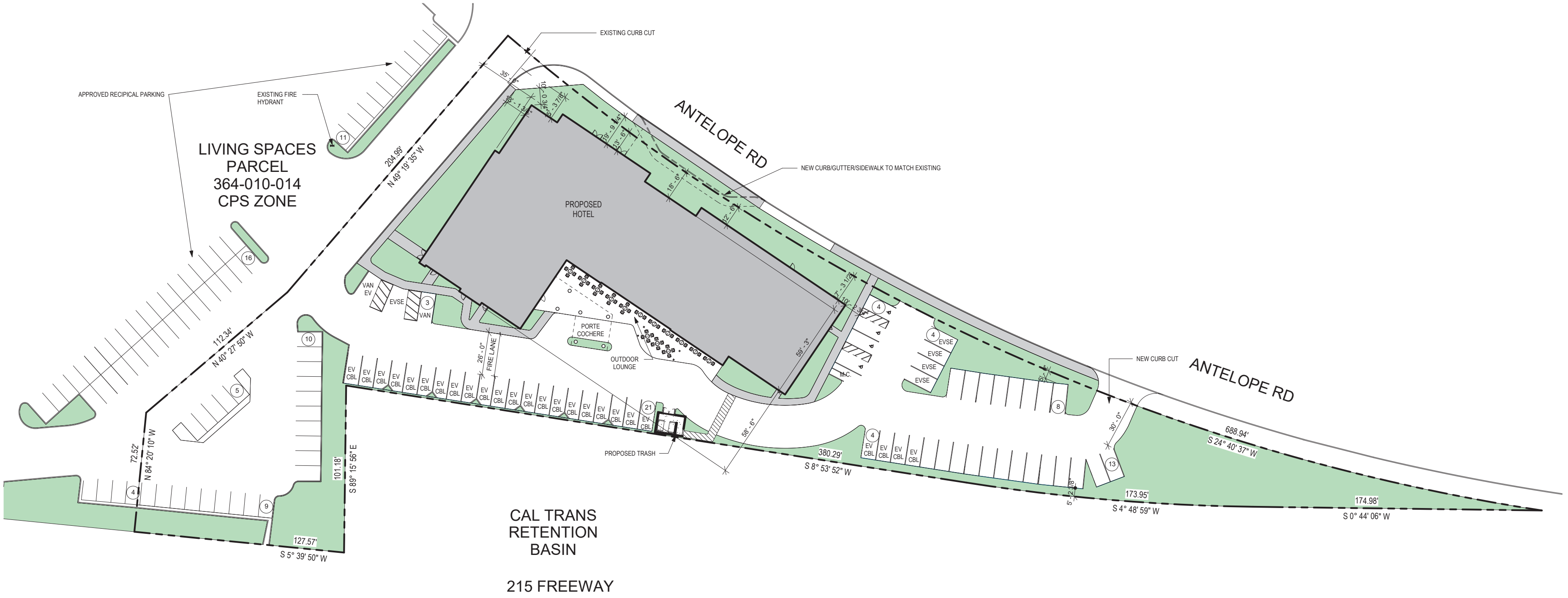
tel: 619-297-8066
web: www.noaainc.com

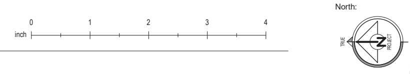
DANUBE TALANT
No. C38946
REN 11/30/2023

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE

ANTELOPE RD.
MENIFEE, CA 92584





1 PROPOSED SITE PLAN
Ref: A-201 / Scale: 1" = 30'-0"

REVISION SCHEDULE		
NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

PROPOSED SITE PLAN

Scale: 1" = 30'-0"
Sheet No:

A-102

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APPENDIX B

CALEEMOD AIR EMISSION MODEL RESULTS ANNUAL AND DAILY EMISSIONS FOR CONSTRUCTION AND OPERATION

Home2Suites Menifee_102623 Custom Report

Table of Contents

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Home2Suites Menifee_102623
Construction Start Date	6/3/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.68039595552061, -117.17054355090401
County	Riverside-South Coast
City	Menifee
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5508
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

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

Hotel	106	Room	1.16	65,463	22,650	—	—	—
Parking Lot	108	Space	0.85	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-14*	Provide Electric Vehicle Charging Infrastructure
Transportation	T-34*	Provide Bike Parking
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Energy	E-25*	Install Electric Heat Pumps
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

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.	4.02	12.7	32.2	33.0	0.05	1.43	3.45	4.88	1.31	1.48	2.79	—	5,720	5,720	0.22	0.14	2.28	5,769
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	12.7	11.7	13.3	0.03	0.46	0.32	0.78	0.42	0.08	0.50	—	2,728	2,728	0.11	0.07	0.05	2,751
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.96	1.63	7.03	7.54	0.01	0.29	0.49	0.79	0.27	0.19	0.46	—	1,521	1,521	0.06	0.04	0.42	1,534
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.30	1.28	1.38	< 0.005	0.05	0.09	0.14	0.05	0.03	0.08	—	252	252	0.01	0.01	0.07	254

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.02	3.38	32.2	33.0	0.05	1.43	3.45	4.88	1.31	1.48	2.79	—	5,720	5,720	0.22	0.14	2.05	5,769
2025	2.54	12.7	17.2	22.5	0.04	0.68	0.46	1.14	0.63	0.11	0.74	—	4,131	4,131	0.17	0.08	2.28	4,163
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.72	1.45	11.7	13.3	0.03	0.46	0.32	0.78	0.42	0.08	0.50	—	2,728	2,728	0.11	0.07	0.05	2,751
2025	1.62	12.7	11.0	13.1	0.03	0.41	0.32	0.73	0.38	0.08	0.45	—	2,719	2,719	0.11	0.07	0.05	2,742
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.96	0.80	7.03	7.50	0.01	0.29	0.49	0.79	0.27	0.19	0.46	—	1,480	1,480	0.06	0.03	0.33	1,492
2025	0.91	1.63	6.21	7.54	0.01	0.23	0.18	0.41	0.21	0.04	0.26	—	1,521	1,521	0.06	0.04	0.42	1,534
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.17	0.15	1.28	1.37	< 0.005	0.05	0.09	0.14	0.05	0.03	0.08	—	245	245	0.01	0.01	0.05	247
2025	0.17	0.30	1.13	1.38	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	252	252	0.01	0.01	0.07	254

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.02	3.38	32.2	33.0	0.05	1.43	3.45	4.88	1.31	1.48	2.79	—	5,720	5,720	0.22	0.14	2.05	5,769
2025	2.54	12.7	17.2	22.5	0.04	0.68	0.46	1.14	0.63	0.11	0.74	—	4,131	4,131	0.17	0.08	2.28	4,163
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.72	1.45	11.7	13.3	0.03	0.46	0.32	0.78	0.42	0.08	0.50	—	2,728	2,728	0.11	0.07	0.05	2,751
2025	1.62	12.7	11.0	13.1	0.03	0.41	0.32	0.73	0.38	0.08	0.45	—	2,719	2,719	0.11	0.07	0.05	2,742
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.96	0.80	7.03	7.50	0.01	0.29	0.49	0.79	0.27	0.19	0.46	—	1,480	1,480	0.06	0.03	0.33	1,492
2025	0.91	1.63	6.21	7.54	0.01	0.23	0.18	0.41	0.21	0.04	0.26	—	1,521	1,521	0.06	0.04	0.42	1,534
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.17	0.15	1.28	1.37	< 0.005	0.05	0.09	0.14	0.05	0.03	0.08	—	245	245	0.01	0.01	0.05	247
2025	0.17	0.30	1.13	1.38	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	252	252	0.01	0.01	0.07	254

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.	3.50	4.69	4.21	20.7	0.04	0.17	3.16	3.33	0.17	0.80	0.97	34.2	6,219	6,253	3.73	0.19	117	6,521
Mit.	3.50	4.69	4.21	20.7	0.04	0.17	3.16	3.33	0.17	0.80	0.97	33.9	5,909	5,943	3.69	0.19	117	6,209
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	5%	5%	1%	1%	—	5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	2.85	4.09	4.31	15.5	0.04	0.17	3.16	3.32	0.16	0.80	0.97	34.2	5,977	6,011	3.74	0.20	103	6,267
Mit.	2.85	4.09	4.31	15.5	0.04	0.17	3.16	3.32	0.16	0.80	0.97	33.9	5,667	5,700	3.70	0.20	103	5,954
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	5%	5%	1%	1%	—	5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.47	3.74	2.54	16.2	0.04	0.07	3.13	3.20	0.07	0.79	0.87	34.2	5,686	5,720	3.73	0.20	109	5,981
Mit.	2.47	3.74	2.54	16.2	0.04	0.07	3.13	3.20	0.07	0.79	0.87	33.9	5,376	5,409	3.68	0.20	109	5,668
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	5%	5%	1%	1%	—	5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.68	0.46	2.96	0.01	0.01	0.57	0.58	0.01	0.15	0.16	5.65	941	947	0.62	0.03	18.0	990
Mit.	0.45	0.68	0.46	2.96	0.01	0.01	0.57	0.58	0.01	0.15	0.16	5.62	890	896	0.61	0.03	18.0	938
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	5%	5%	1%	1%	—	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	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Area	0.51	1.96	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	2,001	2,001	0.14	0.01	—	2,008
Water	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102

Stationar	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	3.50	4.69	4.21	20.7	0.04	0.17	3.16	3.33	0.17	0.80	0.97	34.2	6,219	6,253	3.73	0.19	117	6,521
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Area	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	2,001	2,001	0.14	0.01	—	2,008
Water	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Stationary	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	2.85	4.09	4.31	15.5	0.04	0.17	3.16	3.32	0.16	0.80	0.97	34.2	5,977	6,011	3.74	0.20	103	6,267
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.81	1.89	13.7	0.04	0.03	3.13	3.16	0.03	0.79	0.82	—	3,606	3,606	0.17	0.18	6.18	3,670
Area	0.35	1.81	0.02	1.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.02	8.02	< 0.005	< 0.005	—	8.05
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	2,001	2,001	0.14	0.01	—	2,008
Water	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Stationary	0.11	0.10	0.29	0.26	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	0.00	52.8	52.8	< 0.005	< 0.005	0.00	53.0
Total	2.47	3.74	2.54	16.2	0.04	0.07	3.13	3.20	0.07	0.79	0.87	34.2	5,686	5,720	3.73	0.20	109	5,981
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608
Area	0.06	0.33	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	331	331	0.02	< 0.005	—	332

Water	—	—	—	—	—	—	—	—	—	—	—	0.48	2.92	3.40	0.05	< 0.005	—	4.98
Waste	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9
Stationary	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77
Total	0.45	0.68	0.46	2.96	0.01	0.01	0.57	0.58	0.01	0.15	0.16	5.65	941	947	0.62	0.03	18.0	990

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	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Area	0.51	1.96	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,694	1,694	0.12	0.01	—	1,700
Water	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4
Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Stationary	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	3.50	4.69	4.21	20.7	0.04	0.17	3.16	3.33	0.17	0.80	0.97	33.9	5,909	5,943	3.69	0.19	117	6,209
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Area	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,694	1,694	0.12	0.01	—	1,700
Water	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4

Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Stationary	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	2.85	4.09	4.31	15.5	0.04	0.17	3.16	3.32	0.16	0.80	0.97	33.9	5,667	5,700	3.70	0.20	103	5,954
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.97	1.81	1.89	13.7	0.04	0.03	3.13	3.16	0.03	0.79	0.82	—	3,606	3,606	0.17	0.18	6.18	3,670
Area	0.35	1.81	0.02	1.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.02	8.02	< 0.005	< 0.005	—	8.05
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,694	1,694	0.12	0.01	—	1,700
Water	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4
Waste	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Stationary	0.11	0.10	0.29	0.26	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	0.00	52.8	52.8	< 0.005	< 0.005	0.00	53.0
Total	2.47	3.74	2.54	16.2	0.04	0.07	3.13	3.20	0.07	0.79	0.87	33.9	5,376	5,409	3.68	0.20	109	5,668
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608
Area	0.06	0.33	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	280	280	0.02	< 0.005	—	281
Water	—	—	—	—	—	—	—	—	—	—	—	0.44	2.48	2.92	0.05	< 0.005	—	4.36
Waste	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9
Stationary	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77
Total	0.45	0.68	0.46	2.96	0.01	0.01	0.57	0.58	0.01	0.15	0.16	5.62	890	896	0.61	0.03	18.0	938

3. Construction Emissions Details

3.1. Demolition (2024) - 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	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.85	0.88	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.06	0.06	0.04	0.75	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	125	125	0.01	< 0.005	0.49	127
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	0.49	0.12	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	438	438	0.01	0.07	0.93	460
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.37	6.37	< 0.005	< 0.005	0.01	6.47
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	—	24.0	24.0	< 0.005	< 0.005	0.02	25.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.07
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	< 0.005	4.17

3.2. Demolition (2024) - 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	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.85	0.88	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.06	0.06	0.04	0.75	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	125	125	0.01	< 0.005	0.49	127
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	0.49	0.12	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	438	438	0.01	0.07	0.93	460
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.37	6.37	< 0.005	< 0.005	0.01	6.47

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	—	24.0	24.0	< 0.005	< 0.005	0.02	25.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.07
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	< 0.005	4.17

3.3. Site Preparation (2024) - 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	1.56	1.31	12.7	11.4	0.03	0.55	—	0.55	0.51	—	0.51	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.80	0.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	171	171	0.01	< 0.005	—	172

Dust From Material Movemen	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.3	28.3	< 0.005	< 0.005	—	28.4
Dust From Material Movemen	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.04	0.04	0.03	0.45	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	74.9	74.9	< 0.005	< 0.005	0.30	76.1
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	0.22	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	192	192	< 0.005	0.03	0.41	202
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	4.40	4.40	< 0.005	< 0.005	0.01	4.46
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.01	12.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.74
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.10

3.4. Site Preparation (2024) - 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	1.56	1.31	12.7	11.4	0.03	0.55	—	0.55	0.51	—	0.51	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.80	0.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	171	171	0.01	< 0.005	—	172
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.3	28.3	< 0.005	< 0.005	—	28.4

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	0.04	0.04	0.03	0.45	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	74.9	74.9	< 0.005	< 0.005	0.30	76.1
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	0.22	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	192	192	< 0.005	0.03	0.41	202
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	4.40	4.40	< 0.005	< 0.005	0.01	4.46
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.01	12.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.74
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.10

3.5. Grading (2024) - 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	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.74	1.69	< 0.005	0.08	—	0.08	0.07	—	0.07	—	269	269	0.01	< 0.005	—	270
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.15	0.15	—	—	—	—	—	—	—
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	0.04	0.03	0.32	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.5	44.5	< 0.005	< 0.005	—	44.7
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
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	0.05	0.05	0.04	0.60	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	99.9	99.9	< 0.005	< 0.005	0.39	102
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	0.12	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	< 0.005	0.02	0.23	116
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.02	10.3
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.01	12.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.71
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.10

3.6. Grading (2024) - 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	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462

Dust From Material Movemen	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.74	1.69	< 0.005	0.08	—	0.08	0.07	—	0.07	—	269	269	0.01	< 0.005	—	270
Dust From Material Movemen	—	—	—	—	—	—	0.30	0.30	—	0.15	0.15	—	—	—	—	—	—	—
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	0.04	0.03	0.32	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.5	44.5	< 0.005	< 0.005	—	44.7
Dust From Material Movemen	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
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	0.05	0.05	0.04	0.60	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	99.9	99.9	< 0.005	< 0.005	0.39	102
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	0.12	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	< 0.005	0.02	0.23	116

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.02	10.3
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.01	12.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.71
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.10

3.7. Building Construction (2024) - 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	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
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	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
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	0.48	0.40	3.43	3.64	0.01	0.14	—	0.14	0.13	—	0.13	—	672	672	0.03	0.01	—	674
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	0.09	0.07	0.63	0.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	112
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	0.14	0.13	0.10	1.66	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	275	275	0.01	0.01	1.08	279
Vendor	0.01	0.01	0.33	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	274	274	0.01	0.04	0.77	287
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	0.13	0.12	0.11	1.28	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	253	253	0.01	0.01	0.03	256
Vendor	0.01	0.01	0.34	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	274	274	0.01	0.04	0.02	287
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	0.04	0.04	0.04	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.1	78.1	< 0.005	< 0.005	0.14	79.3
Vendor	< 0.005	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.7	83.7	< 0.005	0.01	0.10	87.6
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	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.02	13.1

Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.02	14.5
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 (2024) - 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	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
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	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
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	0.48	0.40	3.43	3.64	0.01	0.14	—	0.14	0.13	—	0.13	—	672	672	0.03	0.01	—	674
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	0.09	0.07	0.63	0.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	112
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	0.14	0.13	0.10	1.66	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	275	275	0.01	0.01	1.08	279
Vendor	0.01	0.01	0.33	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	274	274	0.01	0.04	0.77	287
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	0.13	0.12	0.11	1.28	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	253	253	0.01	0.01	0.03	256
Vendor	0.01	0.01	0.34	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	274	274	0.01	0.04	0.02	287
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	0.04	0.04	0.04	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.1	78.1	< 0.005	< 0.005	0.14	79.3
Vendor	< 0.005	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.7	83.7	< 0.005	0.01	0.10	87.6
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	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.02	13.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.02	14.5
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 (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
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	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
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	0.78	0.65	5.58	6.24	0.01	0.21	—	0.21	0.20	—	0.20	—	1,159	1,159	0.05	0.01	—	1,163
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	0.14	0.12	1.02	1.14	< 0.005	0.04	—	0.04	0.04	—	0.04	—	192	192	0.01	< 0.005	—	193
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	0.13	0.12	0.09	1.53	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.98	273
Vendor	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	270	270	0.01	0.04	0.76	283
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	0.12	0.11	0.10	1.19	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	247	247	0.01	0.01	0.03	251

Vendor	0.01	0.01	0.33	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	270	270	0.01	0.04	0.02	283
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	0.06	0.06	0.06	0.66	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	0.01	0.22	134
Vendor	0.01	< 0.005	0.17	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	142	142	< 0.005	0.02	0.17	149
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	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.8	21.8	< 0.005	< 0.005	0.04	22.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.03	24.7
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 (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
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	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
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	0.78	0.65	5.58	6.24	0.01	0.21	—	0.21	0.20	—	0.20	—	1,159	1,159	0.05	0.01	—	1,163
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	0.14	0.12	1.02	1.14	< 0.005	0.04	—	0.04	0.04	—	0.04	—	192	192	0.01	< 0.005	—	193
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	0.13	0.12	0.09	1.53	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.98	273
Vendor	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	270	270	0.01	0.04	0.76	283
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	0.12	0.11	0.10	1.19	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	247	247	0.01	0.01	0.03	251
Vendor	0.01	0.01	0.33	0.11	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	270	270	0.01	0.04	0.02	283
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	0.06	0.06	0.06	0.66	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	0.01	0.22	134
Vendor	0.01	< 0.005	0.17	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	142	142	< 0.005	0.02	0.17	149
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	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.8	21.8	< 0.005	< 0.005	0.04	22.2

Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.03	24.7
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. Paving (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.70	6.13	8.21	0.01	0.27	—	0.27	0.25	—	0.25	—	1,244	1,244	0.05	0.01	—	1,248
Paving	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.45	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.2	68.2	< 0.005	< 0.005	—	68.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.07	0.06	0.05	0.84	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	147	147	0.01	0.01	0.54	149
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	7.49	7.49	< 0.005	< 0.005	0.01	7.60
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	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.26
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

3.12. Paving (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.70	6.13	8.21	0.01	0.27	—	0.27	0.25	—	0.25	—	1,244	1,244	0.05	0.01	—	1,248
Paving	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.45	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.2	68.2	< 0.005	< 0.005	—	68.4
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.07	0.06	0.05	0.84	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	147	147	0.01	0.01	0.54	149
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	7.49	7.49	< 0.005	< 0.005	0.01	7.60
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	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.26
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

3.13. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	—	0.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.02	0.31	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	53.8	53.8	< 0.005	< 0.005	0.20	54.7
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	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.5	49.5	< 0.005	< 0.005	0.01	50.2
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.43	3.43	< 0.005	< 0.005	0.01	3.48
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
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. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	12.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.15	9.15	< 0.005	< 0.005	—	9.18
Architectural Coatings	—	0.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.02	0.31	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	53.8	53.8	< 0.005	< 0.005	0.20	54.7
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	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	49.5	49.5	< 0.005	< 0.005	0.01	50.2
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.43	3.43	< 0.005	< 0.005	0.01	3.48
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608

Parking Lot	0.00	0.00	0.00	0.00	0.00	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	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	2.12	1.96	1.73	15.7	0.04	0.03	3.16	3.19	0.03	0.80	0.83	—	3,803	3,803	0.16	0.17	14.3	3,873
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	1.99	1.82	1.85	13.3	0.03	0.03	3.16	3.19	0.03	0.80	0.83	—	3,573	3,573	0.17	0.18	0.37	3,630
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608
Parking Lot	0.00	0.00	0.00	0.00	0.00	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	0.36	0.33	0.34	2.51	0.01	0.01	0.57	0.58	< 0.005	0.15	0.15	—	597	597	0.03	0.03	1.02	608

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,537	1,537	0.10	0.01	—	1,543
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	< 0.005	< 0.005	—	47.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,585	1,585	0.10	0.01	—	1,591
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,537	1,537	0.10	0.01	—	1,543
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	< 0.005	< 0.005	—	47.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,585	1,585	0.10	0.01	—	1,591
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	254	254	0.02	< 0.005	—	255
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	7.85	7.85	< 0.005	< 0.005	—	7.88
Total	—	—	—	—	—	—	—	—	—	—	—	—	262	262	0.02	< 0.005	—	263

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,230	1,230	0.08	0.01	—	1,234
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	< 0.005	< 0.005	—	47.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,277	1,277	0.08	0.01	—	1,282
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	1,230	1,230	0.08	0.01	—	1,234
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	47.4	47.4	< 0.005	< 0.005	—	47.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,277	1,277	0.08	0.01	—	1,282
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	204	204	0.01	< 0.005	—	204
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	7.85	7.85	< 0.005	< 0.005	—	7.88
Total	—	—	—	—	—	—	—	—	—	—	—	—	211	211	0.01	< 0.005	—	212

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Parking Lot	0.00	0.00	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hotel	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Parking Lot	0.00	0.00	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.0	69.0	0.01	< 0.005	—	69.2
Parking Lot	0.00	0.00	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	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.0	69.0	0.01	< 0.005	—	69.2

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Parking Lot	0.00	0.00	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Parking Lot	0.00	0.00	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	417	417	0.04	< 0.005	—	418
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.0	69.0	0.01	< 0.005	—	69.2

Parking Lot	0.00	0.00	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	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.0	69.0	0.01	< 0.005	—	69.2

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Total	0.51	1.96	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Total	0.06	0.33	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.51	0.47	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Total	0.51	1.96	0.02	2.85	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Total	0.06	0.33	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.87	17.7	20.5	0.30	0.01	—	30.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.48	2.92	3.40	0.05	< 0.005	—	4.98
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.48	2.92	3.40	0.05	< 0.005	—	4.98

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.64	15.0	17.6	0.27	0.01	—	26.4

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	0.44	2.48	2.92	0.05	< 0.005	—	4.36
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.44	2.48	2.92	0.05	< 0.005	—	4.36

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	31.3	0.00	31.3	3.13	0.00	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.18	0.00	5.18	0.52	0.00	—	18.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	16.9

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77
Total	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Total	0.83	0.75	2.10	1.92	< 0.005	0.11	0.00	0.11	0.11	0.00	0.11	0.00	385	385	0.02	< 0.005	0.00	387
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77
Total	0.02	0.02	0.05	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	8.74	8.74	< 0.005	< 0.005	0.00	8.77

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	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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	6/3/2024	6/28/2024	5.00	20.0	—
Site Preparation	Site Preparation	5/1/2024	5/31/2024	5.00	23.0	—
Grading	Grading	6/3/2024	7/26/2024	5.00	40.0	—
Building Construction	Building Construction	7/29/2024	9/26/2025	5.00	305	—
Paving	Paving	9/1/2025	9/26/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	9/29/2025	10/31/2025	5.00	25.0	—

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	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
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	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	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	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
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	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
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	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	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	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
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	12.5	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	6.25	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	2.74	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	1.57	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	27.5	12.8	LDA,LDT1,LDT2
Building Construction	Vendor	10.7	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	5.50	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	12.5	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	6.25	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	2.74	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	1.57	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	27.5	12.8	LDA,LDT1,LDT2

Building Construction	Vendor	10.7	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	5.50	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

Non-applicable. No control strategies activated by user.

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	0.00	0.00	98,195	32,732	2,227

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	500	—
Site Preparation	—	500	34.5	0.00	—
Grading	500	—	30.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.85

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
Hotel	0.00	0%
Parking Lot	0.85	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	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
Hotel	466	466	466	170,081	4,457	4,457	4,457	1,626,872

Parking Lot	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
Hotel	466	466	466	170,081	4,457	4,457	4,457	1,626,872
Parking Lot	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

5.10.1.2. Mitigated

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)
0	0.00	98,195	32,732	2,227

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	250

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)
Hotel	1,054,641	532	0.0330	0.0040	1,300,000
Parking Lot	32,517	532	0.0330	0.0040	0.00

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)
Hotel	843,713	532	0.0330	0.0040	1,300,000
Parking Lot	32,517	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	1,500,000	359,132
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Hotel	1,378,650	167,277
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	58.0	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Hotel	58.0	—
Parking Lot	0.00	—

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
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00

Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Emergency Generator	Diesel	1.00	1.00	50.0	335	1.00

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)

8. User Changes to Default Data

Screen	Justification
Land Use	Client provided data. Parking lot and drive aisles: 37,120 sqft, total building sqft: 65,463 sqft, landscape area: 22650 sqft
Construction: Construction Phases	Client provided schedule: i. Demolition; June 2024 – June 2024 ii. Site Preparation; May 2024 iii. Grading; June 2024 – July 2024 iv. Building; July 2024 – September 2025 v. Surface coating (painting); and September 2025 – October 2025 vi. Paving. September 2025
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Water and Waste Water	Client provided data: water usage 1.5 million gals/year
Operations: Vehicle Data	ADT of 466 from Rick Engineering Traffic Assessment (October 2023)
Operations: Energy Use	Client provided natural gas usage data: 1,300,000 kBTU/year
Operations: Emergency Generators and Fire Pumps	Maximum allowed testing and maintenance hours per SCAQMD Rule 1470
Construction: Dust From Material Movement	Client provided info, 500 CY of export, 500 CY of import

MSHCP Consistency Analysis And Habitat Suitability Assessment

For

Home To Suites Hilton
APN: 364-010-015
30141 Antelope Rd
Menifee CA 92584

Prepared for

Rick Engineering Company
5620 Friars Road
San Diego CA 92110

Prepared by

Kinsinger Environmental Consulting
8885 Rio San Diego Dr. Ste. 237
San Diego, CA 92108
Project # KE-20230722

November 2023

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Appendices

1.0 Executive Summary

This MSHCP Consistency Analysis And Habitat Suitability Assessment investigates the potential impacts to biological resources that could occur as a result of developing a four-story hotel on a wedge-shaped piece of property adjacent to and east of I-215 in Menifee, CA. It evaluates the project plans for consistency with the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), and suitability for sensitive species and/or streams or wetlands that connect to Waters Of The US (WOTUS) and Waters of the State (WOTS) and waters within the jurisdiction of the MSHCP.

The project site is located at 30141 Antelope Rd. in Menifee, APN 364-010-015 (Figure 1 Location and Vicinity Map for Home 2 Suites Project in Menifee, CA and Figure 2 Site plan for Home 2 Suites Project in Menifee CA. The project site is within the MSHCP "burrowing owl survey area" and does not support potential habitat for burrowing owl (Athene cunicularia). (Figure 3 MSHCP Survey Areas for Burrowing Owl and Narrow Endemic Plant Species)

Kinsinger Environmental Consulting (KEC) conducted the Combined MSHCP Consistency Analysis And Habitat Suitability Assessment. No threatened, endangered species were detected during the field study for the Habitat Suitability Assessment (HSA).

The resources evaluated are considered in relationship to the site plan to meet the criteria set forth by the City of Menifee (City). As a requirement of the California Environmental Quality Act (CEQA), it also assesses the project's potential impacts for consistency within the MSHCP (RCTLMA, 2003a).

Components of the Biological Resource Assessment combined HSA/MSCHP Consistency Analysis were evaluated by on-the-ground surveys and the Regional Conservation Authority MSHCP maps (Appendix A). These evaluation results show that:

- The project site is not located within a Criteria Cell, Conservation Area, or Constrained Linkage area (RCA, 2023)
- It is not in a MSHCP burrowing owl or other species survey area
- The field Habitat Suitability Assessment survey determined that the site does not support burrowing owl habitat.
- A focused survey for burrowing owl is not recommended as there is currently no suitable habitat on site
- No impacts to MSCHP species associated with riparian/riverine or wetland habitat and listed or sensitive flora and fauna will occur on site within the 500-foot survey buffer.
- Impacts to all other species and habitat will be less-than-significant.
- The project, will be consistent with the Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) (PRC, 2020) and the MSHCP with mitigation.

KEC finds the project to be consistent with the MSHCP and CEQA with impacts that will be less-than-significant.

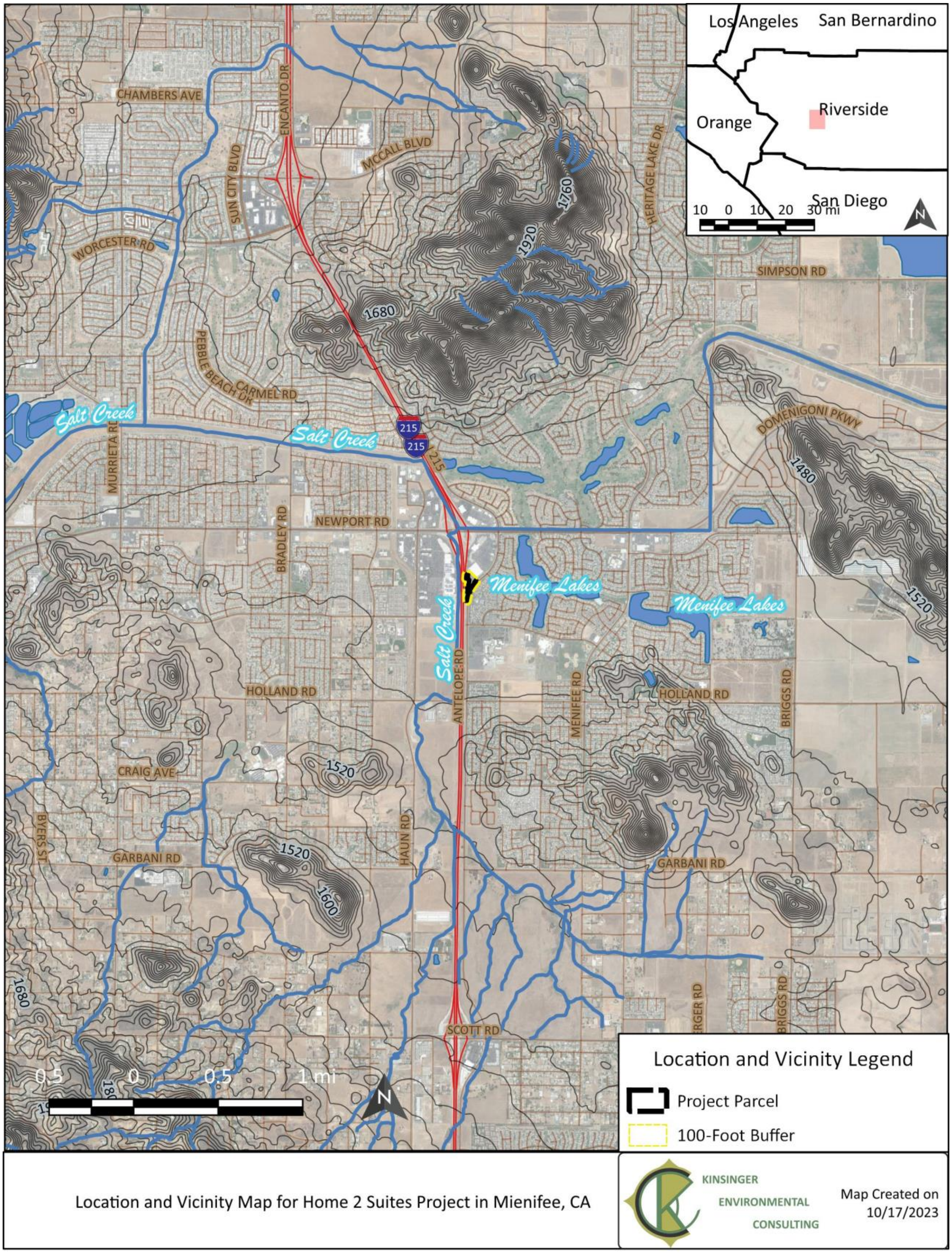

Figure 1 Location and Vicinity Map for Home 2 Suites Project in Menifee, CA

Figure 2 Site plan for Home 2 Suites Project in Menifee CA

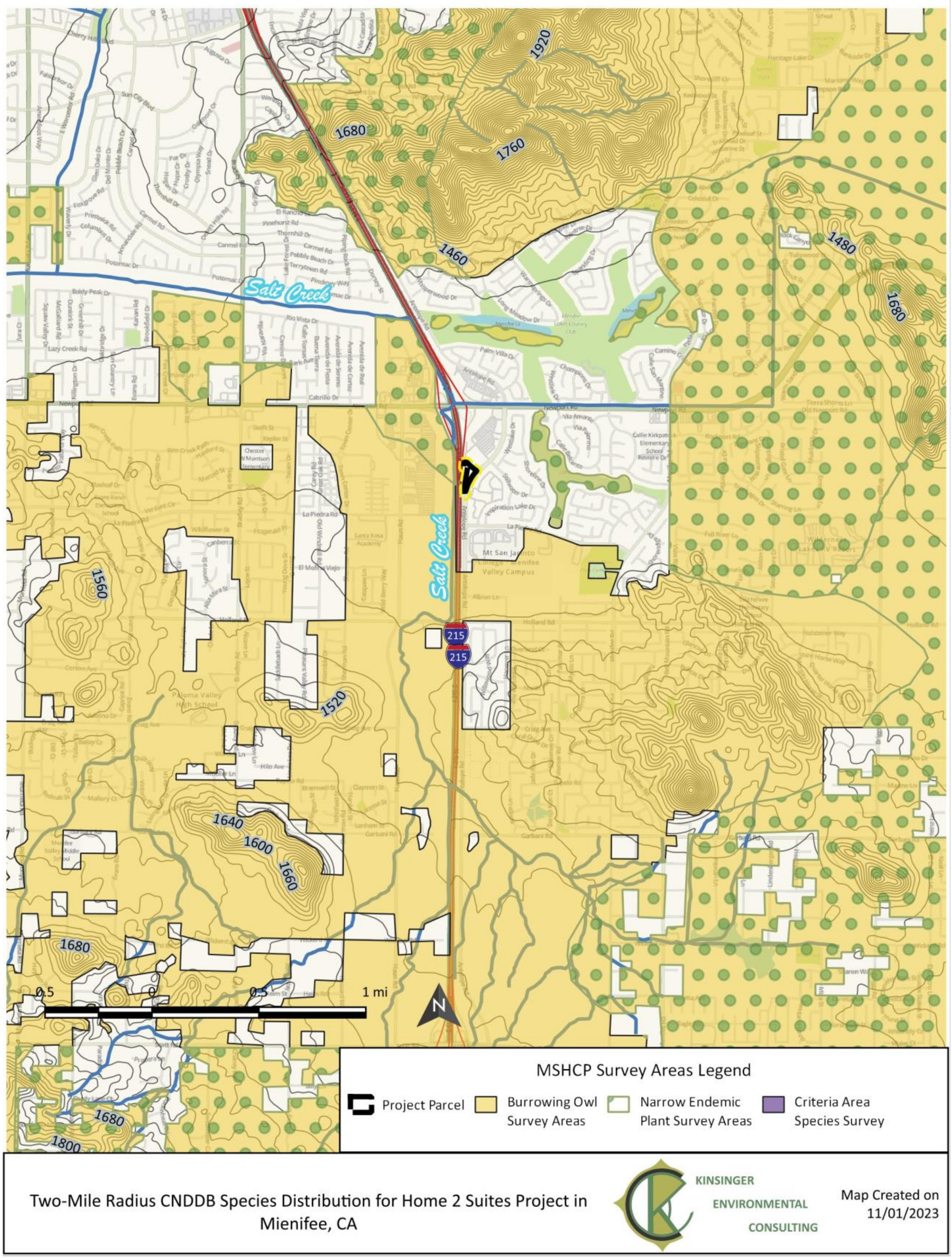

Figure 3 MSHCP Survey Areas for Burrowing Owl and Narrow Endemic Plant Species

Figure 4 Vegetation and Habitat Map for Home 2 Suites Project in Menifee

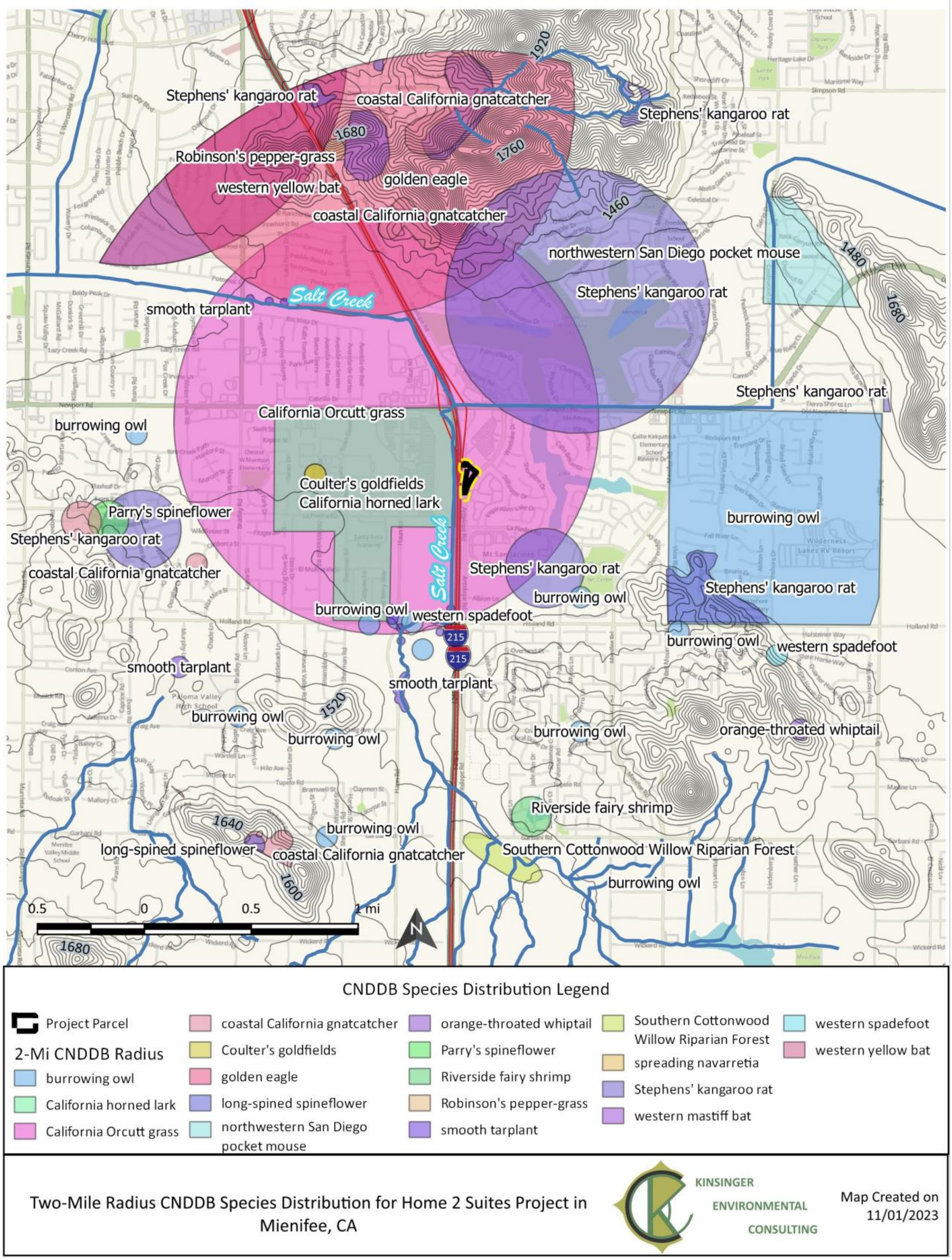

Figure 5 California Natural Diversity Data Base (CNDDB) Species Distribution in Relationshp to MSHCP Burrowing Owl and Agricultural Habitats Within 2-Miles of the Project in Menifee, CA

2.0 Introduction

This MSHCP Consistency Analysis & Habitat Suitability Assessment is being conducted at the request of Menifee Home2Suites Hilton) (Figure 1 Location and Vicinity Map for Home 2 Suites Project in Menifee, CA). The survey area is located at Universal Transverse Mercator (UTM) coordinates 1720385.98 Northing/552011.47 Easting within Zone 11, Section 02, Township 6 South, Range 3 West in the City of Menifee, Riverside County, as shown on the U.S. Geological Survey (USGS) Public Land Survey System. 33.68044, -117.17005.

2.1 Project Area and General Setting

The project (Project) will be a four-story hotel on a wedge-shaped piece of property adjacent to and east of I-215 in Menifee, CA. It is located at 30141 Antelope Rd. in Menifee, APN 364-010-015 (Figure 1 Location and Vicinity Map for Home 2 Suites Project in Menifee, CA Figure 2). The project site was evaluated for potential habitat within a paved parking lot with landscape trees and shrubs and a small triangular lawn in south part of the lot. There is a Caltrans-maintained rights-of-way (ROW) detention basin within the survey buffer area to the west adjacent to the I-215 freeway.

To the north is a shopping center with a grocery store anchor, multiple retail and fast food outlets, and gas station. The east side of the parcel is bounded by Antelope Road and residential housing. The Living Spaces retail outlet is on the south end of the shopping complex and the planned hotel will occupy what is presently a triangular shaped parking lot behind Living Spaces. The east side of the parcel is bounded by Antelope Road and residential housing.

The project site is outside of the MSHCP "burrowing owl survey area" and does not support potential habitat for burrowing owl (Athene cunicularia) (Figure 5 and Appendix A FEMA, MSHCP & Soils Maps). The project proponent plans to build a four-story hotel, Home 2 Suites by Hilton on a wedge-shaped piece of property adjacent to and east of I-215. A portion of the lot to the south is vacant and the rest is a paved lot behind and to the north of the existing Living Spaces retail outlet and is part of a larger retail shopping complex.

2.2 Project Schedule

Construction of the Project is anticipated to commence in early 2024 and be completed in the winter/spring of 2025, resulting in a total construction duration of approximately twelve months.

2.3 Covered Roads

Under the MSHCP there are certain activities that are covered or "allowed" where existing roads, collector roads or freeways will be improved, lengthened or realigned, and are part of the County's General Plan circulation Element.

> Public and private Development, including construction of buildings, structures, infrastructure and all alterations of the land, that are carried out by Permittees, Participatory Special Entities, Third Parties Granted Take Authorization and others within the Plan Area, that are outside of the Criteria Area and [Public/Quasi-Public] PQP Lands are permitted under the Plan.

KEC evaluated planned improvements to Antelope Road to determine consistency under the MSHCP for "covered roads" The roads within the vicinity of this project are all covered under the MSHCP and the project is not within a criteria cell or PQP lands therefore improvements to Antelope Road are consistent with the MSHCP.

3.0 Reserve Assembly Analysis

The Table 1 MSHCP Project Review Checklist (below) guided which investigations are needed to determine consistency with the MSHCP.

Table 1 MSHCP Project Review Checklist

MSHCP Project Review Checklist Questions	YES	NO
1. Is the project located in a Criteria Area or Public/Quasi-Public Land?		√
2. Is the project located in a Criteria Area Plant Survey Area?		√
3. Is the project located in a Criteria Area Amphibian Survey Area?		√
4. Is the project located in a Criteria Area Mammal Survey Area?		√
5. Is the project located adjacent to MSHCP Conservation Areas?		√
6. Is the project located in a Narrow Endemic Plant Species Survey Area?		√
7. Are riverine/riparian/wetland habitats or vernal pools present?		√
8. Is the project located in a Burrowing Owl Survey Area?		√

The project site is located within the Sun City/Menifee Area Plan. The Sun City/Menifee Area Plan does not identify the project site as part of an Area Plan Sub-Unit, conservation area, public/quasi-public land, criteria cell, core reserve area or linkage between core areas under Sections: 4 Assembling the MSHCP Conservation Area, 5 Management and Monitoring and 6 MSHCP Implementation Structure (RCTLMA, 2003a).

The project site does not intersect or have adjacency to MSHCP conservation areas or mapped planning areas and therefore does not meet criteria for acquisition or conservation as part of the MSHCP reserve assembly.

3.1 Topography and Soils

The site is nearly level at 1440 feet above mean sea level (AMSL) for a half mile radius around the project site (Figure 1). The soils to the north, under the present shopping complex, are Domino silt loam (Dv), saline/alkaline, and Chino (Ce) silt loam, drained. Saline/alkaline soils are soils that have high salt content and high pH values, usually caused by the accumulation of basic salts such as sodium bicarbonate and sodium carbonate that precipitate out of solution as the soil dries.

There are three soil types in the area of interest for the Project Site with Wyman loam (WyC2), 2 to 8 percent slopes, eroded being the dominant one (See Appendix C Soils Map). The other two types are under the existing Living Spaces building to the north. Wyman loam is classified as a fine-loamy, mixed, thermic Typic Haploxeralfs. This means it has a fine grained texture with and even amount of silt, clay and sand without much gravel or rock. it is in a warm climate, thermic, that gets rain in the winter, xeric. It has a subsurface clay layer with a high content of base nutrients called an “argillic horizon”. The argillic horizon develops as clay minerals and nutrients are transported by rain into the subsurface where they precipitate out of solution as the soil dries to form a clay-dominated horizon. (NRCS, 2023)

To the north of Newport Road is Salt Creek. The banks of Salt Creek are known to support species of rare or endemic plants that are ecological specialists for wet saline/alkaline soils. Since Chino (Ce) was "drained" and Domino (Dv) is saline/alkaline and they both occurred adjacent to Salt Creek before the advent of development, they may have been wetlands that supported endemic species prior to development. In addition:

- The soil patterns observed in historical aerial photos support this speculation (NETR, 2023).
- The soil survey map for the vicinity shows show Chino (Ce) and Domino (Dv) series soils occurring north of Newport road around Salt Creek.
- The MSHCP Narrow Endemic Plant Species (NEPS) survey areas overlay those soils (Figure 3)

However, this project site was not indicated as a MSHCP survey area for rare, riverine, Narrow Endemic Plant Species (NEPS) or Criteria Area Species (CAS). It has Wyman (WyC2) soils which are not associated with the Salt Creek banks that are associated with MSHCP survey areas (Appendix A FEMA, MSHCP & Soils Maps and Figure 3).

3.2 Existing Conditions

The 1.96-acre project site is nearly level at 1440 AMSL for a half mile radius around the project site (Figure 1). The Base Flood Elevation (BFE) is 1,424.6 AMSL (See Appendix B Photos Fig 13). The project site is not within the 100-year and 500-year flood plains.

The project site is entirely developed as a parking lot with a mowed park-like lawn facing Antelope Road. Street trees including Mexican fan palm (Washingtonia robusta), blue gum eucalyptus (Eucalyptus globulus) and Peruvian pepper (Schinus molle) face Antelope Road and the western boundary of the parking lot. The south end of the parcel is a narrow triangle that has been landscaped with mulch, decomposed granite sands, succulents, large agave (Agave sp.), rosemary (Salvia rosmarinus), and hedges shaded by the palms, Peruvian pepper and one Cottonwood tree (Populus fremontii). There are other ornamental trees and low hedges in planters between parking sections and around the perimeter of the lot.

On the west side of the parking lot and project site there is a Caltrans detention basin with non-native grass and some shrubs and trees. This is off site but within the 100-foot survey buffer. It is routinely mowed so that the vegetation does not become naturalized and the basin retains its function as a detention basin. In the winter during the rainy season this basin is inundated (Appendix B Photos).

Onsite water inputs to the detention basin are from two curb runoff drains, one at the northwest end of the parking lot and the other from the middle of the triangular section of parking lot. To the north of the project site and shopping center complex, there is a stormdrain culvert that exits just below the off-ramp turn at Newport Road and empties into the detention basin. Freeway debris are scattered along the western boundary of the site.

3.2.1 Current and Historical Uses

The project site is currently used as a parking lot. The adjacent Caltrans ROW is a detention basin for runoff and is inundated during the rainy season and dry in the summer. The historical uses for both the current parking lot and the detention basin were agriculture until the 1970's decade when Caltrans began developing the interchange and I-215 freeway. It remained a non-native grassland habitat until the 1990's decade when the present parking lot and shopping center was developed. (NETR, 2023)

4.0 Survey Methods

The study area includes the project site and a 100-foot survey buffer north, west, east, and south of the project site (Figure 4). KEC conducted a pedestrian survey using binoculars and GPS for a 100 percent visual coverage of the project site and habitat within the 100-foot buffer on the west side of the parcel. All plant and animal species detected were recorded and identified.

Table 2 below lists the 2023 field survey and weather conditions for general biology and the HSA BUOW.

Table 2 Survey Dates and Weather Conditions

Date	**Survey Type**	**Surveyor**	**Time**	**Survey Window**	**Temp ° F**	**Wind mph**	**Cloud cover**
9/21/2023	Habitat Suitability Assessment	Luka Spear	07:00 – 09:00	n/a	62°	2	95%

KEC conducted a literature review that includes:

- California Natural Diversity Data Base (CNDDB) 10-mile and 2-mile queries (CNDDB 2019).
- Historic Aerial Photos and topographic maps (NETR, 2023)
- Riverside County Authority (RCA) guidelines for biologists and MSHCP interactive maps (RCA, 2019) & (RCA, 2023)
- Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Program (MSHCP) (RTLMA-EPD, 2006a)
- The Western Riverside MSHCP Volumes 1 & 2 (RCTLMA, 2003a) (RCTLMA, 2003b)
- Natural Resource Conservation Service (NRCS) Web Soil Survey (NRCS, 2023)
- California Native Plant Society Inventory of Rare and Endangered Plants (CNPS, 2022)

4.1 Flora and Fauna Observed on Site

The vegetation communities in this document follow a Manual of California Vegetation (Sawyer, 2009). Scientific and common names of the flora follow The Vascular Plants of Western Riverside County, California (Roberts et al, 2004) with current updates to nomenclature as found in the Jepson Interchange Index to California Plant Names (Jepson Flora Project (eds.), 2021). Scientific and common names of fauna follow NatureServe (NatureServe, 2022). All flora and fauna observed at the time of the field surveys are listed in Table 3 Flora and Fauna Observed on the Project Site

Scientific Name	**Common Name**	**USACE wetland plant status / animal habitat associations**
	Plants	
	Monocots	
	Arecaceae	
Washingtonia robusta	Mexican fan palm	FACW
Cyperus sp.	Sedge	FAC/OBL
	Poaceae	

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Bromus sp.	Annual brome	N/A
Cynodon dactylon	Bermuda Grass	FACU
Dicots		
Anacardiaceae		
*Schinus molle**	Peruvian pepper tree	N/A
Apocynaceae		
*Nerium oleander**	Common oleander	N/A
Asteraceae [Compositae]		
Baccharis salicifolia	Mule fat	FAC
Helianthus annuus	Western sunflower	FACU
Heterotheca grandiflora	Telegraph weed	N/A
*Centaurea melitensis**	Tocalote (Maltese star thistle)	N/A
Brassicaceae (Cruciferae)		
Hirschfeldia incana	Mediterranean/shortpod mustard	N/A
Cupressaceae		
*Juniperus sp.**	Creeping juniper	FACU
Euphorbiaceae		
*Euphorbia maculata**	Spotted spurge	N/A
Fabaceae		
*Acacia rodolens**	Bank catclaw	N/A
Heliotropiaceae		
Heliotropium curassavicum	Seaside heliotrope	FACU
Lamiaceae		
*Salvia rosmarinus**	Rosemary	N/A
Myrtaceae		
*Eucalyptus globulus**	Blue gum tree	N/A
*Melaleuca citrina**	Common red bottle brush	N/A
Oleaceae		
*Ligustrum lucidum**	Chinese privet	N/A
Onagraceae		
Epilobium brachycarpum	Summer cottonweed	FAC; Buffer only
Polygonaceae		
Eriogonum fasciculatum	California buckwheat	N/A; Buffer only
Rumex crispus	Curly doc	FAC
Rosaceae		
Heteromeles arbutifolia	Toyon	N/A; Buffer only

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Salicaceae		
Populus fremontii	Freemont cotton-wood	Buffer only
Salix lasiolepis	Arroyo willow	FACW
Tamaricaceae		
*Tamarix ramosissima**	Salt cedar	FACW Buffer only
Animals		
Mammals		
Otospermophilus beecheyi	California ground squirrel	Grasslands/scrub
Thomomys bottae	Botta’s pocket gopher	Grasslands
Birds		
Corvidae		
Corvus brachyrhynchos	American crow	Ubiquitous
Fringillidae		
Carduelis psaltria	Lesser goldfinch	Grasslands
Spinus tristis	American goldfinch	Grasslands
Passerellidae		
Melozone crissalis	California towhee	Scrub
Troglodytidae		
Thryomanes bewickii	Bewick’s wren	Scrub
Turdidae		
Sialia mexicana	Western bluebird	Grasslands
Tyrannidae		
Sayornis nigricans	Black phoebe	Riparian associated / urban
Insects		
Gryllus sp.	Field cricket	Riparian and upland habitats

* = Non-Native Species. FAC = Facultative Wetland Species, FACU = facultative upland, FACW = facultative wetland, OBL = Obligate wetland

. The third column in Table 3 includes the Abundance/Sensitivity and wetland status as they appear in the Arid West Regional Wetland Plant List (USACE, 2016).

Table 3 Flora and Fauna Observed on the Project Site

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Plants		
Monocots		

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Arecaceae		
Washingtonia robusta	Mexican fan palm	FACW
Cyperus sp.	Sedge	FAC/OBL
Poaceae		
Bromus sp.	Annual brome	N/A
Cynodon dactylon	Bermuda Grass	FACU
Dicots		
Anacardiaceae		
*Schinus molle**	Peruvian pepper tree	N/A
Apocynaceae		
*Nerium oleander**	Common oleander	N/A
Asteraceae [Compositae]		
Baccharis salicifolia	Mule fat	FAC
Helianthus annuus	Western sunflower	FACU
Heterotheca grandiflora	Telegraph weed	N/A
*Centaurea melitensis**	Tocalote (Maltese star thistle)	N/A
Brassicaceae (Cruciferae)		
Hirschfeldia incana	Mediterranean/shortpod mustard	N/A
Cupressaceae		
*Juniperus sp.**	Creeping juniper	FACU
Euphorbiaceae		
*Euphorbia maculata**	Spotted spurge	N/A
Fabaceae		
*Acacia rodolens**	Bank catclaw	N/A
Heliotropiaceae		
Heliotropium curassavicum	Seaside heliotrope	FACU
Lamiaceae		
*Salvia rosmarinus**	Rosemary	N/A
Myrtaceae		
*Eucalyptus globulus**	Blue gum tree	N/A
*Melaleuca citrina**	Common red bottle brush	N/A
Oleaceae		
*Ligustrum lucidum**	Chinese privet	N/A
Onagraceae		
Epilobium brachycarpum	Summer cottonweed	FAC; Buffer only
Polygonaceae		

Scientific Name	**Common Name**	**USACE wetland plant status / animal habitat associations**
Eriogonum fasciculatum	California buckwheat	N/A; Buffer only
Rumex crispus	Curly doc	FAC
Rosaceae		
Heteromeles arbutifolia	Toyon	N/A; Buffer only
Salicaceae		
Populus fremontii	Freemont cotton-wood	Buffer only
Salix lasiolepis	Arroyo willow	FACW
Tamaricaceae		
*Tamarix ramosissima**	Salt cedar	FACW Buffer only
Animals		
Mammals		
Otospermophilus beecheyi	California ground squirrel	Grasslands/scrub
Thomomys bottae	Botta’s pocket gopher	Grasslands
Birds		
Corvidae		
Corvus brachyrhynchos	American crow	Ubiquitous
Fringillidae		
Carduelis psaltria	Lesser goldfinch	Grasslands
Spinus tristis	American goldfinch	Grasslands
Passerellidae		
Melozone crissalis	California towhee	Scrub
Troglodytidae		
Thryomanes bewickii	Bewick’s wren	Scrub
Turdidae		
Sialia mexicana	Western bluebird	Grasslands
Tyrannidae		
Sayornis nigricans	Black phoebe	Riparian associated / urban
Insects		
Gryllus sp.	Field cricket	Riparian and upland habitats

* = Non-Native Species. FAC = Facultative Wetland Species, FACU = facultative upland, FACW = facultative wetland, OBL = Obligate wetland

4.2 Vegetation Communities

Non-native grassland and Urban developed habitat are the only vegetation types on site. The Figure 4 Vegetation and Habitat Map for Home 2 Suites Project in Menifeealso includes MSHCP features within the 100-foot survey buffer that are “micro-habitats” within the Non-native grassland vegetation communities. This includes the artificially constructed Caltrans detention basin that is inundated during the winter.

4.2.1 Non-native Grassland (NNG) Code 42200

Most annual grasses are non-native grasses in California. Annual grasslands are typically dominated by non-native bromes, wild oat grass and shortpod mustard. They often include native dicots such as rancher’s fiddleneck as well as ruderal dicots including filaree and mustard species which are indicators of non-native grass habitats. Annual grasslands by definition do not include any native grass species (Klein & Evens, 2005).

As a subclass of non-native grasslands, the detention basin is a seasonally inundated micro-habitat. It may have some potential to support sensitive species. It is characterized in section 5.1 Riparian/Riverine Areas. Consideration for the potential of the seasonally inundated areas to be vernal pool habitat is discussed in Section 5.2. No project impacts will occur within the Caltrans ROW detention basin.

The detention basin is dominated by typical non-native grasses, primarily brome species, Mediterranean mustard and native facultative wetland species including mulefat, arroyo willow, curly dock, Western sunflower, and seaside heliotrope. Obligate wetland species such as sedge (Cyperus sp.) may occur in the detention basin as well. Sedge looks very much like grass in the mowed condition that we found on the site. Ruderal species such as tocalote (Maltese star thistle) and Mediterranean mustard are common. (See Table 3 Flora and Fauna Observed on the Project Site

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Plants		
Monocots		
Arecaceae		
Washingtonia robusta	Mexican fan palm	FACW
Cyperus sp.	Sedge	FAC/OBL
Poaceae		
Bromus sp.	Annual brome	N/A
Cynodon dactylon	Bermuda Grass	FACU
Dicots		
Anacardiaceae		
*Schinus molle**	Peruvian pepper tree	N/A
Apocynaceae		
*Nerium oleander**	Common oleander	N/A
Asteraceae [Compositae]		
Baccharis salicifolia	Mule fat	FAC
Helianthus annuus	Western sunflower	FACU
Heterotheca grandiflora	Telegraph weed	N/A

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
*Centaurea melitensis**	Tocalote (Maltese star thistle)	N/A
Brassicaceae (Cruciferae)		
Hirschfeldia incana	Mediterranean/shortpod mustard	N/A
Cupressaceae		
*Juniperus sp.**	Creeping juniper	FACU
Euphorbiaceae		
*Euphorbia maculata**	Spotted spurge	N/A
Fabaceae		
*Acacia rodolens**	Bank catclaw	N/A
Heliotropiaceae		
Heliotropium curassavicum	Seaside heliotrope	FACU
Lamiaceae		
*Salvia rosmarinus**	Rosemary	N/A
Myrtaceae		
*Eucalyptus globulus**	Blue gum tree	N/A
*Melaleuca citrina**	Common red bottle brush	N/A
Oleaceae		
*Ligustrum lucidum**	Chinese privet	N/A
Onagraceae		
Epilobium brachycarpum	Summer cottonweed	FAC; Buffer only
Polygonaceae		
Eriogonum fasciculatum	California buckwheat	N/A; Buffer only
Rumex crispus	Curly doc	FAC
Rosaceae		
Heteromeles arbutifolia	Toyon	N/A; Buffer only
Salicaceae		
Populus fremontii	Freemont cotton-wood	Buffer only
Salix lasiolepis	Arroyo willow	FACW
Tamaricaceae		
*Tamarix ramosissima**	Salt cedar	FACW Buffer only
Animals		
Mammals		
Otospermophilus beecheyi	California ground squirrel	Grasslands/scrub
Thomomys bottae	Botta’s pocket gopher	Grasslands
Birds		
Corvidae		

Scientific Name	Common Name	USACE wetland plant status / animal habitat associations
Corvus brachyrhynchos	American crow	Ubiquitous
Fringillidae		
Carduelis psaltria	Lesser goldfinch	Grasslands
Spinus tristis	American goldfinch	Grasslands
Passerellidae		
Melozone crissalis	California towhee	Scrub
Troglodytidae		
Thryomanes bewickii	Bewick's wren	Scrub
Turdidae		
Sialia mexicana	Western bluebird	Grasslands
Tyrannidae		
Sayornis nigricans	Black phoebe	Riparian associated / urban
Insects		
Gryllus sp.	Field cricket	Riparian and upland habitats

* = Non-Native Species. FAC = Facultative Wetland Species, FACU = facultative upland, FACW = facultative wetland, OBL = Obligate wetland

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The street-facing side of the parking lot has a sidewalk and mowed lawn bordered by low hedges separating it from the parking lot. Lawns are not considered a "non-native grassland" but "urban/developed habitat".

4.3 Urban / Developed Habitat

Urban/Developed habitat can include formal landscaping in developed sites, urban trees, roofs, and chimneys which are used by urban birds and constitute a habitat mixed in among streets, roads and freeways that imperil wildlife and are barriers to movement. It also includes the Caltrans constructed and maintained detention basin that also supports a non-native grass dominated vegetation community.

At the project site, urban developed land includes commercial buildings and their parking lots adjacent to and north of the project site, and landscaped greenspace on the southern portion of the parcel. A Caltrans detention basin lies adjacent to the west boundary of the parcel. Birds were observed using horticultural trees for roosting and cover and may be used by song birds for nesting though no nests were observed.

Burrows onsite and in the buffer are made by fossorial mammals (those that are adapted for burrowing or digging), such as California ground squirrel and Botta's pocket gopher (Thomomys bottae). They occur along the detention basin slope adjacent to/forming the western boundary of the parcel within the 100-foot survey buffer zone. The largest burrows were 3 inches. A minimum suitable burrow entrance size for burrowing owls is considered to be 4 inches or greater.

Birds observed included American goldfinch, black phoebe, lesser goldfinch, Bewick's wren, California towhee, American crow, and western bluebird; no special status bird species were detected.

5.0 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools – Habitat Associations

Wildlife habitats such as riparian/riverine areas and vernal pools differ from vegetation communities in that a wildlife habitat may contain several plant communities, which will be similar in structure but different in their plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat. An example of this would be a mowed lawn which does not support wildlife versus grassland that supports enough burrowing mammals to form a prey base for raptors and suitable dens for sensitive species like the Western burrowing owl.

5.1 Riparian/Riverine

Riparian habitats occur along the banks of channels and waterbodies as well as marshes and vernal pools. Many of the plant species in a riparian habitat are found only where a consistent supply of water occurs, these are obligate species. Other riparian species may be found in wet or dry areas and these are referred to as facultative species.

5.1.1 Methods

KEC biologists reviewed the MSHCP definitions of Riparian/riverine habitat and find the detention basin to be riparian. KEC Biologists used GPS to walk the limits of the soils that are known to have ponded water in past years as well as the channels that were created as part of Caltrans drainage plan. The ponded condition of the detention basin is shown in Google Streetview photos from March 2023.

KEC did not find aerial photo evidence of a pre-development drainage for this area and it is not represented in the National Hydrology Database (NHD). As described in Section 3.1, Topography and Soils, the north part of the shopping complex near Newport Road has ample evidence of a pre-development wetland (NRCS, 2014) (NETR, 2023). The topography of the project vicinity is a closed basin with no clear drainage outlet centered on Salt Creek as shown by the elevation contours for the vicinity (Figure 1 Location and Vicinity).

The hydrology of the vicinity had to be re-engineered to accommodate development of the 1970’s. This resulted in the Caltrans detention basin, a reservoir, Menifee Lakes, (Figure 4 Inset) to the east of the project area. North of Newport Road there is a golf course with water features north as and extension of Salt Creek.

5.1.1.1 Regulatory Environment for Jurisdictional Delineation

The County of Riverside requires development plans to be consistent with the MSHCP definitions for regulated waters as well as jurisdictional requirements of multiple local, state and federal agencies. The Riverside County Flood Control and Water Conservation District (RCFC) “provides certain non-tax supported functions such as floodplain Management, development review, NPDES compliance…” in floodways and flood zones under the regulatory authority of the Federal Emergency Management Agency (FEMA) (RCFC, 2022b). In California, the USACE, State Water Resources Control Board (SWRCB), and CDFW regulate activities within inland streams, coastal streams, wetlands, and other waters. These agencies administer the many federal and state laws, regulations, and policies that prevent further impacts to jurisdictional wetlands and waters.

5.1.1.1.1 MSHCP

The Caltrans detention basin adjacent to the project site qualifies as Riparian by the MSHCP definition. To be consistent with the MSHCP, the project must employ Best Management Practices (BMPs) that prevent direct and indirect impacts to the detention basin.

The MSHCP definition for Riverine includes, "any feature that is natural in origin as well as past natural features that have been heavily modified and/or redirected and can include features indirectly created through man-made manipulation of the landscape, including channelization of a historic riverine feature." If these features connect to nearby downstream resources that are either existing or described conservation lands, they would be considered riverine."

According to the MSHCP, riparian habitats include "… lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source, or areas with fresh water that flows during all or a portion of the year." MSCHP Vol. 1, Section 6.1.2 (RCTLMA, 2003a).

5.1.1.1.2 USACE

The detention basin does not meet the definition of Waters of the United States (WOUS). Water in the detention basin flows from the direction of Salt Creek, not toward it. Therefore, it does not drain into a Traditionally Navigable Water (TNW). There is no clear adjacency of the basin to the TNW and the project design does not include or impact the detention basin.

The Environmental Protection Agency (EPA) and the USACE regulate the discharge of dredged or fill material into WoUS). The USACE also regulates Riverine and Riparian resources as defined by the Clean Water Act (CWA) under the Code of Federal Regulations (CFR) 33 § 328.3 and an amendment in 2015 that revises those regulations called the Clean Water Rule of 2020 (EPA, 2020).

The definition of WoUS includes Traditionally Navigable Waters (TNWs), Tributaries of TNWs and Territorial Seas. Wetlands are included when they have a "nexus" or significant connection with TNWs, tributaries or sea. Perennial or intermittent waters with a direct surface connection to a TNW are considered a WoUS but ephemeral features that only flow as a direct result of precipitation and isolated wetlands are excluded from WoUS (USACE, 2020).

The WoUS are delineated by the waterway's bed and bank, up to and including the Ordinary High Water Mark (OHWM) (USACE and EPA, 2019).

The 1987 USACE Wetlands Delineation Manual (USACE, 1987) and the USACE Arid West Regional Supplement (USACE, 2008) provide guidance to determine if a water feature satisfies the three criteria of the wetland definition for vegetation, soil and hydrology:

- A predominance of plant life that is adapted to life in wet conditions hydrophytic vegetation must be present;
- Soils must saturate, flood or pond long enough during the growing season to develop anaerobic conditions in the upper part of hydric soils; and
- Permanent or periodic inundation or soils saturation must occur at least seasonally, establishing wetland hydrology.

5.1.1.1.3 CDFW

The developed vegetation adjacent to the Caltrans detention does not qualify as riparian and lacks facultative vegetation but for palm trees that exist by virtue planting and irrigation. The CDFW under

§§ 1600-1616 of the California Fish and Game Code (CFGC) requires a Lake and Streambed Alteration (LSA) Agreement for activities that:

- Divert or obstruct the natural flow of any river, stream, or lake;
- Change the bed, channel, or bank of any river, stream, or lake;
- Use material from any river, stream, or lake;
- or Deposit or dispose of material into any river, stream, or lake.

The CDFW has interpreted jurisdictional boundaries to be defined by the tops of stream banks (i.e., the limit of stream influence) and/or the limit of the canopy of riparian vegetation (outer drip line) that is hydrologically connected to river, stream, or lake, whichever is greatest. As a result, the area of CDFW jurisdiction includes adjacent wetland and riparian areas of WoUS. The CDFW jurisdictional area is usually greater than the active channel and overlaps and extends beyond the USACE jurisdiction. (CDFW, 2022c)

5.1.1.1.4 SWRCB

Although the California State Water Resources Control Board (SWRCB) may have jurisdiction over the detention basin, activities in the basin are permitted to Caltrans for maintenance by the agency. The project is designed to avoid the basin and will avoid direct and indirect impacts by proper implementation of Best Management Practices (BMPs).

While the SWRCB is a “designee” on behalf of the USACE for administration of the federal CWA 401 certification process to permit discharges of dredge or fill into WoUS in California it also permits these actions for Waters of the State (WOTS) that do not fall under federal jurisdiction. KEC considered new guidance arising from the Clean Water Act’s Clean Water Rule (CWR) of 2020 and administration of the 401 Certification process (EPA, 2020) that became effective on August 8, 2022.

Simply stated, the SWRCB retains jurisdiction over all waters of the state including isolated “wetland” habitats, “dryland washes” and adjacent riparian vegetation. The SWRCB administers the State Wetland Conservation Policy to ensure “no overall net loss and long-term gain in the quantity, quality, and permanence of wetlands acreage and values in California” under Executive Order W-59-93 (no net loss of wetlands). The Porter Cologne Water Quality Act establishes the SWRCB and their authority to regulate discharges into Waters of the State (WOTS) to preserve water quality and beneficial uses of water in California. (SWRCB, 2021).

The definition of wetlands follows the same guidance as the USACE definitions and those definitions are clarified in the California Wetland And Riparian Area Protection Policy Technical Memorandum No. 2: Wetland Definition (SWRCB, 2012).

On April 6, 2021, the SWRCB adopted a resolution to confirm that the “State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State” is in effect as a state policy for water quality control independently of the outcome of litigation over the application of the CWR of 2020 and application of its 401 Certification process. The California Office of Administrative Law (OAL) approved the procedures on August 28, 2019 and they became effective on May 28, 2020. (SWRCB, 2021)

5.1.1.1.5 RCFC and FEMA

The project site and detention basin are not within a regulated floodway or a flood zone as shown by the FIRM map in Appendix B Photos, Figure 13. FEMA provides the Flood Insurance Rate Maps (FIRM) that Riverside County Flood Control (RCFC) and the City of Menifee use to regulate actions within flood zones and floodways. If adverse impacts could occur, then the Services would require changes to the proposed activity and/or mitigation.

5.1.2 Existing Conditions and Results

KEC conducted an examination of the project site and detention basin and conclude that there are no state or federal jurisdictional waters nor MSHCP Riverine/Riparian features on the project site. They do occur within the 100-foot survey buffer, the Caltrans detention basin.

The project site is located outside of the regulatory floodway of the Salt Creek River floodway which lies to the west of the project site. It is not within a flood zone. Appendix A FEMA, MSHCP & Soil Maps, FEMA Flood Insurance Rate Map (FIRM))

5.1.2.2 Human-constructed Channels

The Caltrans detention basin channel on the north of the basin supports mulefat shrub, (FAC), arroyo willow (FACW), and sedge (OBL). No sensitive plant or animal species were detected within any of the habitats with riparian vegetation.

5.1.2.3 Seasonally wet areas

The Caltrans detention basin supports facultative wetland species and meets MSHCP Riverine definitions.

Although it is a human-constructed channel, it does not qualify as jurisdictional under the USACE definition because it is not connected to an existing jurisdictional drainage network or TNW. The ditch on the west side of the I-215 connects directly to Salt Creek as shown on the National Hydrology Data (NHD) but not the storm-drain system on the east side adjacent to the project (Figure 1).

Furthermore, the drainage does not fall under CDFW jurisdiction as “riverine” or SWRCB jurisdiction as WOTS because they were not previously natural waterways and they are isolated from streams, rivers and lakes. The channel on site is human-constructed and not part of a historical natural drainage or flood channel. The channel is isolated from USACE and SWRCB networks of jurisdictional drainages.

Riparian habitat within channel bed and adjacent to the high bank would only remain within the jurisdiction of CDFW it was connected to TNWs. The human-constructed channel on site does not meet that criterion.

5.1.2.4 Riparian definitions

A formal jurisdictional determination is not recommended for this project. While, the ephemerally ponded detention basin is meets hydrology criteria under SWRCB rules as an “isolated water” because it is seasonally ponded; whether it meets the other two criteria for wetland soils and a dominance of wetland vegetation is moot since the project and its activities do not encroach upon the basin or add direct or indirect impacts. Therefore, a jurisdictional determination is not recommended.

5.1.2.5 Jurisdictional Validation

To validate these field observations for the USACE jurisdiction, KEC examined current and historical aerial photos and topographic maps and the NHD to determine if any of the onsite drainages were hydrologically connected to jurisdictional flow networks (USGS, 2022).

Neither the channel nor the area of inundation can be described as “adjacent” or hydrologically connected to TNWs under USACE, CDFW or SWCB jurisdictional definitions.

5.1.3 Impacts

There are no regional, state or federal jurisdictional waters on the site and no impacts.

The project will avoid direct and indirect, temporary and permanent impacts to MSHCP riparian/riverine wetlands by implementation of standard BMPs including physical barriers to prevent non-storm runoff or storm-induced sedimentation from entering the detention basin and channel. Therefore, there are no temporary direct and indirect impacts from runoff.

5.1.4 Mitigation

No mitigation for riparian/riverine or wetland habitats is required because direct, indirect, permanent and temporary impacts will be avoided. BMPs are standards required by the grading permit as a plan to avoid impacts, rather than a mitigation.

5.2 Vernal Pools

Saline-alkali soils and Domino soils that occur north of the project site are soil types that are known to support unique vernal pool habitats and historical aerial photos indicate that they may have supported vernal pools prior to development.

5.2.1 Methods

The soil on the project site and within the detention basin is Wyman loam (WyC2), and not known to support vernal pools. A KEC biologist surveyed the area of inundation on foot and documented plant and animal species that occur there as well as indications of inundation, shelving of roadside debris and cracked soil.

5.2.2 Existing Conditions and Results

The area of inundation is a human constructed detention basin and is maintained in a mowed condition with periodic removal of other vegetation. The area was observed to by hydric by the field biologist. Google Street View photos of the site when it is inundated support that conclusion.

As a detention basin, Caltrans would have permits for routine maintenance so, the consideration as a vernal pool is moot in this case. This type of routine disturbance would prevent it from supporting a functional vernal pool-specific ecosystem. The project is designed to avoid direct, indirect permanent and temporary impacts within the Caltrans detention basin ROW.

5.2.3 Impacts

There are no impacts to vernal pools as they are not present on the project site. The project avoids direct, indirect, permanent and temporary impacts within the Caltrans detention basin ROW by implementing standard BMP requirements.

5.2.4 Mitigation

No mitigation is required for vernal pools as there will be no impacts.

5.3 Fairy Shrimp

Vernal pools are a riparian/wetland habitat that may support endangered vernal pool fairy shrimp (Branchinecta lynchi) and Riverside fairy shrimp (Streptocephalus woottoni). Other ephemeral pools, swales, tire tracks and ruts that that do not meet the criteria as a vernal pool wetland may also support Riverside fairy shrimp and other branchiopod species.

5.3.1 Methods

KEC does not recommend focused surveys for vernal pool and Riverside fairy shrimp in the detention basin primarily because the project is designed to avoid impact to the site and the detention basin is already permitted for Caltrans routine maintenance. No fairy shrimp records were returned within KEC's CNDDB 2-mile radius query of the CNDDB.

5.3.2 Existing Conditions and Results

The detention basin adjacent to the project site is seasonally inundated but unlikely to support endangered vernal pool fairy shrimp and Riverside fairy shrimp because the basin is human-constructed and permitted for routine vegetation removal maintenance. These species are not expected to occur within this habitat. However, it is quite possible that non-sensitive versatile fairy shrimp (Branchinecta lindahli) occur in such habitats. Unlike the endangered fairy shrimp species, versatile fairy shrimp are tolerant to disturbance and poor water quality conditions. The one record for Riverside fairy shrimp that occurs within the 2-mile CNDDB query and it's vernal pool habitat was extirpated by agriculture and development.

5.3.3 Impacts

No direct, indirect permanent or temporary impacts will occur to the endangered Riverside or vernal pool fairy shrimp because they would not occur in the disturbed habitat of the detention basin. None-the-less, the project will avoid the detention basin and employ BMPs that avoid direct and indirect permanent and temporary impacts to the detention basin and any other sensitive species that may occur there.

5.3.4 Mitigation

No mitigation is required because impacts will be avoided.

5.4 Riparian Birds

There was no potential riparian habitat for the three special status MSCHP riparian bird species (MSHCP Section 6.1.2 Volume 1):

- least Bell's vireo (Vireo bellii pusillus) federal and state listed as endangered
- Southwestern willow flycatcher (Empidonax traillii extimus) federal and state listed as endangered
- Western yellow-billed cuckoo (Coccyzus americanus occidentalis) federally listed as threatened, state listed as endangered.

The CNDDB 2-mile radius query returned no riparian-specific bird records.

5.4.5 Methods

KEC conducted field surveys and prepared a map of vegetation types on site and within the 100-foot survey buffer. KEC surveyed the area of the detention basin on the west of the project site to identify potentially suitable vegetation for riparian-specific birds.

5.4.6 Existing Conditions and Results

There is no forest, woodland or scrub habitat on site. Within the detention basin the facultative wetland species present, arroyo willow and mulefat, lack the density and vertical structure required to support nesting for riparian-obligate bird species such as: least Bell's vireo, Southwestern willow flycatcher, or Western yellow-billed cuckoo. The habitat which is inundated in winter months was dry at the time of the survey. It was broad and open because of frequent mowing. There is no shrub canopy and only a few scattered mulefat and arroyo willow shrubs (See Photos Appendix B).

KEC took note of all species on site and specifically looked for riparian-associated species such as yellow warbler (Setophaga petechia), common yellowthroat (Geothlypis trichas) and song sparrow (Melospiza melodia). No riparian-associated common or sensitive species were detected within this potential area of habitat within the 100-foot buffer (See species list Section 4.1.2). However, these three species can occur in urbanized areas and would be expected during periods of inundation.

5.4.7 Impacts

No impacts will occur to federally and state listed riparian bird species as their specific riparian habitat does not occur on site or within the 100-foot buffer. Impacts to other nesting birds will be avoided by employing standard City-required Best Management Practices (BMPs) as follows:

5.4.8 (Standard Avoidance Measure)

Standard Avoidance Measure Bio-BMP-1 To avoid impacts to nesting and riparian birds

In order to avoid violation of the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503, 3503.5, and 3513, site preparation activities (ground disturbance, construction activities, staging equipment, and/or removal of trees and vegetation) for the Project shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species.

Construction may be conducted during the nesting/breeding season only when: active nests are not located within the project site, or 500 feet of an active listed species or raptor nest, or 300 feet of other sensitive or protected bird nests, or 100 feet of sensitive or protected songbird nests (non-listed).

If site-preparation and/or construction activities are proposed during the nesting/breeding season, The project applicant shall:

1. Designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

2. The designated biologist shall conduct nesting bird surveys at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures on site and within the survey buffer zone. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate.

3. The nest surveys shall include the Project site and adjacent areas where project activities have the potential to cause nest failure. The survey results shall be provided to the City's Planning Division.

If active nests are located during the pre-activity field survey, the biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience and in consultation with the City of Menifee and the CDFW. The biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer.

The buffer around the nest shall be delineated and flagged, and no construction activity shall occur within the buffer area until a qualified biologist determines nesting species have fledged and the nest is no longer active or the nest has failed.

If the biologist determines that such project activities may be causing an adverse reaction, the biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest).

The designated biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

5.5 Other Section 6.1.2 Species

The purpose of MSHCP Volume 1 Section 6.1.2, as it applies to the detention basin within the 100-foot survey buffer of this project site, is to "ensure that the biological functions and values of riparian/riverine areas and vernal pools throughout the MSHCP Plan Area are maintained such that habitat values are maintained for ALL 6.1.2 species" (RCA, 2019).

Although the site was determined not to support protected riparian habitats such as vernal pools, or riparian birds, it does support riparian-associated or facultative wetland plants. However, the purpose of the detention basin within the Caltrans ROW is to maintain it more or less free of vegetation. For naturally occurring habitats, the focus of Section 6.1.2 would be to evaluate whether the habitat has the potential to support sensitive riparian-associated plants now or under different annual seasonal conditions in the past or future. Because this is a managed detention basin, we expect this site to remain more or less as it appears now due to regular maintenance.

Of 23 flora species in the 6.1.2 list, the 2-mile CNDDB query produced records for three (3) species:

- California Orcutt grass (Orcuttia californica) federal and state listed as endangered
- smooth tarplant (Centromadia pungens ssp. laevis)
- spreading navarretia (Navarretia fossalis) federally listed as threatened

Species not returned in the CNDDB query are discussed in Section 6.0 Narrow Endemic Plants and Section 7.1 Criteria Areas Plant Species. The potential for the remaining 6.1.2-list fauna species not represented in the CNDDB query are evaluated in Section 5.3 Fairy Shrimp, Section 5.4, Riparian Birds, and Section 7.2 Amphibians.

5.5.1 Methods

KEC queried the CNDDB within a two-mile radius of the project site and reviewed the habitat types within that radius where any of the 34 Section 6.1.2 MSHCP species either do or occur or may occur. The Potentially Occurring Species Table, Appendix C, identifies the potential for a variety of sensitive flora and fauna to occur on site including those on the. KEC considered field survey findings and whether habitat components for the Section 6.1.2 list species are present on the site.

KEC mapped the spatial relationship of the FEMA regulatory floodway and soil series (Appendix A) to recorded locations of 6.1.2 species in Figure 5 CNDDB 2-Mile query. We identified soil chemistry and ponding patterns. We used that information to predict the potential for those species on site knowing that ponded habitat on site was artificially created. Finally, we surveyed for habitat components for

MSHCP Section 6.1.2 flora represented in the query as well as flora species that are discussed in this document under Narrow Endemic Plant Species and Criteria Area Plant Species sections.

5.5.2 Existing Conditions and Results

Of the 6.1.2-list fauna, none have potential to occur on site. Of the 6.1.2-list flora, we considered the potential for the detention basin to support those species that occur within the 2-mile query area including: Orcutt grass is state and federally listed as endangered, spreading navarretia is state listed as endangered and federal listed as threatened. Smooth tarplant is a California Native Plant Society rare plant, CNPS rank 1B.1. It occurs in non-native grasslands and or Riparian/Riverine habitat on the west side of I-215 along the banks of Salt Creek.

Both California Orcutt grass and spreading navarretia are endemic species restricted to vernal pool habitats. Neither have potential to occur without the specific habitat components unique to natural vernal pools. Smooth tarplant occurs in dry meadows usually associated with riparian habitat and or wetlands. While the potential for tarplant to occur in the detention basin is low, it is a large showy aster that blooms from spring into fall and could have been detected during the survey if present.

Of the 6.1.2 fauna, bald eagle occurs within the 2-mile query area but has no potential to nest on site. Peregrin falcon did not occur within the query area and has no potential to nest on site.

Of fish and amphibians, none have potential to occur on site as they require unique riparian habitats that are also connected to stream systems. The drainage on site is not connected to a stream system. Of invertebrates within the query area, the only record of Riverside fairy shrimp and its vernal pool habitat has been extirpated. The detention basin is not and never has been a vernal pool.

Both Chino and Domino soils that occur north of the project site under the shopping complex may have supported vernal pools in the past. Neither the detention basin or its channel is connected to those soils. No other MSHCP Section 6.1.2 species flora are fauna would find the necessary habitat components to survive and reproduce in this human constructed detention basin, even if introduced.

5.5.3 Impacts

None of the other species from the 6.1.2 list are expected to occur on site based on field inventories and data base research. No impacts will occur to 6.1.2 flora or fauna species.

5.5.4 Mitigation

No mitigation is required for other 6.1.2 species since there will be no impacts.

6.0 Protection of Narrow Endemic Plants

Figure 3 MSHCP Survey Areas for Burrowing Owl and Narrow Endemic Plant Species shows that the project site is not included as a Narrow Endemic Plant Species (NEPS) survey site.

6.1 Methods.

KEC conducted the Habitat Suitability Assessment (HSA) to determine the potential for NEPS to occur based on the field HSA survey and HSA evaluation of available maps and data. There is a mandatory MSHCP NEPS survey area on the west side of I-215. This waterway may appear as ditch of no special significance next to the freeway but it flows into Salt Creek, an area known for supporting rare, threatened and endangered species. However, the channel and detention basin on the east side of the I-215 freeway is not connected to Salt Creek or other wetland areas.

Spreading navarretia and Orcutt grass are on both the NEPS list and the MSHCP Riparian/Riverine 6.1.2 list as discussed above in section 5.5. Of the 14 NEPS species, 12 that did not appear in the CNDDB 2-mile query are:

No potential, not in 2-mile radius, upland sage scrub habitats/native grassland

- Hammitt's clay-cress (Sibaropsis hammittii)
- Johnston's rock cress (Arabis johnstonii)
- Many-stemmed dudleya (Dudleya multicaulis)
- Munz's mariposa lily (Calochortus palmeri var. munzii)
- Munz's onion (Allium munzii)
- San Jacinto Mountains bedstraw (Galium angustifolium ssp. jacinticum)
- Yucaipa onion (Allium marvinii)

No potential, Exceedingly Scarce

- Brand's phacelia (Phacelia stellaris), only two collections from same area of Santa Ana River (Roberts et al, 2004)
- San Diego ambrosia (Ambrosia pumila) seasonally wet areas with alkaline soils, only 3 locations in Riverside (Roberts et al, 2004)

No potential, upland sage scrub and chaparral habitats

- San Miguel savory (Satureja chandleri) (Roberts et al, 2004)

No potential, known from specific localities on old alluvial benches, sandstone slopes (Roberts et al, 2004)

- Slender-horned spine flower (Dodecahema leptoceras)

No potential, known from specific localities on the San Jacinto River, along seasonally inundated areas with muddy bottoms (Roberts et al, 2004)

- Wright's trichocoronis (Trichocoronis wrightii var. wrightii) (Roberts et al, 2004)

6.2 Existing Conditions and Results

The project site does not support vernal pools or natural riparian areas or soils of the type that support the two species that have some potential to occur by proximity; smoot tarplant and Orcutt grass. Both of these species have CNDDB occurrence records along the banks or adjacent grasslands of Salt Creek on the west side of the I-215 freeway. Orcutt grass would not occur in areas with no vernal pools. The detention basin, although seasonally inundated, is not a vernal pool and is routinely maintained by Caltrans to remove vegetation so that it can serve its purpose as a detention basin. The potential for smooth tarplant to occur in the adjacent non-native grasslands is very low and would have been seen during the survey period.

6.3 Impacts

No NEPS occur on site or in the adjacent detention basin in the 100-foot survey buffer. No direct, indirect, permanent or temporary impacts will occur.

6.4 Mitigation

No impacts will occur and no mitigation is needed

7.0 Additional Survey Needs and Procedures

7.1 Criteria Area Plant Species

Criteria Area Species (CAS) that occur within the 2-mile CNDDB data query include several wetland or facultative wetland species that were considered for their potential to occur on site. These include: thread-leaved brodiaea, San Jacinto Valley crownscale, prostrate navarretia (Navarretia Prostrata), Parish’s brittlescale (Atriplex parishii), mud nama (Nama stenocarpum), Coulter’s goldfields, (Lasthenia glabrata ssp. coulteri), and smooth tarplant. Of these, Coulter’s goldfields, and smooth tarplant occur within the CNDDB 2-mile query area. Other Criteria Area Species are discussed Appendix C.

7.1.1 Methods

KEC biologists evaluated the habitat conditions on site and the requirements of CAS species to rule out the species that would not be expected to occur. Once having made that determination, KEC surveyed the site to check if those assumptions were accurate based on the floristic species composition on the site.

KEC visited the site in September when Coulter’s goldfields would no longer be present but smooth tarplant would still be detectable. KEC considered the wetland regulatory classification of all species on site as upland, facultative, wetland facultative, upland facultative, or obligate wetland (Table 3 Flora and Fauna Observed on the Project Site).

7.1.2 Existing Conditions and Results

San Jacinto Valley crownscale and Parish’s brittlescale, both in the genus Atriplex, and Coulter’s goldfields and smooth tarplant, in the family Asteraceae, share the same endemism associations with alkaline or saline/alkaline soils and/or vernal pools. KEC’s site investigation and evaluation of soil maps and MSHCP survey areas corroborate the conclusion that the saline/alkaline soils and/or vernal pools required for these species do not occur on site or within the detention basin.

7.1.3 Impacts

No CAS occur on site and no impacts will occur

7.1.4 Mitigation

No mitigation is required since no impacts will occur.

7.2 Amphibians

Four amphibian species are covered under the MSHCP. California red-legged frog (Rana draytonii) is federally listed as threatened. Southern mountain yellow-legged frog (Rana muscosa) is both federally and state listed as endangered. The arroyo toad is federally listed as endangered. The coast range newt (Taricha tarosa tarosa) is a California Species of Special Concern (SSC) (RCTLMA, 2003a). The western spadefoot toad (Scaphiopus hammondii) in not covered by the MSHCP but it is the that occurs within the 2-mile query area. The red and yellow-legged frog and coast range newt are all habitat specific to pristine upland streams and rivers. Western spadefoot occurs in vernal pools or sometimes ponds that are in relictual vernal pool habitat.

7.2.5 Methods

KEC evaluated the detention basin and determined that it is not a vernal pool and not in the location of a relictual vernal pool based on a field Habitat Suitability Assessment, evaluation of the MSHCP Criteria Area Survey Area Maps and their association with saline/alkaline soils and Salt Creek.

7.2.6 Existing Conditions and Results

KEC determines there is no potential for Western spadefoot toad to occur in the survey buffer detention basin even though it occurs along Salt Creek on the east side of I-215. The detention basin was constructed and not a relictual vernal pool and not connected to Salt Creek or another stream. The other federally and state listed amphibians have no potential to occur because they require pristine stream habitats in upland areas.

7.2.7 Impacts

These species do not occur on site and no impacts will occur

7.2.8 Mitigation

No impacts will occur and no mitigation is required.

7.3 Burrowing Owl

The project site is located outside of the MSHCP's burrowing owl survey area (Figure 3 MSHCP Survey Areas for Burrowing Owl and Narrow Endemic Plant Species). Burrowing owl is a California Species of Special Concern (SSC) and USFWS Bird of Conservation Concern (BCC). There are multiple records of BUOW within the CNDDB 2-mile query area mostly near agricultural areas to the south.

No suitable BUOW habitat was found during the Habitat Suitability Assessment and Nesting Bird Survey on September 21, 2023. There were no burrows on site greater than 4 inches in diameter. There was no evidence of BUOW pellets, den-apron decoration, feathers, white wash or tracks on holes less than four inches in diameter. No further surveys for BUOW are recommended.

7.3.9 Methods

KEC biologist, Luka Spear, conducted the habitat assessment for Western burrowing owl according to the Western Riverside MSHCP BUOW Survey Protocol (RTLMA-EPD, 2006a). Suitably sized burrows (3 inches or greater) were documented within the non-native grassland habitat and detention basin. Burrows and cavities, were recorded with GPS and photographed (See Appendix B Photos Figure 1)

7.3.10 Existing Conditions and Results

Non-native grasslands are important habitats for raptors because they support small burrowing animals that forage on herbs and seeds. Fences and utility poles serve as perches for raptors such as burrowing owls and hawks, which prey on ground squirrels, snakes, mice, lizards and in the case of BUOW, insects.

The BUOW, is attracted to agricultural fields and non-native grasslands near irrigation canals that have water that support an insect prey base. An important component to burrowing owl habitat is the presence of California ground squirrels and their burrows. The BUOW modifies them and uses as a natal den as well as for roosting for wintering owls. (CDFW, 2012)

Although the survey buffer has a water source in ditch and detention basin adjacent to the project site. The project site has suitable perches but lacks potentially suitable natural burrows or artificial burrows in the form of cavities in debris piles.

There is a low potential for burrowing owl to nest and/or roost within the 100-foot buffer area because of lack of California ground squirrel colonies and suitable den habitat. Currently there are no burrows suitable to support nesting burrowing owl on site.

7.3.11 Impacts

Direct temporary and permanent impacts to burrowing owls will not occur because there is presently no suitable habitat or burrowing owls on site or within the 100-foot buffer. There is no record or evidence of past use by burrowing owls.

Indirect temporary impacts to potential habitat that is currently not suitable for burrowing owls because there are no suitable burrows can be avoided by implementing the Biology Best Management Practices (Bio Standard Measure 1) during nesting bird season.

Indirect permanent impacts to BUOW from loss of habitat are less-than-significant because there will be no loss of the potential habitat. There are no BUOW owl records for occupation on site and no evidence that the project site or suitable habitat within the 100-foot survey buffer was occupied by BUOW within the last three years or ever (CDFW, 2012).

7.3.12 (Standard Avoidance Measure)

Standard Avoidance Measure Bio-BMP-1 To avoid impacts to nesting and riparian birds

In order to avoid violation of the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503, 3503.5, and 3513, site preparation activities (ground disturbance, construction activities, staging equipment, and/or removal of trees and vegetation) for the Project shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species.

Construction may be conducted during the nesting/breeding season only when: active nests are not located within the project site, or 500 feet of an active listed species or raptor nest, or 300 feet of other sensitive or protected bird nests, or 100 feet of sensitive or protected songbird nests (non-listed).

If site-preparation and/or construction activities are proposed during the nesting/breeding season, The project applicant shall:

1. Designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

2. The designated biologist shall conduct nesting bird surveys at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures on site and within the survey buffer zone. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate.

3. The nest surveys shall include the Project site and adjacent areas where project activities have the potential to cause nest failure. The survey results shall be provided to the City's Planning Division.

If active nests are located during the pre-activity field survey, the biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience and in consultation with the City of Menifee and the CDFW. The biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer.

The buffer around the nest shall be delineated and flagged, and no construction activity shall occur within the buffer area until a qualified biologist determines nesting species have fledged and the nest is no longer active or the nest has failed.

If the biologist determines that such project activities may be causing an adverse reaction, the biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest).

The designated biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

8.0 Mammals

The project site is not within a criteria area for focused mammal surveys. Four mammal species that are covered under the MSHCP occurred within the CNDDB 2-mile query area; Stephens' kangaroo rat (Dipodomys stephensi), Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Western mastiff bat (*Eumops perotis californicus*), and Western yellow bat (*Lasiurus xanthinus*).

Two of these species northwestern San Diego pocket mouse and Stephens' kangaroo rat are associated with sage scrub habitats although Stephens' kangaroo rat uses habitats with both a grassland and scrub habitat interface. Stephens' kangaroo rat is federally and state listed as threatened. It was "reclassified" from endangered to "threatened" in February of 2022 by the USFWS along with a concurrent Endangered Species Act "4(d) rule" for management activities in approved management plans (RCHCA, 2022). It also has its own Habitat Conservation Plan independent from the MSHCP (RCHCA, 1996).

San Diego pocket mouse is a sage scrub dependent species and would not occur in a non-native grassland. Western mastiff bat forages over open water and flies over large ranges although it is very rare and as a large bat, it needs high roots from which to drop into flight. Western yellow bat forages over open water and roosts under the fronds of fan palms.

8.1 Methods

KEC examined the locations of the CNDDB records and on site habitat to determine if suitable habitat was on site or similar habitats to those where the other records were located.

8.2 Existing Conditions and Results

None of these species are expected to occur on site or within the survey buffer. There is no sage scrub habitat on the site or survey buffer and no soil suitable for Stephens' kangaroo rat burrows. There were no potential kangaroo rat burrows on site or in the survey buffer. Northwestern pocket mouse is sage scrub dependent and would not occur on site. There is no roosting habitat like high bridges for Western mastiff bat. Potential foraging habitat for Western mastiff bat would be along Salt Creek north of Newport

Road. The palms have potential as roosting habitat for yellow bat but these palms are routinely maintained and lack the "skirts" that make suitable habitat for this species.

8.3 Impacts

There are no direct, indirect, temporary or permanent impacts to sensitive mammals or their habitat on site or within the survey buffer as their habitat does not occur and these species are not expected to occur.

8.4 Mitigation

No mitigation is required because there will be no impacts.

9.0 Information on Other Species

9.1 Delhi Sands Flower Loving Fly

The project site does not occur within the MSHCP survey area for Delhi Sands Flower Loving Fly (Rhaphiomidas terminatus abdominalis) federally listed as endangered. Its range is extremely restricted to northwestern corner of the plan area, also the Jurupa Hills and Agua Mansa Industrial Center in Riverside County. It occurs in a narrow range of habitat exclusive to the Delhi Sands soil series. (RCTLMA, 2003b)

It is not expected to occur within the project area.

No Impacts will occur and no mitigation is required.

9.2 Species Not Adequately Conserved

Of the 28 MSHCP species that on the "not adequately conserved" list, as of 2020, eleven (11) have met the conservation criterion as of the Resource Conservation Authority 2020 Report (RCA, 2021) including Parry's spineflower (Chorizanthe parryi var. parryi) that had a record within the CNDDB 2-mile query.

The remaining 17 species are mostly associated with sage scrub, chaparral or mountain habitats outside the query area in the Santa Rosa Plateau or mountains surrounding the basin on U.S. Forest Service or State Managed Lands. Those that also occur within the basin are discussed in the Table. (RCTLMA, 2003a) Section 9.0.

9.2.1 Methods

Parry's spineflower occurs within the CNDDB 2-mile query area. Because Parry's spineflower was within the query area in scrub and chapparal, open gravelly sites (Roberts et al, 2004). KEC surveyed the project site and 100-foot buffer for potential habitat.

9.2.2 Existing Conditions and Results

No scrub or chapparal habitat for Parry's spineflower occurs on site or within the 100-foot survey buffer. The gravelly soil in the landscaped area is a recent replacement of lawn. The small gravelly is imported decomposed granite. Parry's spineflower is not expected to occur. Species on the "Not Adequately Covered" list were not detected and not expected to occur on site.

9.2.3 Impacts

there will be no impacts to MSHCP species that are not adequately covered. They and their habiats do not occur on site or within the 100-foot buffer.

9.2.4 Mitigation

There are no potential impacts and no mitigation is required.

10.0 Guidelines Pertaining to the Urban/Wildlands Interface

This project site is not located adjacent to existing conservation land or land described for conservation. It is surrounded by industrial uses. The riparian habitat has an industrial use as a detention basin and is not a wildland. There are no impacts or required mitigation. The best management avoidance practices for Urban/Wildlands Interface do not apply to this project site.

11.0 Summary Conclusions and Recommendations

The MSHCP is approved by the State of California and the U.S. Fish and Wildlife Service (USFWS) to cover threatened or endangered species listed under the California Endangered Species Act (CESA) (California, State of, 2014) and the federal Endangered Species Act (ESA) (U.S.C., 1973). The City may permit development without additional consultation for potentially occurring listed species, because listed species are determined to be adequately covered under their respective plans and this project is consistent with the MSHCP.

The MSHCP Consistency Analysis also considered the potential for impacts to jurisdictional waters as defined by the State of California the U.S. federal jurisdictional agencies, the County definitions under the MSHCP. There are no federal jurisdictional waters within the survey area. Assuming that the detention basin is considered under the regulatory authority of the Regional Water Quality Control Board, direct, indirect, temporary, and permanent impacts will be avoided.

11.1 California Environmental Quality Act (CEQA)

CEQA requires determination of consistency with the MSHCP as well as local regulations and a significance analysis for impacts to biological and natural resources not adequately conserved under those regulations and fully protected species (PRC, 2020). This MSHCP Consistency Analysis achieves those objectives and finds the project to be consistent with CEQA including species not adequately covered by the MSHCP and fully protected species because impacts to those species and listed species are avoided by implementing standard measures for BMPs described in the recommendations below. No impacts to fully protected species will occur. No further discussion or surveys for federally or state listed or MSHCP-covered species is required because the project site is not in a criteria area species survey area or narrow endemic plant species survey area.

11.1.1 Mandatory Findings of Significance

CEQA " Mandatory Findings of Significance" require evaluation of actions that may "substantially reduce the habitat of a fish or wildlife species: cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species" (PRC, 2020) CCR 15065 (a) (1)). While threatened and endangered species and many other non-listed species are covered for take and conserved within existing Habitat Conservation Plans and Mitigation Banks within Riverside County, CEQA requires that any species or population, whether covered by an HCP or not, be considered for the potential to experience "significant impacts" according to this definition.

11.1.1.1 Sensitive and Common Fauna

The list of potentially occurring listed species in Appendix C gives the rational for each species' likelihood to occur in the last column. None of the potentially occurring federal or state-listed species is expected to occur within the project survey area because there is no suitable habitat.

Three species of ground nesting birds have potential to forage or nest on site: horned lark, killdeer, and lark sparrow. All three have a NatureServe status of "G4" "apparently secure" but horned lark is covered by the MSHCP and considered sensitive.

The habitat of horned lark and other ground nesting birds is declining due to the expansion of urbanization. Birds that are common to open spaces and not adapted to urban environments such as Say's phoebe are also experiencing reductions in habitat but the MSHCP protects large expanses of conserved habitat for foraging and nesting and these species benefit even though they are not directly covered by the MSHCP. There will be no loss of habitat as a result of this project and standard measures for BMPs with avoid direct, indirect, temporary and permanent impacts.

11.1.1.2 Sensitive and Common Flora

None of the potentially occurring federal or state-listed species is expected to occur within the project survey area because there is no suitable habitat. Of those potentially occurring sensitive species already discussed in this document and those discussed in Appendix C, none were detected on site. Among the species that do occur on site, none are sensitive, rare, or populations whose loss might substantially reduce the number or restrict the range of an endangered, rare or threatened species.

Common species are protected under the MSHCP through large expanses of conserved habitat. There will be no loss of habitat as a result of this project and Standard measures for BMPs with avoid direct, indirect, temporary and permanent impacts.

11.1.2 Impacts

Direct, indirect, temporary and permanent impacts to common flora species in meadow habitats and indirect impacts to these species from loss of habitat will be avoided by implementing standard measures for BMPs.

Based on these results, KEC finds that none of the indirect, direct or cumulative incremental impacts to species and habitat are above the threshold definition for "Mandatory Findings of Significance" and impacts are substantially below this threshold for both flora and fauna.

11.1.3 Standard Measures Bio-BMP-1

Mitigation Measures

MM-1 to avoid impacts to nesting and riparian birds and a violation of the Migratory Bird Treaty Act and the California Fish and Game Code:

Standard Avoidance Measure Bio-BMP-1 To avoid impacts to nesting and riparian birds

In order to avoid violation of the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503, 3503.5, and 3513, site preparation activities (ground disturbance, construction activities, staging equipment, and/or removal of trees and vegetation) for the Project shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species.

Construction may be conducted during the nesting/breeding season only when: active nests are not located within the project site, or 500 feet of an active listed species or raptor nest, or 300 feet of other sensitive or protected bird nests, or 100 feet of sensitive or protected songbird nests (non-listed).

If site-preparation and/or construction activities are proposed during the nesting/breeding season, The project applicant shall:

1. Designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

2. The designated biologist shall conduct nesting bird surveys at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures on site and within the survey buffer zone. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate.

3. The nest surveys shall include the Project site and adjacent areas where project activities have the potential to cause nest failure. The survey results shall be provided to the City's Planning Division.

If active nests are located during the pre-activity field survey, the biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience and in consultation with the City of Menifee and the CDFW. The biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer.

The buffer around the nest shall be delineated and flagged, and no construction activity shall occur within the buffer area until a qualified biologist determines nesting species have fledged and the nest is no longer active or the nest has failed.

If the biologist determines that such project activities may be causing an adverse reaction, the biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest).

The designated biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

Certification

I hereby certify that the statements furnished above and in the attached exhibits/appendices present the data and information required for this The facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Debbie Kinsinger

Date: 11/16/2023

If you have any question regarding this biological technical report, please contact Debra Kinsinger at (877)-593-6275.

12.0 Bibliography

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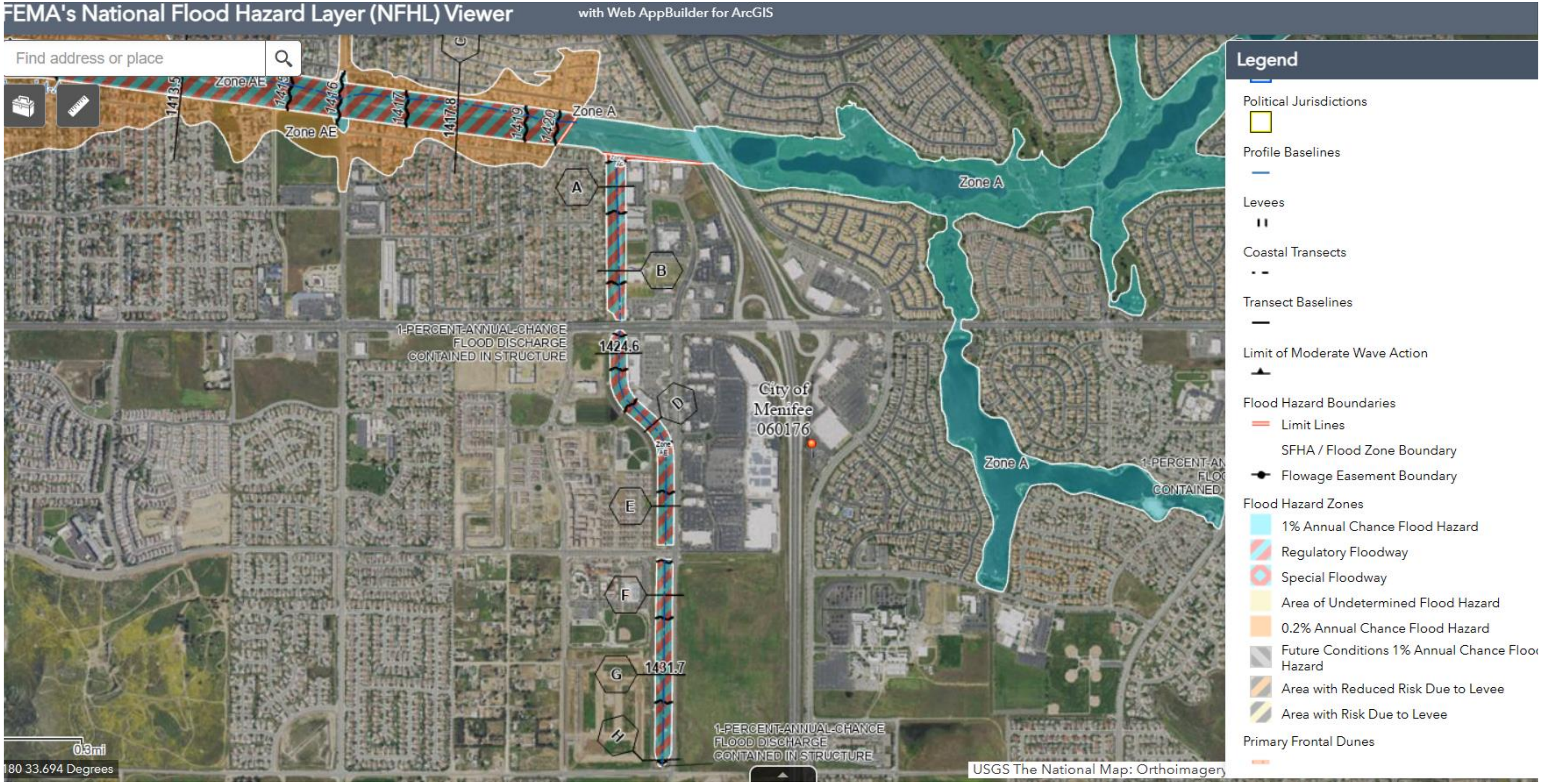
Appendix A FEMA, MSHCP & Soils Maps



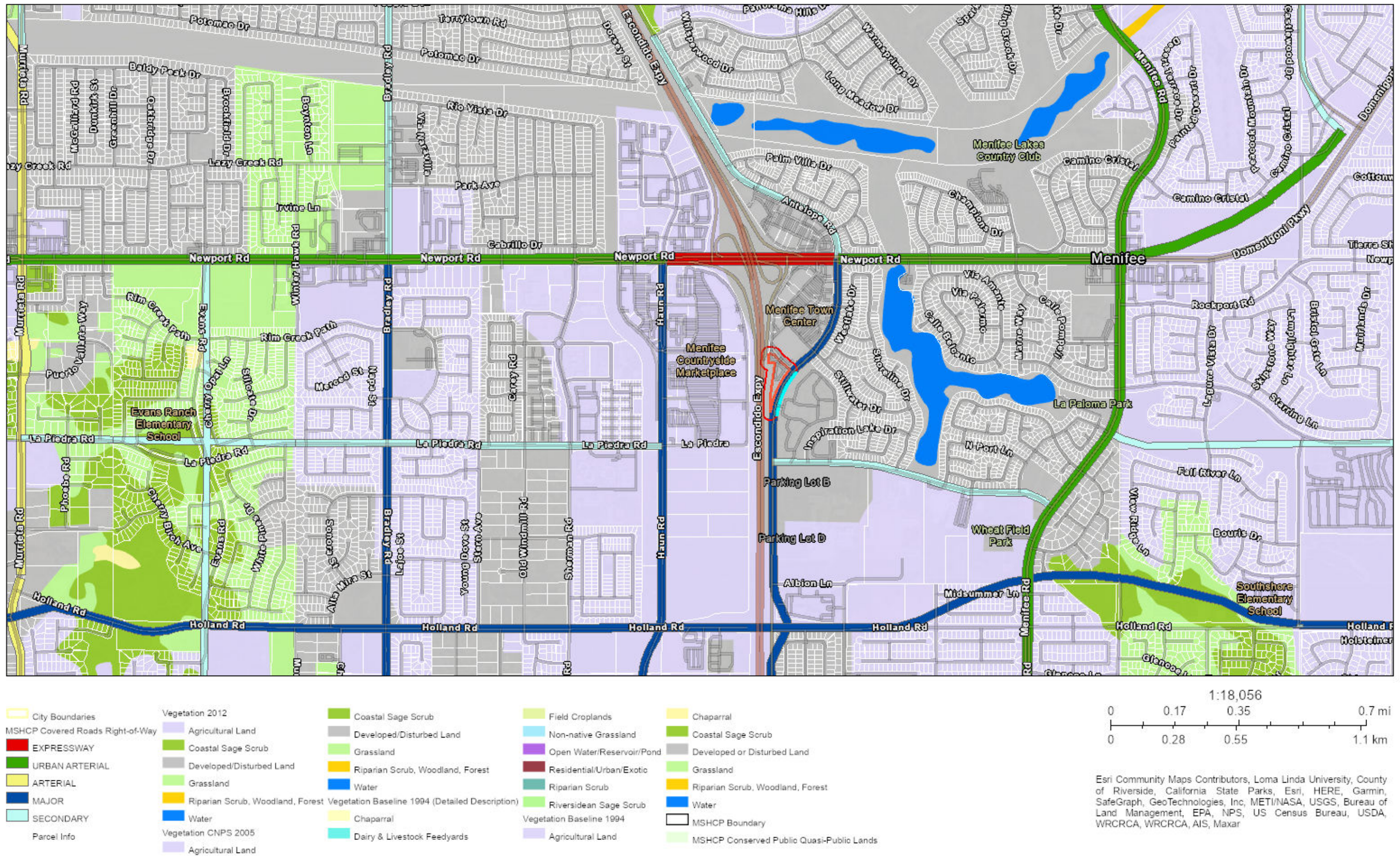
FEMA Firm Map Showing Areas Where Drainage Has Been Diverted in the Vicinity to Accommodate the Lack of Natural Drainage

Multiple Species Habitat Conservation Plan (MSHCP) Report

Area of Interest (AOI) Information

Area : 7.36 acres

Nov 1 2023 22:38:46 Pacific Daylight Time



Esri Community Maps Contributors, Loma Linda University, County of Riverside, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, WRCRCA, WRCRCA, AIS, Maxar

Map Unit Legend (On Site Soil Mapping Units)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Chino silt loam, drained	0.6	2.9%
Dv	Domino silt loam, saline-alkali	1.9	9.1%
WyC2	Wyman loam, 2 to 8 percent slopes, eroded	18.3	88.0%
Totals for Area of Interest		**20.8**	**100.0%**

Map Unit Descriptions (On Site Soil Mapping Units)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

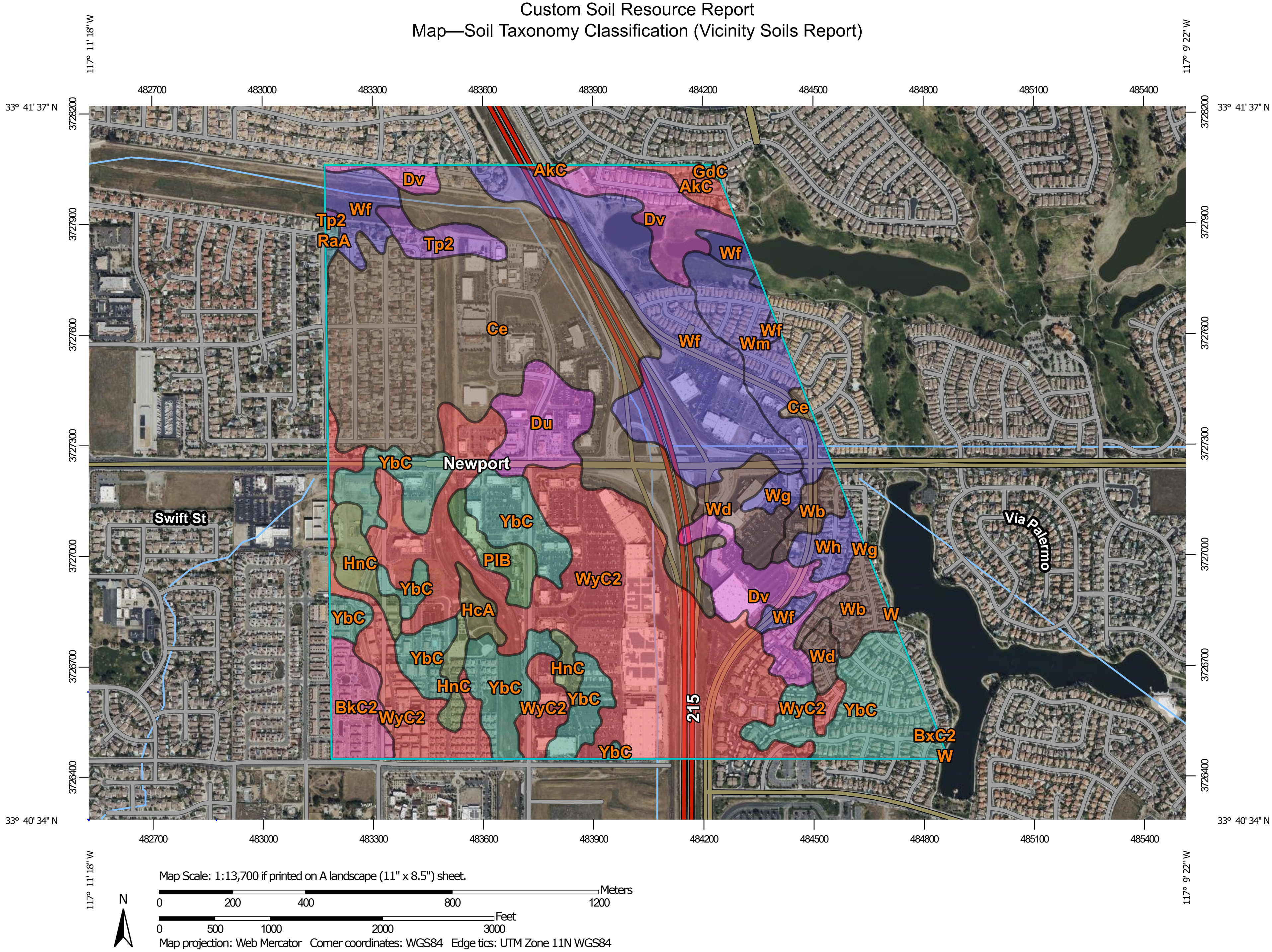
Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Soil Map (On Site Soil Mapping Units)

Map Scale: 1:1,960 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Map—Soil Taxonomy Classification (Vicinity Soils Report)



Appendix B Photos

Fig 1. 09/21/2023 <4" hole, no evidence of BUOW

Fig 2. 09/21/2023 Looking West from Caltrans retention basin eastern boundary. Western bluebird perched in Caltrans retention basin.

Fig. 3. 09/21/2023 Looking North (NW) at buffer zone from western edge of property.

Fig 4. 09/21/2023 Looking north from eastern edge of property	Fig 5. 09/21/2023 Looking south-from within landscaped greenspace on property. Pepper tree, agave, rosemary.	Fig 6 Looking east-towards eastern boundary of Caltrans retention basin. Holes, no BUOW evidence, no holes >4". Rumex crispus.	Fig 7 Looking West-at Caltrans retention basin west edge, HWY 215 in background. Helianthus annuus.
			
Fig 7. 09/21/2023 Looking southwest from property west edge; view of drainage	Fig 8. 09/21/2023 Sedges growing within Caltrans retention basin.	Fig 9. 09/21/2023 Looking north from south end of parcel.	
			
Fig 10. 09/21/2023 Looking Southeast from northwest corner of APN: 364010015.	Fig 11. 09/21/2023 Looking east, view of slope, western boundary of APN: 364010015. No sign of BUOW occurrence, no holes >4".	Fig 12. 09/21/2023 Looking southeast from Retention basin; APN: 364010015 on left of view.	

Appendix C Potentially Occurring Species

Potentially Occurring Species

The CNDDB query used to develop this list of potentially occurring sensitive species within a 2-mile radius that resulted in 18 species: 7 plants, 1 amphibian, 1 reptile, 4 birds, 4 mammals and 1 crustacean. It includes spatial data extracted from a 2-mile radius around the project site on either side of the I-215 from in Menifee from Scott Rd. on the South to McCall Blvd on the north

A broader radius of species considerations, 9 quads, would have been used if the area was designated for Criteria Area Species surveys by the MSHCP. Although this site is not within a MSHCP Criteria Area cell, we conducted in-season surveys for species with potential to occur due to the presence of an inundated depression, detention basin, in the survey buffer area of the site.

Bats are not well represented within the CNDDB data base although we typically consider the potential for Southern California species to occur. In this case there are no structures or vegetative habitat that would serve as breeding or roosting habitat on site.

Column 1, labeled “Special Status Species” identifies the potentially occurring species common name and currently accepted species name. Column 2, “Habitat and Distribution”, lists appropriate habitat types and/or vegetation types for the indicated species and for plants and animals. Column 3, “Status Designation”, gives the sensitivity status designated at the federal level and California level as well as the state ranking and status within the MSHCP. Plants also include a California Native Plant Society (CNPS) status (CNPS, 2022). The code descriptions for status designations and rankings are listed below the table.

The last column, “Potential for Occurrence”, ranks the probability of occurrence on-site.

Present: Observed onsite during surveys or recorded onsite by other qualified biologists.

High: Observed in similar habitat in region by qualified biologists or often occurs in habitat similar to that onsite and within the known range of the species.

Moderate: Reported sightings in surrounding region or site and is within the known range of the species and often occurs in habitat similar to that onsite.

Low: Site is within the known range of the species but habitat onsite lacks primary constituents for survival and reproduction.

Absent: A focused study failed to detect the species, no suitable habitat is present

Not Expected: Habitat for these species does not occur on site or within the 100-foot survey buffer area and/or beyond the known extent of the species range.

Unknown: Focused surveys have been performed in the region and the species' distribution and habitat are poorly known.

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Plants				
Allium munzii **Munz's onion**	FE, ST, 1B.1, MSHCP Group 3, NEPS	Mesic clay soils, coastal scrub, chaparral, cismontane woodland, pinyon-juniper, valley & foothill grassland	Blooms Mar – May Elev. 975 – 3510 ft.	**Not Expected –** No native grasslands, coastal scrub or chaparral.
Atriplex coronata var. notatior **San Jacinto Valley crownscale**	FE, 1B.1, MSHCP Group 3, 6.1.2-list riparian/riverine, CAS, additional survey needs.	Highly alkaline, saline/alkaline, silty clay soils. Traver-Domino-Willows soil association 80% in Willows soil. Floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, alkali grasslands.	Annual herb Blooms Apr - Aug Elev. 455 – 1,640 ft.	**Not Expected** – No alkaline soils, Traver-Domino-Willows soils not detected, seasonal pools are artificial. Distinguished from A. semibaccata, a perennial of the same genus.
Atriplex serenana var. *davidsonii* **Davidson's saltscale**	1B.2, MSHCP, Group 3, CAS, additional survey needs	Alkali floodplains of the San Jacinto River, Mystic Lake and Salt Creek in association with Willows, Domino and Traver soils. Coastal scrub	Annual herb Blooms Apr - Oct Elev. 33-655 ft.	**Not Expected** – Out of elevation range. No alkali soils or vernal pools, playas or native grasslands on site Local records
Atriplex parishii **Parish's brittlescale**	1B.1, MSHCP Group 3, CAS, additional survey needs	Alkali vernal pools, scrub, playa and non-native grassland of vernal plains. In flood plains and Traver, Domino, Willows soil association.	Blooms Jun - Oct Elev. 80 – 6,235 ft.	**Not expected** – Alkaline soils, Traver-Domino-Willows soils not detected, seasonal pools are artificial. Distinguished from A. semibaccata, a perennial of the same genus.
Brodiaea filifolia **Thread-leaved brodiaea**	FT, SE, 1B.1, MSHCP Group 3, 6.1.2-list riparian/riverine NEPS, additional survey needs,	Endemic to deep clay soils. Restricted to open cismontane woodland, & valley and foothill grassland. Temescal Valley near Lake Mathews, near Lake Skinner and Oak Mtn. near Vail Lake.	Blooms Mar-May Elev. 50 – 3,937 ft.	**Not expected** – No native grasslands (valley and foothill grasslands have natives) or woodland, clay soils are shallow

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Calochortus weedii var. intermedius **Intermediate mariposa-lily**	1B.2 MSHCP Group 2	Dry, rocky open slopes and rock outcrops in coastal scrub, chaparral, valley and foothill grassland. Hills and valleys west of Lake Skinner and Vail Lake in the MSHCP plan area.	Blooms May-Jul Elev. 344 – 2,805 ft.	**Not Expected –** No native grasslands, coastal scrub or chaparral.
Centromadia pungens **Smooth tarplant**	1B.1, MSHCP Group 3, 6.1.2-list riparian/riverine, CAS, additional survey needs	Alkali meadow - playa, alkali scrub; also in disturbed places, grassland, chenopod scrub, meadow, especially San Jacinto River basin.	Blooms Apr-Sep Elev. 0 - 2,100 ft.	**Low** – No alkaline soils, Traver-Domino-Willows soils not detected, seasonal pools are artificial, no chenopod scrub. Occurs in non-native grasslands on the west side of I-215 near the banks of Salt Creek.
Chorizanthe leptotheca **Peninsular spineflower**	4.2, MSHCP Group 2,	Uncommon plant of sandy or gravelly soils. Coastal scrub, chaparral, lower montane coniferous forest, on alluvial benches at the base of the Santa Ana and Agua Tibia Mountains, granitic soils	Blooms May – Aug Elev. 985 - 6235	**Not Expected –** No sandy gravelly soil, coastal scrub, chaparral or forest.
Chorizanthe parryi var. parryi **Parry's spineflower**	1B.1, MSHCP Group 2, adequately-covered requirement met	Dry slopes and flats; sometimes at interface of two vegetation types such as chaparral and oak woodland; dry, sandy soils. Open sites often on gravelly soils	Blooms Apr-Jun Elev. 33 – 5,594 ft.	**Low –** No chaparral, oak woodland or sandy soil. Occurs within along San Jacinto River within 2 mi.
Chorizanthe polygonoides var. longispina **Long-spined spineflower**	1B.2 MSHCP Group 2	Gabbroic clay in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Temecula, Lake Skinner, and foothills of the Agua Tibia.	Blooms Mar – Jun Elev. 98 – 5,020 ft.	**Not Expected** – No native grassland, coastal scrub, chaparral, vernal pools, no gabbro soil.

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Chorizanthe procumbens **Prostrate spineflower**	CBR MSHCP Group 2	Sandy or gravelly soils found mostly in Santa Ana Mtns., Santa Rosa Plateau, and foothills of the Agua Tibia Mtns.	Blooms Apr – Jun Elev. 33 – 4300 ft.	**Not Expected –** No gabbro soil, not in mountains or foothills.
Cryptantha wigginsii **Wiggins' cryptantha**	1B.2	Often on clay soils. Coastal scrub.	Elev. 66 – 902 ft.	**Not Expected –** Not in elevation range, No coastal scrub
Erodium macrophyllum **Round-leaved filaree**	1B.1, MSHCP Group 3, CAS, additional survey needs,	Endemic to deep clay soils. Restricted to open cismontane woodland, & valley and foothill grassland. Temescal Valley near Lake Mathews, near Lake Skinner and Oak Mtn. near Vail Lake.	Blooms Mar-May Elev. 50 – 3,937 ft.	**Low** – No native grasslands (valley and foothill grasslands have natives) or woodland, clay soils are shallow.
Lasthenia glabrata ssp. coulteri **Coulter's goldfields**	1B.1, MSHCP Group 3, CAS, additional survey needs	Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Seasonally flooded plains of the San Jacinto River and Alberhill Creek in MSHCP plan area.	Blooms Mar-May Elev. < 4593 ft.	**Low –** No alkali habitats, no native grasslands. Occurs west if I-215 near Menifee school near vernal pools. Appears developed now.
Lepidium virginicum var. robinsonii **Robinson's pepper-grass**	4.3	Dry soils, shrubland Chaparral, coastal scrub. Low-growing vegetation, on Rocky slopes, among shrubs, often in fissures of boulders or relatively sterile sites. Perris basin, Santa Ana Mtns. Foothills of the Agua Tibia in MSHCP plan area.	Present Jan-Jul Bloom Jan-Apr (annual herb) Elev. < 2,904 ft.	**Not Expected –** Identification of similar species is *Lepidium nitidum.* No coastal scrub, chaparral or rocky slopes or boulders. Occurs within 2-mile query on coastal scrub
Myosurus minimus ssp. apus **Little mousetail**	1B.1, MSHCP, Group 3, 6.1.2-list riparian-riverine-vernal pool, CAS, additional survey needs	Alkali vernal pools near Hemet.	Blooms Apr – May Elev. 66 – 2,100 ft.	**Not Expected** – No alkali habitats, no vernal pools.

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Nama stenocarpum **Mud nama**	2B.2, MSHCP Group 3, 6.1.2-list riparian-riverine-vernal pool, CAS, additional survey needs	Muddy embankments of marshes and swamps, San Jacinto River, Mystic Lake	Blooms Jan – Jul Elev. 15 – 1,640 ft.	**Not Expected** – No marshes or s wamps.
Navarretia fossalis **Spreading navarretia**	FT, 1B.1, MSHCP Group 3, 6.1.2-list riparian/riverine, NEPS, additional survey needs	Endemic to deep clay soils. Restricted to open cismontane woodland, & valley and foothill grassland. Temescal Valley near Lake Mathews, near Lake Skinner and Oak Mtn. near Vail Lake.	Blooms Mar-May Elev. 50 – 3,937 ft.	**Low** – No native grasslands (valley and foothill grasslands have natives) or woodland, clay soils are shallow. Occurs within 2 mi.
Crustaceans				
Branchinecta lynchi **Vernal pool fairy shrimp**	FE, MSHCP Group 3, 6.1.2-list riparian-riverine-vernal pool, CAS	Santa Rosa Plateau Ecological Reserve, Skunk Hollow, and Salt Creek in west Hemet and Pechanga Indian Reservation –vicinity. Cool-water vernal pools and one alkali pool, clay soils, Willows, Traver, and Domino soils.	Elev. Less than 3,800 ft. Active during seasonal inundation, cysts (eggs) survive throughout the dry period of the year.	**Low –** No vernal pools, seasonal pools are artificially created and support versatile fairy shrimp, *Branchinecta lindahli*. *B. Lynchi* not detected in focused surveys.
Linderiella santarosae **Santa Rosa Plateau fairy shrimp**	MSHCP Group 3, 6.1.2-list riparian-riverine-vernal pool, CAS	Cool-water vernal pool on southern basalt flow on the Santa Rosa Plateau.	Elev. 2,050 ft. Active during seasonal inundation, cysts (eggs) survive throughout the dry period of the year.	**Not Expected –** Out of elevation range. No vernal pools, seasonal pools are artificially created and support versatile fairy shrimp, *Branchinecta lindahli*. L. santarosae not detected.

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Streptocephalus wootoni **Riverside fairy shrimp**	FE, MSHCP Group 3, 6.1.2-list riparian-riverine-vernal pool, CAS	All known sites are within annual grasslands. Deep vernal pools, playas, basalt flows and clay soils (Murrieta stony clay loam, Las Posas, Wyman clay loam and Willows soils. Santa Rosa Plateau Ecological Reserve, and alkali vernal pools i.e., Skunk Hollow, and Salt Creek in west Hemet.	Elev. 98 -1,362 f t. Active during seasonal inundation, cysts (eggs) survive throughout the dry period of the year.	**Low** – Within known range but not in grassland or alkaline habitats, not on MSHCP-identified soils, above elevation range. seasonal pools are artificially created and support versatile fairy shrimp, *Branchinecta lindahli*. S. woottoni not detected in focused surveys.
Amphibians				
Spea hammondii (Scaphiopus hammondii) **Western spadefoot**	SSC, MSHCP Group 2	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood or scrub with vernal pools. Vernal pools are essential for breeding and egg-laying.	Estivates in summer. Active Oct-Apr if rain has fallen. Elev. < 4,472 ft.	**Low** – Although the extant locations are in ecologically functional vernal pools or along perennial streams. Seasonal pools on site are artificially created. Not detected in fairy shrimp surveys.
Reptiles				
Aspidoscelis (Cnemidophorus hyperythrus) hyperythra beldingi **Belding's orange-throated whiptail**	SSC, MSHCP Group 1	Coastal sage and chaparral adjacent to flood plains or terraces along streams occurring in western Riverside County, perennial vegetation.	Adults most active Apr – May, diurnal, warm parts of the day, Elev. < 3,412 ft.	**Not Expected** – Not adjacent to flood plains or stream terraces.
Birds				

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Athene cunicularia **burrowing owl**	SSC, MSHCP Group 3, additional survey needs	Nests in ground squirrel burrows for dens. Open, dry annual or perennial grasslands deserts and scrublands characterized by low-growing vegetation.	Breeds Mar – Aug peak in Apr – May.	**Low** – Based on 2022 focused surveys. Not detected during focused surveys. No evidence of past or present occupation.
Eremophila alpestris actia **California horned lark**	WL, MSHCP Group 2	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. Suitable foraging habitat includes freshly tilled soil and bare ground.	Resident species. Ground nester. Breeds Mar – Jul, peak in May.	**Present** – High Potential due to open disturbed non-native grasses on site. May follow bulldozer during vegetation clearing to forage for insects.
Polioptila californica californica **Coastal California gnatcatcher**	FT SSC, MSHCP Group 2	Lowland and foothill bioregions of western Riverside county in coastal sage scrub. Core Areas between Lake Mathews and Lake Elsinore also Murrieta Hot Spring/Lake Skinner west to I-215.	Resident. Breeds Feb – Aug, peak mid Mar – May.	**Not Expected** – No coastal sage scrub habitat. Occurs in adjacent Criteria Area cell to west.
Vireo bellii pusillus **Least Bell's vireo**	FE SE, MSHCP Group 2 riparian-riverine-vernal pool	Well-developed willow riparian scrub, woodlands, and forest.	Migrant. Breeds Apr - Jul	**Not Expected –** No dense multi-story willow riparian habitat. No willow riparian scrub along flood channel. Vegetation is routinely removed.
Mammals				
Chaetodipus fallax fallax **Northwestern San Diego pocket mouse**	SSC, MSHCP Group 1	Confined to contiguous habitat in Coastal scrub–grassland ecotones, chaparral, grasslands, sagebrush, with rocks and coarse gravel. Within the MSHCP plan area they occur occupy mountain foothills and valley hills.	Active year-round, torpor during cold periods. Reproduction coincides with peak vegetation production. Elev. < 6,000 ft.	**Not Expected –** No sage scrub or chaparral, no suitable burrowing habitat.

Species	**Status**	**Habitat and Distribution**	**Activity Period**	**Occurrence Probability**
Dipodomys stephensi **Stephens' kangaroo rat**	FE ST MSHCP Group 1, SKRHCP	Open grasslands and sparse coastal scrub, chaparral, sandy and sandy loam soils, with gentle slopes. Mostly in foothill and valley scrub habitats in Western Riverside County.	Active year-round with peak breeding in winter and spring. Multiple litters per year depending on rainfall. Elev. 180 – 4,100 ft.	**Not Expected** – No native grasslands, sage scrub or chaparral, no suitable burrowing habitat.
Eumops perotis californicus **Western mastiff bat**	SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging.	Year- round; nocturnal	**Not Expected.** No roosting habitat in study area. No scrub or chaparral foraging habitat.
Lasiurus xanthinus **Western yellow bat**	SSC	Found in desert and riparian areas of the southwest U.S. Individuals roost in the dead fronds of palm trees, and have also been documented roosting in cottonwood trees.	Year- round; nocturnal	**Not Expected.** No roosting habitat in study area. Forages over open water.

Federal designations: (federal Endangered Species Act, U. S. Fish and Wildlife Service)
FE: Federally listed, endangered.
FT: Federally listed, threatened.

State designations: (California Endangered Species Act, California Dept. of Fish and Game)
SE: State listed, endangered.
ST: State listed, threatened.
CSE: Candidate for State list endangered.
CBR: Considered But Removed from state sensitivity rankings
R: State listed as rare. (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SSC: Species of Special Concern (DFG).
WL: Watch List
FP: Fully protected

CNPS: California Rare Plant Ranking System

List 1A	Plants presumed extirpated in California and either rare or extinct elsewhere
List 1B	Plants rare, threatened, or endangered in California and elsewhere
List 2A	Plants presumed extirpated in California but common elsewhere
List 2B	Plants rare, threatened, or endangered in California but more common elsewhere
List 3	Review List: Plants about which more information is needed
List 4	Watch List: Plants of limited distribution
CBR	Considered But Removed from rarity list

California Rare Plant threat ranking extension
0.1 – Seriously threatened in California (over 80%) of occurrences threatened / high degree and immediacy of threat)
0.2 – Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

MSHCP Ranking
Group 1 -- Take coverage is warranted based upon regional or landscape level considerations, such as healthy population levels, widespread distribution throughout the MSHCP Plan Area, and life history characteristics that respond to habitat-scale conservation and management actions.
Group 2 -- Take coverage is warranted based on regional or landscape level considerations with the addition of site-specific conservation and management requirements that are clearly identified in the MSHCP for species that are generally well-distributed, but that have Core Areas that require Conservation.
Group 3 -- Take coverage is warranted based upon site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined Habitat or limited geographic area within the MSHCP Plan Area.

MSHCP 6.1.2 Riparian /Riverine Species
MSHCP NES – For plants only, Narrow Endemic Species, requires additional focused surveys before disturbing potential habitat
MSHCP CAS – Criteria Area Species, requires additional focused surveys before disturbing habitat within Criteria Cell Blocks.

LETTER REPORT FOR A NEGATIVE CULTURAL RESOURCES OVERVIEW OF THE HOMES2SUITES PROJECT, MENIFEE, CALIFORNIA

PLN 23-0069

PREPARED FOR:
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
#19913-101.1

PREPARED BY:

RICHARD L. CARRICO
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92086

PRINCIPAL INVESTIGATOR

Richard L Carrico

RICHARD L. CARRICO

Phase I Overview of 1.2-acres **Guidelines: CEQA/City of Menifee**
USGS Quadrangle: Romoland 7.5
Township 6 South Range 3 West Section 2

Keywords: City of Menifee, Newport Road, Antelope Road, Negative Overview

November 3, 2023

1.0 INTRODUCTION AND SUMMARY

This letter report provides the results of a cultural resources overview Phase 1 study for an approximately 2-acre parcel located in the City of Menifee, California. The proposed project is the construction of a four-story hotel on the site currently occupied by a shopping mall. The records search, background research, and preparation of this letter report were performed in accordance with the California Environmental Quality Act and guidelines of the City of Menifee as one element of project approval.

Results of the study were negative; no archaeological or historical resources were recorded at the Eastern Information Center. A search of the Sacred Lands File at the California Native American Heritage Commission is pending as of November 3, 2023. Given previous disturbances to the parcel which included construction of the existing mall and substantial grading, trenching for underground utility lines, and improvements associated with nearby freeway off ramps and roads, the proposed project is unlikely to impact or adversely affect any significant cultural resources.

2.0 PROJECT LOCATION

The project is in the City of Menifee, California south of Newport Road and immediately west of Antelope Road (Figure 1). The street address is 30141 Antelope Road. As shown on the Romoland 7.5 USGS quadrangle, the parcel is situated within Township 6 South Range 3 West Section 2 at an approximate elevation of 1440 feet above mean sea level (msl) (Figure 2).

3.0 ARCHIVAL RESEARCH/RECORDS SEARCH

A records search was conducted at the Eastern information Center on October 23, 2023 (Attachment A: Records Search Request). Results of the self-search were negative; no archaeological or historical resources were previously recorded on or near the subject parcel The nearest archaeological site was RIV-1029 a site recorded in 1976 by Ike Eastvold. On the sparse site form no indication of artifacts or cultural materials was noted. Besides the location at the southeastern intersection what was then I-15 and Newport Road, the site area (50m x 50m) no additional information was provided. A field survey conducted in 1981 failed to relocate the site and noted that whatever may have previously existed, was destroyed by freeway and road improvements. Field surveys for projects within a half-mile radius of the current project did not result in the discovery or recordation of cultural resources (Smith & Associates 2019; Duke 2014; CRM Tech 2015; Drover 1994)

Although the City of Menifee will serve as the Lead Agency and will be ultimately responsible for conducting any future consultation with interested or affected Native American groups, a request for a search of the NAHC files was requested (Appendix B); results of the NAHC contact are pending and will be provided in a subsequent follow-up to this report (Appendix C).

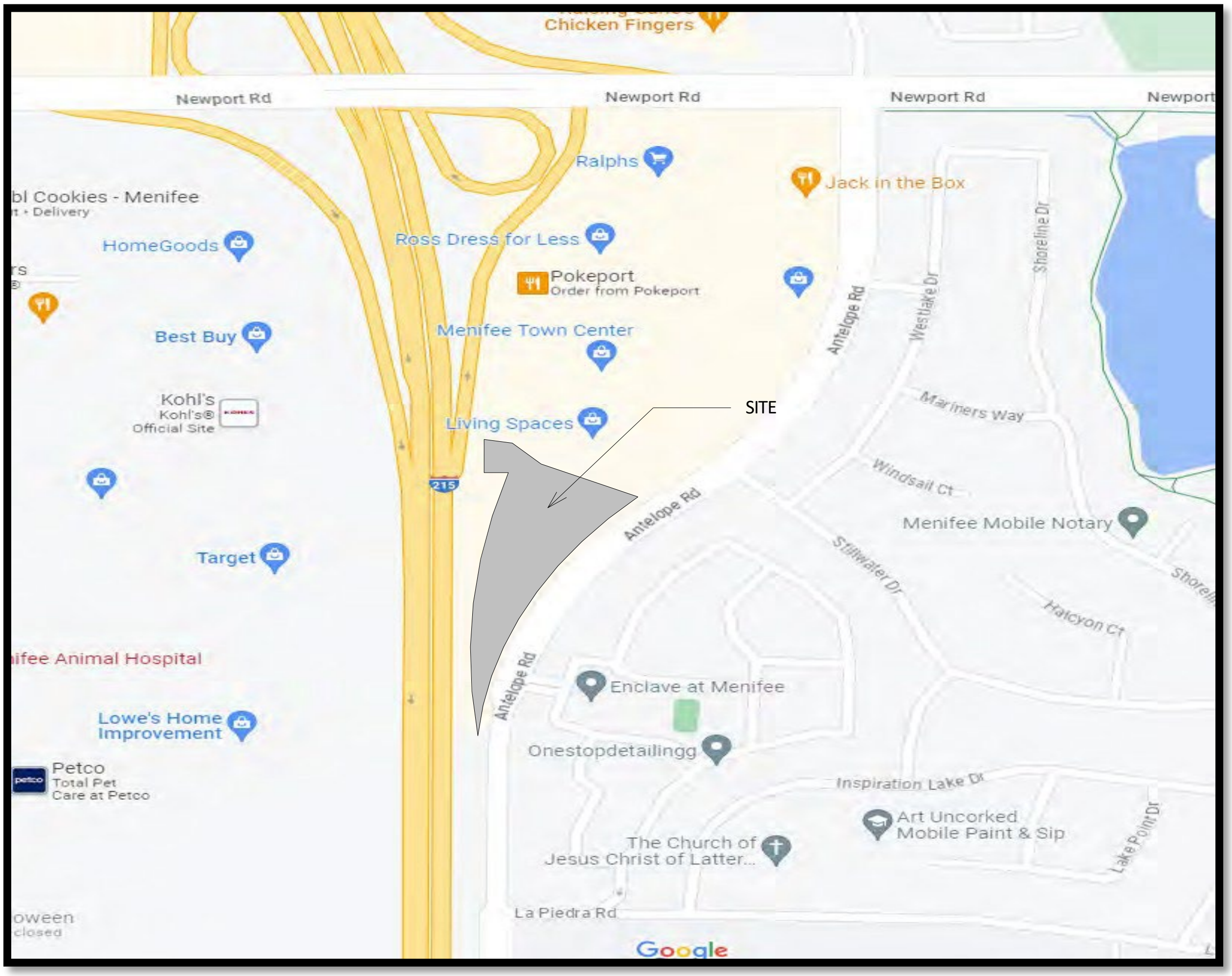

FIGURE 1
PROJECT SITE

It is known that several milling sites and resource exploitation areas associated with the Luiseño people exist well removed from the project site in the nearby foothills and along major water courses. A review of historic maps and background did not indicate that any historical roads or buildings existed within the parcel.

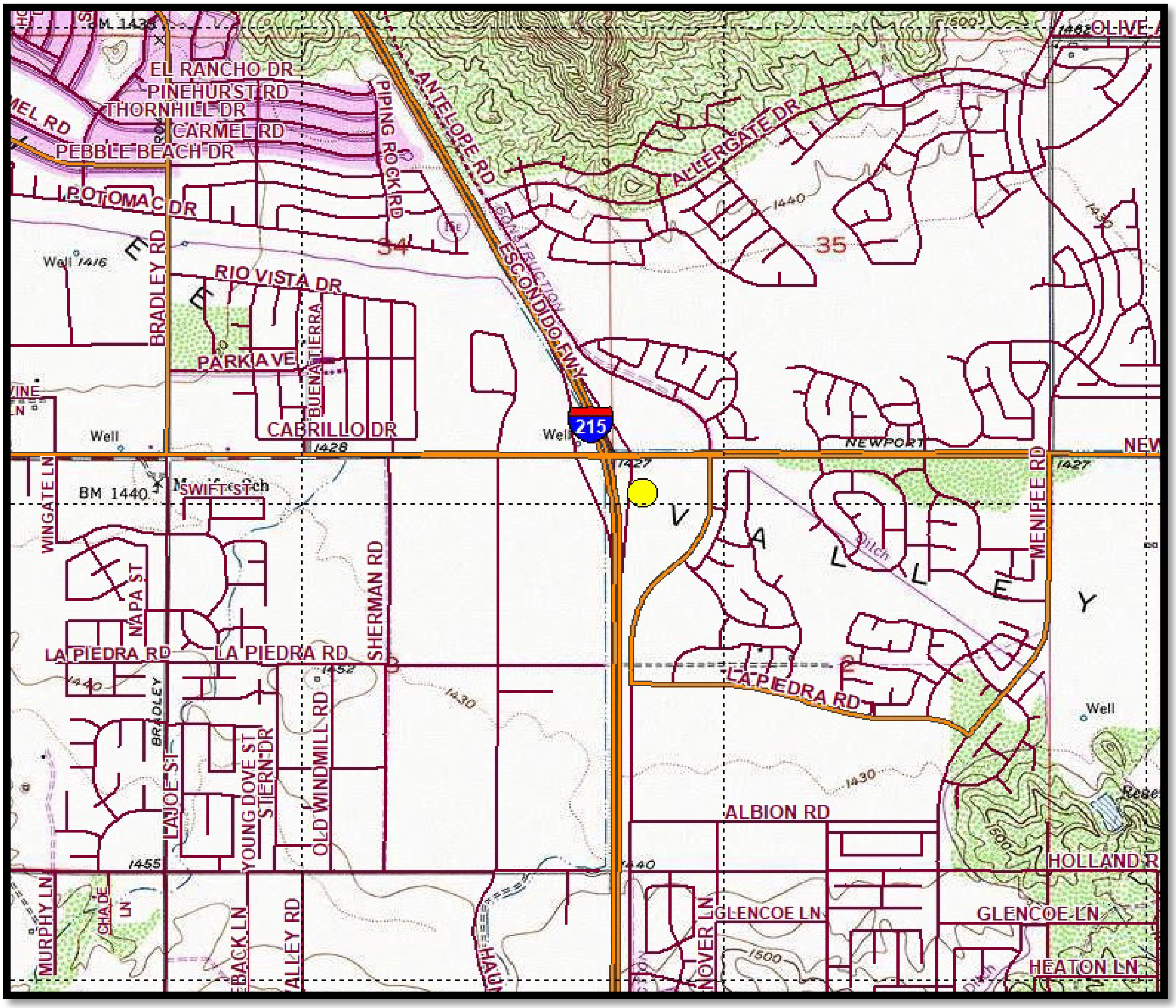

FIGURE 2:
PROJECT SITE AS DEPICTED ON THE ROMOLAND 7.5 MINUTE USGS QUADRANGLE
(Yellow Dot Denotes Project)

4.0 SETTING

The subject parcel is a wedge-shaped largely developed and paved piece of land. Elevation of the parcel varies very little given previous leveling for paving and construction; the average is 1,440 feet above mean sea level (msl). Existing commercial structures, stores, and parking lots are in the parcel.

5.0 TRADITIONAL CULTURAL PROPERTIES

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Also, potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management (CRM) performed under federal auspices. “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

1. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;

2. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;

3. An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;

4. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and

5. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A Traditional Cultural Property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

No information related to Traditional Cultural Properties has been obtained through communication with the Native American Heritage Commission. It should be noted, however, that during any potential future Native American consultation between the City of Menifee and the Tribes, new information or concerns may be documented.

6.0 MANAGEMENT RECOMMENDATIONS

The absence of recorded or known cultural resources within the subject parcel and previous grading and paving leads to a finding of no adverse effect and of no impacts to significant cultural resources as result of approval of proposed construction on the parcel. Future consultation with interested Native American Tribes may result in management recommendations such as demolition and grading monitoring.

6.0 REFERENCES CITED

CRM Tech
2015 Archaeological Report for the American Tire Center. Report prepared for Kimberly-Horn & Associates. Report on file at the Eastern Information Center, University of California Riverside.

Drover, Christopher
1994 Environmental Impact Report and Cultural Resource Assessment of the Proposed Menifee Desalination Line. Prepared for the Eastern Municipal Water District. Report on file at the Eastern Information Center, University of California Riverside.

Duke CRM
2014 Cultural and Paleontological Resources Assessment for the Proposed Menifee Unified School District Education Center. Prepared for WLC Architects Inc. Report on file at the Eastern Information Center, University of California Riverside.

Smith, Brian S.
2019 Results of Archaeological Monitoring of the Menifee Town Center Project. Report prepared for Lennar Homes. Report on file at the Eastern Information Center, University of California Riverside.

ATTACHMENT A:

REQUEST FOR RECORDS SEARCH AT EIC

California Historical Resources Information System

CHRIS Data Request Form

ACCESS AND USE AGREEMENT NO.: 0099

IC FILE NO.:

To: Eastern Information Center

Print Name: Richard L. Carrico

Date: 10/23/2023

Affiliation: Recuerdos Research

Address: PO Box 387

City: Warner Springs

State: CA

Zip: 92086

Phone: 760-518-1471

Fax: N/A

Email: recuerdosresearch@gmail.com

Billing Address (if different than above): N/A

Billing Email: recuerdosresearch@gmail.com

Billing Phone: 760-518-1471

Project Name / Reference: Homes2Suites Menifee

Project Street Address: 30141 Antelope Road, Menifee, CA

County or Counties: Riverside

Township/Range/UTMs: Township 6 South Range 3 West NW ¼ of Section 2

USGS 7.5' Quad(s): Romoland

- PRIORITY RESPONSE (Additional Fee): yes ☐ / no X

TOTAL FEE NOT TO EXCEED: $ N/A

(If blank, the Information Center will contact you if the fee is expected to exceed $1,000.00)

Special Instructions:

None thank you.
The existing land use is a paved commercial
shopping center.

Information Center Use Only

Date of CHRIS Data Provided for this Request:

Confidential Data Included in Response: yes ☐ / no ☐

Notes:

Mark the request form as needed. Attach a PDF of your project area (with the radius if applicable) mapped on a 7.5' USGS topographic quadrangle to scale 1:24000 ratio 1:1 neither enlarged nor reduced and include a shapefile of your project area, if available. Shapefiles are the current CHRIS standard for submitting digital spatial data for your project area or radius. **Check with the appropriate IC for current availability of digital data products.**

- Documents will be provided in PDF format. Paper copies will only be provided if PDFs are not available at the time of the request or under specially arranged circumstances.
- Location information will be provided as a digital map product (Custom Maps or GIS data) unless the area has not yet been digitized. In such circumstances, the IC may provide hand drawn maps.
- In addition to the $150/hr. staff time fee, client will be charged the Custom Map fee when GIS is required to complete the request [e.g., a map printout or map image/PDF is requested and no GIS Data is requested, or an electronic product is requested (derived from GIS data) but no mapping is requested].

For product fees, see the CHRIS IC Fee Structure on the OHP website.

1. **Map Format Choice:**

Select One: Custom GIS Maps ☐ GIS Data ☒ Custom GIS Maps **and** GIS Data ☐ No Maps ☐

Any selection below left unmarked will be considered a "no."

2. **Location Information:**

	Within project area	Within 0 ft. radius
ARCHAEOLOGICAL Resource Locations[1]	yes ☒ / no ☐	yes ☐ / no ☒
NON-ARCHAEOLOGICAL Resource Locations	yes ☒ / no ☐	yes ☐ / no ☒
Report Locations[1]	yes ☒ / no ☐	yes ☐ / no ☒
"Other" Report Locations[2]	yes ☐ / no ☒	yes ☐ / no ☒

3. **Database Information:**

(contact the IC for product examples, or visit the SSJVIC website for examples)

	Within project area	Within 0 ft. radius
ARCHAEOLOGICAL Resource Database[1]		
List (PDF format)	yes ☒ / no ☐	yes ☐ / no ☒
Detail (PDF format)	yes ☐ / no ☐	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☐ / no ☒
NON-ARCHAEOLOGICAL Resource Database		
List (PDF format)	yes / no	yes ☐ / no
Detail (PDF format)	yes ☒ / no ☐	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☐ / no ☒
	☐ ☒	☐ ☒
Report Database[1]		
List (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Detail (PDF format)	yes ☒ / no ☐	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☐ / no ☒
	☐ ☒	☐ ☒
Include "Other" Reports [2]	yes / no	yes / no

4. **Document PDFs** (paper copy only upon request)**:**

	Within project area	Within 0 ft. radius
ARCHAEOLOGICAL Resource Records[1]	yes ☒ / no ☐	yes ☐ / no ☐
NON-ARCHAEOLOGICAL Resource Records	yes ☒ / no ☐	yes ☐ / no ☒
Reports[1]	yes ☐ / no ☒	yes ☐ / no ☒
"Other" Reports[2]	yes ☐ / no ☒	yes ☐ / no ☒

5. **Eligibility Listings and Documentation:**

	Within project area	Within 0 ft. radius
OHP Built Environment Resources Directory[3]:	yes ☐ / no ☒	yes ☐ / no ☒
Directory listing only (Excel format)	yes ☐ / no ☒	yes ☐ / no ☒
Associated documentation[4]		
OHP Archaeological Resources Directory[1,5]:	yes ☐ / no ☒	yes ☐ / no ☒
Directory listing only (Excel format)	yes ☐ / no ☒	yes ☐ / no ☒
Associated documentation[4]		
***California Inventory of Historic Resources* (1976):**	yes ☐ / no ☒	yes ☐ / no ☒
Directory listing only (PDF format)	☐ ☒	☐ ☒
Associated documentation[4]	yes / no	yes / no

6. **Additional Information:**

The following sources of information may be available through the Information Center. However, several of these sources are now available on the OHP website and can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through these sources. Indicate below if the Information Center should review and provide documentation (if available) of any of the following sources as part of this request.

Caltrans Bridge Survey	yes ☐ / no ☒
Ethnographic Information	yes ☐ / no ☒
Historical Literature	yes ☐ / no ☒
Historical Maps	yes ☐ / no ☒
Local Inventories	yes ☐ / no ☒
GLO and/or Rancho Plat Maps	yes ☐ / no ☒
Shipwreck Inventory	yes ☐ / no ☒
Soil Survey Maps	yes ☐ / no ☒

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[1] In order to receive archaeological information, requestor must meet qualifications as specified in Section III of the current version of the California Historical Resources Information System Information Center Rules of Operation Manual and be identified as an Authorized User or Conditional User under an active CHRIS Access and Use Agreement.

[2] "Other" Reports GIS layer consists of report study areas for which the report content is almost entirely non-fieldwork related (e.g., local/regional history, or overview) and/or for which the presentation of the study area boundary may or may not add value to a record search.

[3] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Includes, but not limited to, information regarding National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and historic building surveys. Previously known as the HRI and then as the HPD, it is now known as the Built Environment Resources Directory (BERD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

[4] Associated documentation will vary by resource. Contact the IC for further details.

[5] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Previously known as the Archaeological Determinations of Eligibility, now it is known as the Archaeological Resources Directory (ARD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

ATTACHMENT B:
REQUEST LETTER TO THE NATIVE AMERICAN HERITAGE COMMISSION

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:

County: Riverside

USGS Quadrangle Name: Romoland 7.5' (1978)

Township: 6 South Range: 3 West Section(s): 2 City of Menifee)

Company/Firm/Agency: Recuerdos Research

Street Address: P.O Box 387

City: Warner Springs Zip: 92086

Phone: 760-518-1471

Fax: N/A Email: recuerdosresearch@gmail.com

Project Title: Home2Suites

Project Description: The Home2Suites project is for a proposed hotel construction project in the City of Menifee. Project site is a developed shopping mall and parking lot.

ATTACHMENT C:

LETTER OF RESPONSE FROM THE NATIVE AMERICAN HERITAGE COMMISSION
AND
NATIVE AMERICAN CONTACT LIST

[PENDING AS OF NOVEMBER 3, 2023]

Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Acoustical Analysis Report for Home2Suites Menifee

Prepared for:
Rick Engineering Company
Attention: Brooke Peterson
5620 Friars Road
San Diego, California 92110
Phone: 619-291-0707

Prepared by:
Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025
Phone: 760-738-5570
info@eilarassociates.com

Job # S230903

October 11, 2023

Table of Contents

Figures

Appendices

1.0 Executive Summary

The proposed project, Home2Suites Menifee, consists of the construction of a new four-story hotel to contain 106 hotel rooms. The project site is located at 30141 Antelope Road in the City of Menifee, California.

The City of Menifee requires that noise levels from project-generated sources, such as site operations and rooftop HVAC, be controlled at residential receivers. Calculations show that, as currently designed, exterior noise levels from the rooftop equipment and activity in outdoor use areas are expected to meet the applicable noise limits defined by the City of Menifee at all surrounding residential receivers. No mitigation is deemed necessary to attenuate project-generated noise impacts at neighboring receivers. Project-generated traffic noise is also expected to be less than significant.

The City of Menifee does not provide property line noise limits for temporary construction activity at surrounding noise-sensitive property lines. However, the general good practice construction noise control methods listed herein should be followed, as a courtesy to surrounding properties. With operating hours being limited to those allowable in the City of Menifee and standard good practice construction noise control measures being followed, temporary construction noise and vibration are expected to be less than significant.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts are summarized in Section 5.3.

2.0 Introduction

This acoustical analysis report is submitted to satisfy the noise requirements of the City of Menifee and the State of California. Its purpose is to assess potential project-related noise sources, such as site operations (mechanical equipment, activity in outdoor areas, and project-generated traffic) and temporary construction noise. This analysis aims to determine if additional project design features are necessary and feasible to reduce these impacts to comply with the applicable noise regulations of the City of Menifee. Potential impacts will also be assessed for significance per the California Environmental Quality Act (CEQA).

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated "dBA," to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol "L_{EQ}." Unless a different time period is specified, "L_{EQ}" is implied to mean a period of one hour. Some of the data may also be presented as octave-band-filtered and/or 1/3-octave-band-filtered data, which are a series of sound spectra centered about each stated frequency, with half of the bandwidth above and half of the bandwidth below each stated frequency. This data is typically used for machinery noise analysis and barrier calculations.

Sound pressure is the actual noise experienced by a human or registered by a sound level instrument. When sound pressure is used to describe a noise source, the distance from the noise source must be specified in order to provide complete information. Sound power, on the other hand, is a specialized analytical metric used to provide information without the distance requirement, but it may be used to calculate the sound pressure at any desired distance.

2.1 Project Description

The proposed project, Home2Suites Menifee, consists of the construction of a new four-story hotel to contain 106 hotel rooms. The project will also incorporate outdoor use areas, such as a pool deck, BBQ area, and outdoor seating area. According to the project proponent, no outdoor events will occur on site. For additional project details, please refer to the project plans, provided in Appendix A.

2.2 Project Location

The subject property is located at 30141 Antelope Road in the City of Menifee, California. The Assessor's Parcel Number (APN) for the site is 364-010-015. The site is currently occupied by a parking lot, to be demolished. The site is surrounded by residential uses to the east (across Antelope Road) and commercial uses to the north, and is bounded by Interstate 215 along the western boundary of the project site. For a graphical representation of the site, please refer to the Vicinity Map, Assessor's Parcel Map, and Satellite Aerial Photograph, provided as Figures 1 through 3, respectively.

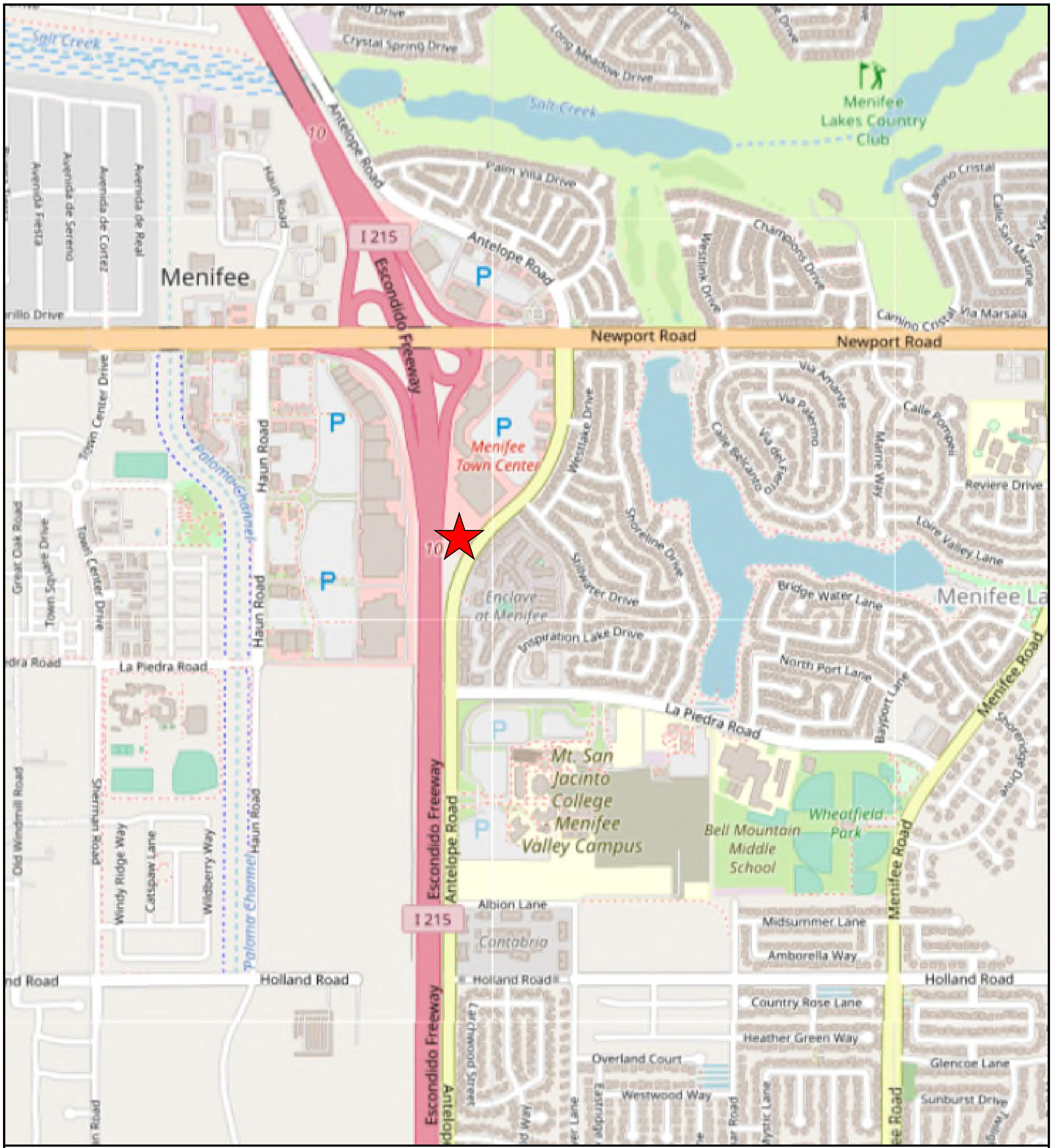
2.3 Applicable Noise Regulations

The City of Menifee requires that noise levels from project-generated sources, such as activity at outdoor use areas and rooftop HVAC, be controlled at residential receivers. According to Table N-1 of the City of Menifee Noise Element to the General Plan, exterior noise levels at residential land uses should not exceed 65 dBA L_{EQ} (10-minute) during the daytime hours of 7 a.m. to 10 p.m. and should not exceed 45 dBA L_{EQ} (10-minute) during the nighttime hours of 10 p.m. to 7 a.m. For a worst-case analysis, the nighttime noise limit of 45 dBA L_{EQ} (10-minute) was applied to adjacent residential receivers.

Additionally, noise impacts resulting from project-generated traffic were evaluated. A significant direct impact occurs when project traffic combines with existing traffic and causes a doubling of sound energy, which is an increase of 3 dB. This threshold of significance was applied to determine whether project-generated noise impacts would have a significant impact on off-site receivers.

The City of Menifee regulates construction noise by limiting the hours of operation. According to Section 8.01.010 of the City of Menifee Municipal Code, construction activities shall be limited to 6:30 a.m. to 7:00 p.m., Monday through Saturday. There shall be no construction activity on Sundays or nationally recognized holidays. Though the City of Menifee does not give a quantitative noise limit for construction noise, a typically acceptable threshold for temporary construction noise impacts is an hourly average noise level of 75 dBA L_{EQ} or less at surrounding residential properties, which was applied for this project. For reference, a 75 dBA L_{EQ} noise level limit is applied for construction activities in both the City of San Diego (75 dBA L_{EQ} 12-hour average) and County of San Diego (75 dBA L_{EQ} 8-hour average) (see references). Commercial properties are not generally considered to be noise-sensitive receivers. Therefore, a 75 dBA construction noise limit was applied to residential properties surrounding the project.

Pertinent sections of the City of Menifee Noise Element to the General Plan and Municipal Code are provided as Appendix B.



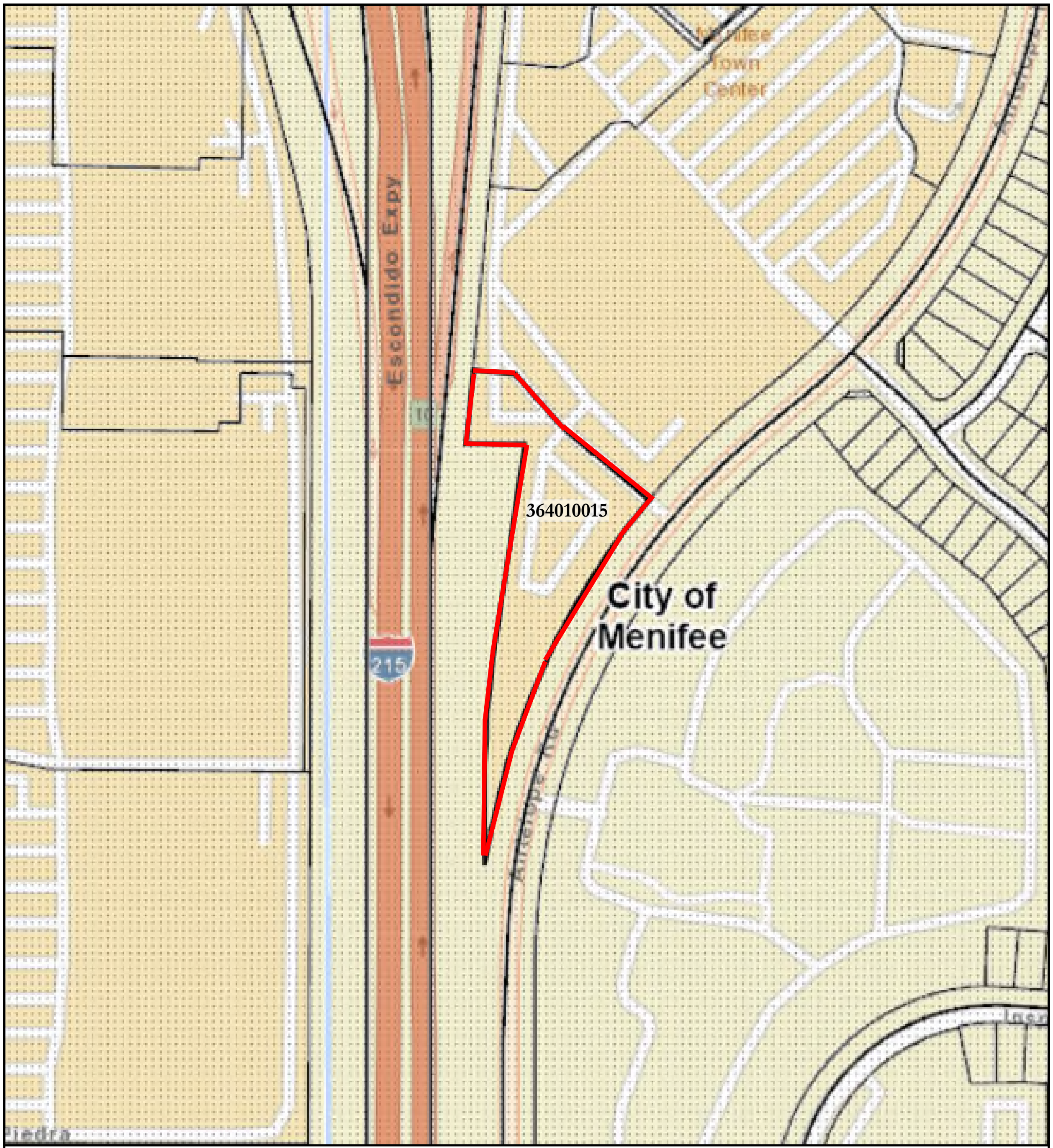
Source: Open Street Map, 2023.

★ Project Location

Figure 1.

Vicinity Map

Job # S230903



Source: Riverside County Assessor, 2023.

🟥 Project Location

Figure 2.

Assessor's Parcel Map

Job # S230903

Source: Google Earth Pro, 2023.

⊗ Noise Measurement Location

☐ Project Location

Figure 3.

Satellite Aerial Photograph

3.0 Environmental Setting

3.1 Existing Noise Environment

An on-site inspection and long-term noise measurements were made beginning the afternoon of Thursday, October 5, 2023 and running through the afternoon of Friday, October 6, 2023. The purpose of these measurements was to obtain information regarding existing ambient noise levels on site. The noise measurement performed is expected to be representative of the typical noise exposure on site (NML 1) and at off-site receivers (NML 2), and encompasses the primary source of noise, which is traffic noise. Two noise level monitors were placed on site. The first sound level meter (NML 1) was placed at approximately 143 feet west of the Antelope Road centerline and approximately 429 feet north of the southern boundary of the project site; noise levels measured at NML 1 are expected to be representative of ambient noise impacts at proposed building facades. The second sound level meter (NML 2) was placed at approximately 55 feet east of the Antelope Road centerline and approximately 345 feet north of the southern boundary of the project site; noise levels measured at NML 2 are expected to be representative of ambient noise impacts at the nearest residential receivers to the east of the project site.

Each meter was placed at a height of approximately four feet above ground level, where each was placed in a bush for security purposes. Noise data obtained on site is shown in Table 1, and the measurement locations are shown graphically in Figure 3.

Table 1. Long-Term Measured Noise Levels on Site

Date	Time	Hourly Average Noise Level (dBA L_{EQ})	
		NML 1	NML 2
October 5, 2023	4 p.m. – 5 p.m.	76.0	75.6
	5 p.m. – 6 p.m.	75.5	75.4
	6 p.m. – 7 p.m.	76.0	75.3
	7 p.m. – 8 p.m.	75.6	74.3
	8 p.m. – 9 p.m.	74.4	75.4
	9 p.m. – 10 p.m.	71.4	74.3
	10 p.m. – 11 p.m.	64.8	76.5
	11 p.m. – 12 a.m.	64.8	77.1
October 6, 2023	12 a.m. – 1 a.m.	67.1	76.0
	1 a.m. – 2 a.m.	69.9	68.3
	2 a.m. – 3 a.m.	69.5	66.6
	3 a.m. – 4 a.m.	71.4	69.3
	4 a.m. – 5 a.m.	73.9	72.5
	5 a.m. – 6 a.m.	75.9	74.9

Table 1. Long-Term Measured Noise Levels on Site

Date	Time	Hourly Average Noise Level (dBA L_{EQ})	
		NML 1	NML 2
October 6, 2023	6 a.m. – 7 a.m.	77.5	75.9
	7 a.m. – 8 a.m.	77.7	77.3
	8 a.m. – 9 a.m.	77.0	76.5
	9 a.m. – 10 a.m.	76.7	74.7
	10 a.m. – 11 a.m.	76.3	76.8
	11 a.m. – 12 p.m.	76.1	77.0
	12 p.m. – 1 p.m.	76.3	74.3
	1 p.m. – 2 p.m.	75.6	74.6
	2 p.m. – 3 p.m.	76.0	74.9
	3 p.m. – 4 p.m.	75.9	75.1

Measured noise levels at NML 1 were observed to range from a minimum of 64.8 dBA between the hours of 10 p.m. and 11 p.m. on October 5, 2023 to a maximum of 77.7 dBA between 7 a.m. and 8 a.m. on October 6, 2023. Measured noise levels at NML 2 were observed to range from a minimum of 66.6 dBA between the hours of 2 a.m. and 3 a.m. on October 6, 2023 to a maximum of 77.3 dBA between 7 a.m. and 8 a.m. on October 6, 2023. The minimum 10-minute average noise level measured at NML 2 was observed to be 65.8 dBA $L_{EQ\ (10\text{-minute})}$, measured between 1:40 p.m. and 1:49 p.m. on October 5, 2023; this 10-minute average was used to compare project-generated noise levels and existing ambient noise levels (see Section 5.3).

3.2 Future Noise Environment

3.2.1 Operational Noise Sources

The future noise environment in the vicinity of the project site will be primarily a result of the same ambient noise sources, as well as the noise generated by activity on the project site. The primary sources of noise associated with the project site will be the proposed rooftop HVAC equipment, activity in outdoor use areas, and project-generated traffic (see Section 3.2.2).

Mechanical plans are not currently available for this project; however, according to the project proponent, the hotel is expected to be served by six five-ton rooftop HVAC units in addition to PTAC units at each hotel room. As PTAC units are not expected to generate significant levels of noise, only the rooftop HVAC units were included in this analysis. The rooftop HVAC units were evaluated to be the 5-ton 25HBC5 unit manufactured by Carrier, which is expected to have noise levels comparable to the rooftop units that will be used on site. Noise level data for these units was provided by the manufacturer in the form of A-weighted octave band and overall sound power levels; however, as the octave band sound levels given by the manufacturer do not add up to the overall sound power level, the octave band levels were adjusted to add up to the overall sound power level of 73 dBA. The sound power level data for the proposed evaluated HVAC units is shown in Table 2. Please refer to Appendix C for additional information.

Table 2. Sound Power Levels of HVAC Equipment

Source	Sound Power at Octave Band Frequency (dBA)							Total (dBA)
	125	250	500	1K	2K	4K	8K	
Carrier 25HBC5 (5-ton)	60	64	66	68	65	62	58	73

Project plans show that proposed outdoor use areas will include a pool deck, BBQ area, and outdoor seating area (located along the western building facade, south of the hotel lobby). According to the project proponent, no outdoor events will be hosted on site, and outdoor use areas will only be used by hotel guests. Based on the seating furniture shown in plans and professional experience, it was assumed that a maximum of 21 people will be seated on the pool deck, 10 people will be swimming in the pool, 12 people will be located in the BBQ area, and 44 people will be seated in the outdoor seating area. Therefore, 87 people at the maximum are expected to be using the outdoor use spaces at any given time. Sources were modeled at a height of 3.5 feet above the ground level to account for the average height of a seated person.

In order to approximate noise levels of persons gathered in the outdoor use areas of the project, measurements shown in *Speech Levels in Various Noise Environments* (see reference) were used. This study shows noise levels of speech for both males and females for five different vocal efforts: casual, normal, raised, loud, and shout. Measurements for "raised" voices were considered to be appropriate for this analysis, as outdoor use areas will only be used casually by hotel guests. Although a person may occasionally elevate his/her voice beyond the "raised" level, performing calculations assuming all raised voices is expected to account for the occasional loud individual combined with individuals speaking at a normal conversational level. According to this study, at a distance of 3.28 feet, an average male will generate a noise level of approximately 65 dBA when speaking with a raised voice, while an average female will generate a noise level of approximately 63 dBA when speaking with a raised voice.

Operational noise levels were calculated for the project site using the above information. Results of this analysis are provided in Section 5.1.1.

3.2.2 Project-Generated Traffic

Project-generated traffic volumes for this project were provided by Rick Engineering. Based on this information, the project site is expected to generate approximately 466 Average Daily Trips (ADT). Project-generated traffic volumes were compared to existing traffic volumes on Antelope Road. Though exact traffic volumes of Antelope Road were not available to the undersigned, the LOS C traffic volume was used. According to the City of Menifee LOS Traffic Study Guidelines (see reference), a Major roadway such as Antelope Road is expected to carry an LOS C volume of 27,300 ADT. This traffic information was incorporated into the analysis to determine worst-case noise exposure at surrounding receivers. Please refer to Section 5.1.2 for the results of this analysis.

3.2.3 Temporary Construction Equipment

During permissible hours of operation, the City of Menifee does not give quantitative noise limits for construction noise. However, noise impacts from construction equipment were evaluated to determine if the construction noise levels would meet the generally accepted construction noise limit of 75 dBA. Based on communication with the project proponent, the site construction will consist of the following phases: demolition/grading/compaction, building construction/utilities, and paving.

The equipment listed in Table 3 is typical of what is expected to be used on site based on the information provided by the project proponent and professional experience. Construction equipment noise levels were obtained from the Department for Environment, Food & Rural Affairs (DEFRA), which compare well with noise measurement results of construction equipment performed by Eilar Associates for other similar projects. Information on the anticipated equipment duty cycles was obtained from the Federal Highway Administration (see references).

Table 3. Anticipated Construction Activity and Equipment Noise Levels

Equipment	Duty Cycle (%)[1]	Noise Level at 50 feet (dBA)[2]	Activity Stage(s)
Backhoe	40	65	Demolition/Grading/Compaction
Bulldozer	40	76	Demolition/Grading/Compaction
Concrete Mixer Truck	40	72	Building Construction/Utilities
Concrete Pump Truck	20	74	Building Construction/Utilities
Dump Truck	40	77	Demolition/Grading/Compaction
Excavator	40	78	Demolition/Grading/Compaction and Building Construction/Utilities
Forklift	40	67	Building Construction/Utilities
Paver	50	73	Paving
Water Truck	40	72	Demolition/Grading/Compaction
Vibratory Roller	20	76	Demolition/Grading/Compaction and Paving

[1] Duty cycle information was provided by the Federal Highway Administration.

[2] Noise level information was provided by UK Department for Environment, Food and Rural Affairs. The noise level at 50 feet was calculated using simple distance attenuation based on the reference levels obtained from DEFRA which are given at a distance of 10 meters (approximately 32.8 feet).

4.0 Methodology and Equipment

4.1 Methodology

4.1.1 CadnaA Noise Modeling Software

Modeling of the outdoor noise environment is accomplished using CadnaA Version 2023, which is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA (Computer Aided Noise Abatement) assists in the calculation, presentation, assessment, and alleviation of noise exposure. It allows for the input of project information such as noise source data, barriers, structures, and topography to create a detailed model and uses the most up-to-date calculation standards to predict outdoor noise impacts. Noise standards used by CadnaA that are particularly relevant to this analysis include ISO 9613-2 (Attenuation of sound during propagation outdoors). CadnaA provides results that are in line with basic acoustical calculations for distance attenuation and barrier insertion loss.

4.1.2 Formulas and Calculations

Project-Generated Traffic Noise Impacts

Changes in traffic noise levels can be predicted by inputting the ratio of the two scenarios into the following logarithmic equation:

$$\Delta = 10\log\left(V_2/V_1\right)$$

where: Δ= Change in sound energy,
V_1 = original or existing traffic volume, and
V_2 = future or cumulative traffic volume.

Distance Attenuation of Airborne Noise

Attenuation of airborne noise due to distance is calculated by the equation:

$$SPL_2 = SPL_1 - 20\log\left(D_2/D_1\right)$$

where SPL_1 = Known sound pressure level at known distance,
SPL_2 = Calculated sound pressure level at distance,
D_1 = Distance from source to location of known sound pressure level, and
D_2 = Distance from source to location of calculated sound pressure level.

This is identical to the more commonly used reference of 6 dB reduction for every doubling of distance. This equation does not take into account reduction in noise due to atmospheric absorption.

Hourly L_{EQ} Summation

To determine the hourly average noise levels (L_{EQ}) when the noise is created for less than the full hour, convert the logarithm values to the base energy value, multiply by the percentage of the hour that the noise occurs, and then convert the sum back to a logarithmic value. This is done with the following formula:

$$L_{EQ} = 10\log\left(P_H \times 10^{L_P/10}\right)$$

where P_H = the percent or fraction of the hour noise is created (duty cycle), and
L_P = the partial hour noise level (dB).

Decibel Addition

To determine the combined logarithmic level of known vibration or noise source levels, the values are converted to the base values, added together, and then converted back to the final logarithmic value, using the following formula:

$$L_C = 10\log\left(10^{L_1/10} + 10^{L_2/10} + 10^{L_N/10}\right)$$

where L_C = the combined noise or vibration level (dB), and
L_N = the individual noise or vibration sources (dB).

Attenuation of Vibration Due to Distance

Construction vibration impact calculations were conducted using formulas recommended by the Federal Transit Authority *Transit Noise and Vibration Assessment Manual* (see reference). Section 7.2 of this document provides the following equations for determining vibration impacts at a specified distance:

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

where PPV_{equip} is the peak particle velocity (in inches per second) of the equipment, adjusted for distance, PPV_{ref} is the reference vibration level (in inches per second) at a distance of 25 feet from the equipment, and D is the distance from the equipment to the receiver.

4.2 Measurement Equipment

Some or all of the following equipment was used at the site to measure existing noise levels:

- Soft dB Model Piccolo II Type 2 Sound Level Meter, Serial # P020043008 and P0223031601
- Larson Davis Model CA200 Type 1 Calibrator, Serial # 19178

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterward to ensure accuracy. All sound level measurements presented in this report, in accordance with the regulations, were conducted using a sound level meter that conforms to the American National Standards Institute specifications for sound level meters (ANSI S1.4). All instruments are maintained with National Institute of Standards and Technology (NIST) traceable calibration, per the manufacturers' standards.

5.0 Noise Impacts

5.1 Permanent Project-Generated Noise Impacts

5.1.1 Mechanical Equipment and Activity in Outdoor Use Areas

Noise levels of the proposed rooftop HVAC equipment and activity in outdoor use areas were calculated using CadnaA at the nearest residential property to the east (across Antelope Road). All other noise-sensitive receivers are located at a further distance from the equipment, and therefore are expected to have lower noise levels, due to distance attenuation and shielding from intervening structures. As per industry standard, the receivers were calculated at a height of five feet above project grade to represent the height of an average individual's ears above ground level.

This calculation also makes conservative assumptions in that it was assumed that the rooftop HVAC equipment would be running constantly, though it is expected to cycle on and off throughout the day and night. Although City noise limits would only be applicable to stationary noise sources, noise generated by people in outdoor use areas was also included for a worst-case assessment of noise impacts at off-site receivers. As detailed in Section 3.2.1 herein, it was assumed that 87 people at a maximum are expected to be using the outdoor use spaces at any given time. All guest noise sources were calculated as point sources with an equal distribution of raised voices, with half of the voices modeled as female and the other half modeled as male. Each person was modeled as speaking using a "raised" vocal effort for 40 percent of the time (a maximum of 4 minutes per 10-minute period), which is considered excessive as each patron is expected to take breaks in conversation for listening, eating, and drinking. For this reason, this analysis is considered to be a conservative estimate of noise levels generated at outdoor use areas, and accounts for occasional bursts of louder noise combined with times of lesser noise. Sources were modeled at a height of 3.5 feet above the ground level to account for the average height of a seated person.

This analysis considers noise shielding provided by the proposed on-site building; however, it does not consider shielding provided by the existing property line CMU walls at residential receivers to the east, which is expected to provide further noise reduction to residential receivers. Results of the analysis are shown in Table 4. Noise contours showing average project-generated noise levels and receiver locations are shown in Figure 4. Noise source locations are shown in Figure 5. Additional information can be found in Appendix D: CadnaA Analysis Data and Results.

Table 4. Project-Generated Noise Levels at Nearest Residential Property Line

Receiver	Location	Nighttime Noise Limit (dBA $L_{EQ\ (10\text{-minute})}$)	Project-Generated Noise Level (dBA $L_{EQ\ (10\text{-minute})}$)
R1	Residential – East (across Antelope Road)	45	41.5

As shown above, as currently designed, the 10-minute average noise levels from the on-site operations will be in compliance with City of Menifee nighttime noise limits at all surrounding residential receivers. For this reason, no project design features are deemed necessary to control project-generated noise impacts from mechanical equipment or activity in outdoor use areas.

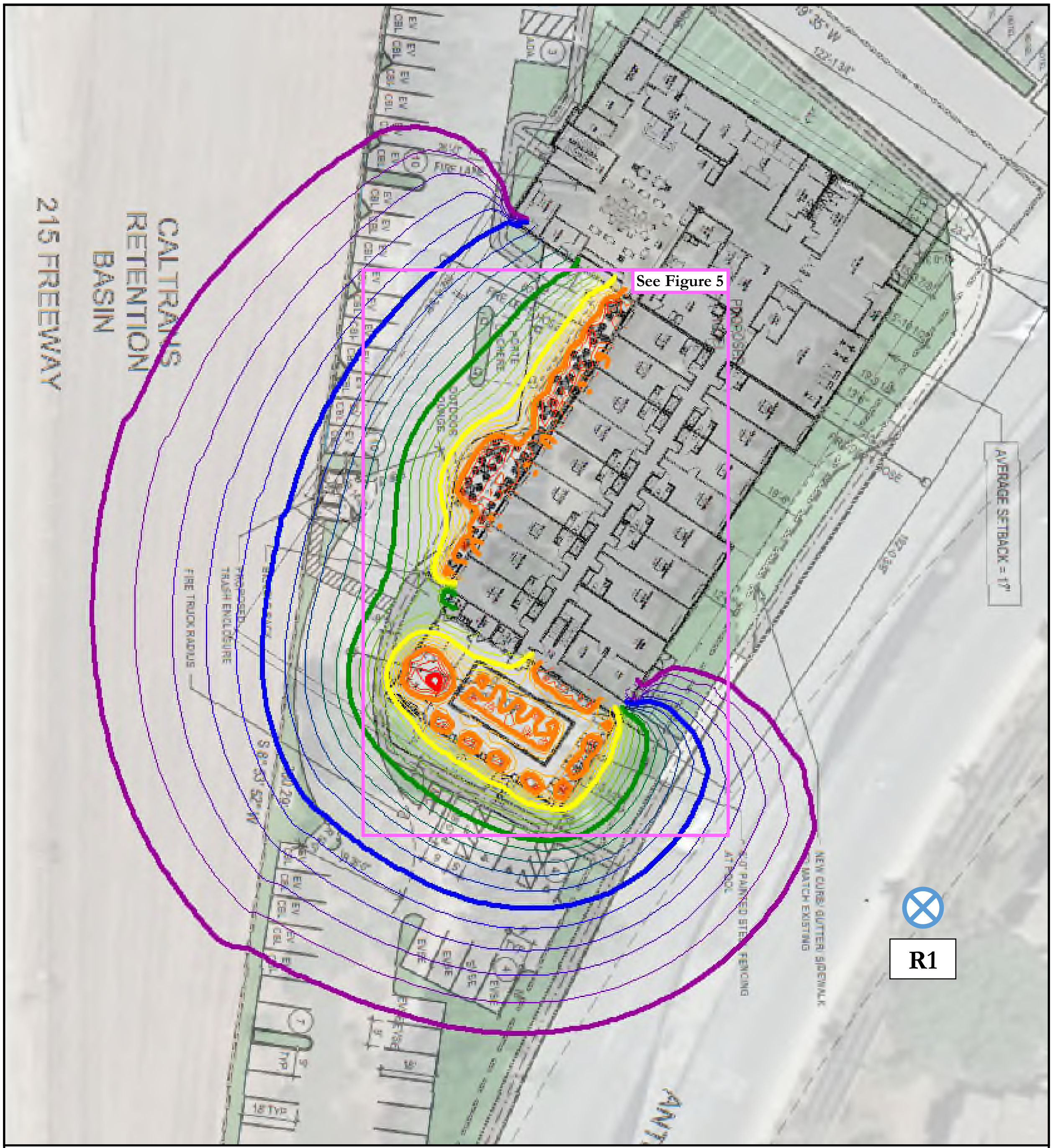
5.1.2 Project-Generated Traffic Noise

As detailed in Section 3.2.2, project-generated traffic impacts were evaluated to determine whether noise impacts from the project site would be significant. Calculations were performed using the formula shown in Section 4.1.2 to determine the approximate change in noise levels as a result of project-generated traffic. A significant direct impact occurs when project traffic combines with existing traffic and causes a doubling of sound energy, which is an increase of 3 dB. Direct impacts were assessed by comparing the traffic volume of Antelope Road with project-generated traffic volumes using the calculation methodology in the CadnaA traffic noise model. Project-generated traffic noise increases are shown in Table 5.

Table 5. Anticipated Traffic Noise Level Increase due to Project-Generated Traffic

Traffic Volume (ADT)			Increase in Traffic Noise Level (dB)
Antelope Road	Project-Generated	Total	
27,300	466	27,766	0.1

As shown in Table 5, the noise level increase from project-generated traffic is expected to be less than 3 dB. For this reason, project-generated traffic noise levels are expected to be less than significant.



Source: NOAA Group, Google Earth Pro, 2023.

🟪 ≥ 45 dB	🟨 ≥ 60 dB
🟦 ≥ 50 dB	🟧 ≥ 65 dB
🟩 ≥ 55 dB	🟥 ≥ 70 dB

Figure 4.

Permanent Project-Generated Noise Contours

Job # S230903

Source: *NOAA Group, Google Earth Pro, 2023*

🔵 Person in Outdoor Use Area
🟢 Rooftop HVAC Equipment

Figure 5.

Project-Generated Noise Source Locations

Job # S230903

5.2 Temporary Construction Noise Impacts

The City of Menifee Municipal Code states that construction activities shall be limited to 6:30 a.m. to 7:00 p.m., Monday through Saturday; there shall be no construction activity on Sundays or nationally recognized holidays. Though the City of Menifee does not give a quantitative noise limit for construction noise, a typically acceptable noise limit of 75 dBA L_{EQ} or less at surrounding residential properties was applied for this project.

Construction noise levels were calculated using the information presented in Section 3.2.3 at the nearest residential receivers to the east. Construction equipment was evaluated as being located near the center of the proposed building footprint, to account for the average equipment location as it moves around on site. Any other potentially noise-sensitive receivers are located at a greater distance from construction activity, and therefore would be exposed to lesser noise impacts due to distance attenuation and shielding provided by intervening structures. Additionally, noise calculations consider typical duty cycles of equipment, to account for periods of activity and inactivity on the site. Noise levels for each phase of construction are shown in Table 6. Detailed calculations are provided in Appendix E, and graphics showing construction noise source and receiver locations are provided as Figure 6.

Table 6. Temporary Construction Noise Levels at Nearest Residential Receiver

Activity Stage	Equipment	Construction Noise Level (dBA L_{EQ})
Demolition/Grading/Compaction	Backhoe, Bulldozer, Dump Truck, Excavator, Water Truck, Vibratory Roller	68.6
Building Construction/Utilities	Concrete Mixer Truck, Concrete Pump Truck, Excavator, Forklift	65.6
Paving	Paver, Vibratory Roller	62.3

As shown above, construction noise levels are not expected to exceed the typically acceptable construction noise threshold of 75 dBA L_{EQ}. Any other surrounding otherwise noise-sensitive receivers are located at a greater distance from proposed construction activity, and therefore will be exposed to lesser noise impacts due to additional distance attenuation and shielding provided by intervening structures.

Despite the fact that noise impacts are expected to remain in compliance with typically accepted construction noise limits, the following “good practice” measures should still be practiced as a courtesy to off-site receivers.

1. Turn off equipment when not in use.
2. Limit the use of enunciators or public address systems, except for emergency notifications.
3. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured to prevent rattling and banging.
4. Schedule work to avoid simultaneous construction activities where both are generating high noise levels.
5. Use equipment with effective mufflers.
6. Minimize the use of backup alarms.

Source: NOAA Group, Google Earth Pro, 2023.

⊗ Receiver Location

● Construction Equipment Location

Figure 6.

Construction Noise Source and Receiver Locations

Job # S230903

With operating hours limited to those permitted by the City of Menifee and adherence to the general good practice construction noise control techniques, temporary construction noise impacts are expected to be less than significant at surrounding properties.

5.3 CEQA Significance Determination

Noise impacts from the project site are summarized below and classified per the noise portion of the CEQA Environmental Checklist Form. This list summarizes conclusions made within the report and classifies the level of significance as: Potentially Significant Impact, Less than Significant with Mitigation Incorporated, Less than Significant Impact, or No Impact. *Italics* are used to denote language from the CEQA Environmental Checklist Form.

XIII. NOISE — Would the project result in:

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?

Less Than Significant Impact. Operational noise impacts calculated in Section 5.1.1 are not expected to generate a substantial permanent increase in ambient noise levels in the vicinity of the project site. A substantial increase would be considered an increase of three decibels or more, which would represent a doubling of sound energy. The minimum 10-minute average ambient noise level measured near residential receivers (65.8 dBA at NML 2) was combined with the project-generated noise impacts to determine the cumulative noise impact and the increase in ambient noise levels at residential receivers resulting project operations. Results are shown in Table 7.

Table 7. Calculated Cumulative Noise Impacts at Nearest Residential Receiver

Receiver Number	Receiver Location	Noise Level (dBA $L_{EQ\ (10\text{-minute})}$)				Impact
		Ambient	Project-Generated	Cumulative	Ambient Increase	
R1	Residential – East (across Antelope Road)	65.8	41.5	65.8	< 0.1	Less than Significant

The results in Table 7 demonstrate that the increase in ambient noise levels from on-site operations (including roof-mounted HVAC equipment and people in outdoor use areas) will be less than 3 dBA. Additionally, as demonstrated in Section 5.1.2 of this report, noise impacts from project-generated traffic are not expected to cause a significant direct increase on any surrounding roadway. This impact is also considered to be less than significant.

As shown in Section 5.4 of this report, noise from temporary construction is expected to be less than significant considering a typical construction schedule and assuming that equipment is maintained in proper operating condition and using appropriate mufflers. Additionally, no construction activity may take place during the more sensitive nighttime hours when ambient noise levels tend to be lower, as per City of Menifee requirements. For these reasons, this impact is deemed to be less than significant.

As demonstrated above, the project is not expected to cause a substantial permanent or temporary increase in ambient noise levels, and therefore, this impact can be classified as less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The Demolition/Grading/Compaction and Paving stages of construction have the potential to generate the highest vibration levels of any phase of construction, as activities would take place closest to sensitive receivers and may consist of the use of a vibratory roller. According to the Federal Transit Administration Transit Noise and Vibration Assessment Manual (see reference), a vibratory roller generates a peak particle velocity (PPV) of approximately 0.210 inches/second at a distance of 25 feet from equipment. The evaluation of an impact's significance can be determined by reviewing both the likelihood of annoyance to individuals as well as the potential for damage to existing structures. According to the Caltrans Transportation and Construction Vibration Guidance Manual (see reference), the appropriate threshold for damage to modern residential structures is a PPV of 0.5 inches/second. Annoyance is assessed based on levels of perception, with a PPV of 0.01 being considered "barely perceptible," 0.04 inches/second as "distinctly perceptible," 0.1 inches/second as "strongly perceptible," and 0.4 inches/second as "severe."

The vibratory roller is expected to be used closest to adjacent receivers when the vibratory roller is used along the eastern boundary of the project site, which is located approximately 110 feet from the nearest residential property line. At this distance, the PPV would be approximately 0.02 inches/second, which falls well below the building damage PPV criteria of 0.5 inches/second. At this distance, vibration levels would be classified as being between "barely perceptible" and "distinctly perceptible," and would be reduced to less than "barely perceptible" at a distance of 185 feet from receivers. As construction vibration is not anticipated to cause damage to off-site buildings and will only exceed the threshold of "barely perceptible" vibration for a short period of time when work is performed near the eastern boundary of the property, it is the opinion of the undersigned that temporary construction vibration impacts would not be "excessive" and therefore are less than significant.

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?

No Impact. The project site is not located within two miles of any public airport or public use airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels from such uses.

6.0 Conclusion

Calculations show that, as currently designed, exterior noise levels from the rooftop equipment and activity in outdoor use areas are expected to meet the applicable noise limits defined by the City of Menifee at all surrounding residential receivers. No mitigation is deemed necessary to attenuate project-generated noise impacts at neighboring receivers. Project-generated traffic noise is also expected to be less than significant.

The City of Menifee does not provide property line noise limits for temporary construction activity at surrounding noise-sensitive property lines. However, the general good practice construction noise control methods listed herein should be followed, as a courtesy to surrounding properties. With operating hours being limited to those allowable in the City of Menifee and standard good practice construction noise control measures being followed, temporary construction noise and vibration are expected to be less than significant.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts are summarized in Section 5.3.

7.0 Certification

All recommendations for noise control are based on the best information available at the time our consulting services are provided. However, as there are many factors involved in sound transmission, and Eilar Associates has no control over the construction, workmanship, or materials, Eilar Associates is specifically not liable for final results of any recommendations or implementation of the recommendations.

This report is based on the related project information received and measured noise levels and represents a true and factual analysis of the acoustical impact issues associated with the Home2Suites Menifee project, located at 30141 Antelope Road in the City of Menifee, California. This report was prepared by Mo Ouwenga and Amy Hool.

M J Ouwenga

Mo Ouwenga, INCE
Acoustical Consultant

Amy Hool, INCE
President/CEO

8.0 References

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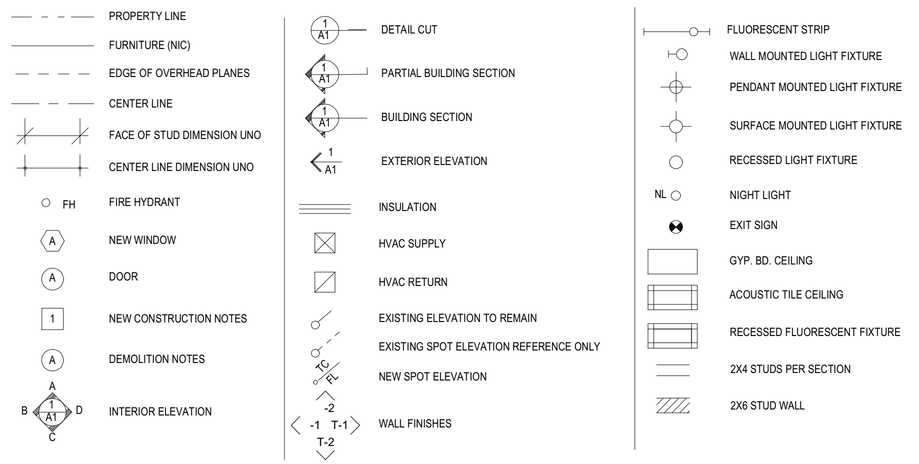
Appendix A

Project Plans

DRAWING SYMBOLS



ABBREVIATIONS

@	AT
AC	ASPHALTIC CONCRETE
AC UNIT	AIR CONDITIONING UNIT
ADJ	ADJUSTABLE
ALUM	ALUMINUM
ASTM	AMERICAN SOCIETY OF TESTING MATERIAL
BR	BEDROOM
BLK	BLOCK OR BLOCKING
BLDG	BUILDING
BM	BEAM
BN	BOUNDRY NAIL
BU ROOF	BUILT UP ROOF
CAB	CABINET
CB	COLUMN BASE
CC	COLUMN CAB
CFM	CUBIC FEET/MINUTE
CI	CAST IRON
CJ	CEILING JOIST OR CONTROL JOINT
CLG	CEILING
CL	CLOSET
CLR	CLEAR
C	CENTER LINE
CMU	CONCRETE MASONARY UNIT
CO	CLEAN OUT
CW	COLD WATER
COL	COLUMN
CONC	CONCRETE
CONTIN	CONTINUOUS
CT	CERAMIC TILE
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CU YD	CUBIC YARD
D	DRYER
DG	DECOMPOSED GRANITE
DIA OR	DIAMETER
DR	DINING ROOM
DN	DOWN
DS	DOWNSPOUT
DBL	DOUBLE
DRWG	DRAWING
EA	EACH
ELECT	ELECTRICAL
ELEV	ELEVATION
EN	EDGE NAIL
EQ	EQUAL
ETC	ET CETRA
EXT	EXTERIOR
EXIST'G OR (E)	EXISTING
FAU	FORCED AIR UNIT
FND	FOUNDATION
FIN FL	FINISH FLOOR
FIN	FINISH
FIN GR	FINISH GRADE
FJ	FLOOR JOIST
FL	FLOW LINE
FLR	FLOOR
FL HDR	FLUSH HEADER
FN	FIELD NAIL
FIX GL	FIXED GLASS
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONARY
FOS	FACE OF STUD
FTG	FOOTING
GA	GAUGE
GAR	GARAGE
GI	GALVANIZED IRON
GLU-LAM	GLUE LAMINATED BEAM
GL	GLASS
GFI	GROUND FAULT INTERCEPTOR
GR	GRADE
GYP BD	GYPSUM BOARD
HB	HOSE BIBB
HC	HANDICAPPED
HDR	HEADER
HDWD	HARDWOOD
HD	HOLD DOWN
HP	HEAT PUMP
HT	HEIGHT
HW	HOT WATER
HORIZ	HORIZONTAL
HR	HOUR
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
JST	JOIST
KIT	KITCHEN
L	
LAM	LAMINATED
LS	LANDSCAPE
LAV	LAVATORY
LAUND	LAUNDRY
LB	POUND
	LINEN
LR	LIVING ROOM
LB	LAG BOLT
MFG	MANUFACTURER
MATL	MATERIAL
MB	MACHINE BOLT
MBR	MASTER BEDROOM
MC	MEDICINE CABINET
MAX	MAXIMUM
MECH	MECHANICAL
MO	MASONRY OPENING
MIN	MINIMUM
MTL	METAL
MTD	MOUNTED
NO OR #	NUMBER
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OC	ON CENTER
P	PANTRY
PB	POST BASE
PL	PROPERTY LINE
PL	PLATE
PLAS LAM	PLASTIC LAMINATE
PLUMB'G	PLUMBING
PLYWD	PLYWOOD
PR	PAIR
PCC	PORTLAND CEMENT CONCRETE
PSI	POUND PER SQ INCH
PSF	POUND PER SQ FOOT
PTDF	PRESSURE TREATED DOUGLAS FIR
REQ'D	REQUIRED
R	RISER
RD	ROOF DRAIN
RDWD	REDWOOD
R/CJ	ROOF/CEILING JOIST
RJ	ROOF JOIST
RS	RESAWN
REF	REFRIGERATOR
REINF	REINFORCING
RO	ROUGH OPENING
RM	ROOM
SC	SOLID CORE
SD	SMOKE DETECTOR
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SHWR	SHOWER
SIMP WD	"SIMPSON" HOLD DOWN
SIM	SIMILAR
S&P	SHELF AND POLE
SPEC	SPECIFICATION
SQ	SQUARE
STL	STEEL
STD	STANDARD
STOR	STORAGE
S 4 S	SURFACE FOUR SIDES
T	TREAD
T & B	TOP & BOTTOM
TEMP	TEMPERED
T & G	TONGUE AND GROOVE
THRU	THROUGH
TI	TENANT IMPROVEMENTS
TC	TOP OF CURB
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VGDF	VERTICAL GRAIN DOUGLAS FIR
VTR	VENT THROUGH ROOF
VTW	VENT THROUGH WALL
VERT	VERTICAL
W	WASHER
WAINS	WAINSCOT
WD	WOOD
WC	WATER CLOSET
WF	WIDE FLANGE
WH	WATER HEATER
WP	WATER PROOF
W/	WITH

CODE REFERENCES

THIS PROJECT SHALL COMPLY WITH THE 2022 CALIFORNIA BUILDING CODE, WHICH ADOPTS THE 2021 IBC, 2021 UMC, 2021 UPC AND THE 2017 NEC.

ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THESE CODES AND ALL APPLICABLE LOCAL ORDINANCES. THE GOVERNING CODES ARE:

- 2022 CALIFORNIA BUILDING CODE WHICH ADOPTS THE 2021 INTERNATIONAL BUILDING CODE
- 2022 CALIFORNIA MECHANICAL CODE WHICH ADOPTS THE 2021 UNIFORM MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE WHICH ADOPTS THE 2021 UNIFORM PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE WHICH ADOPTS THE 2017 NATIONAL ELECTRICAL CODE
- 2022 CALIFORNIA ENERGY CODE, AS ADOPTED AND AMENDED BY THE STATE OF CALIFORNIA
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
- 2022 CALIFORNIA FIRE CODE WHICH ADOPTS 2021 IFC
- 2022 CALIFORNIA RESIDENTIAL CODE
- NFPA 13, STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS AS AMENDED, 2018 EDITION
- NFPA 14, STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS, 2018 EDITION
- NFPA 24, STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES.

BUILDING INFORMATION

SITE ADDRESS:
30141 ANTELOPE RD.
MENIFEE, CA 92584

ACCESSORS PARCEL NO:
364-010-015

LEGAL DESCRIPTION:
2.01 ACRES IN PAR 1 PM 187/027 PM 27426 SUBDIVISIONNAME PM 27426 ACRES 002.01 LOTTYPE PARCEL PARCEL 1 RECMAPTYPE PARCEL MAP MAPPLATB 187 MAPPLATP 027

ZONING:
MENIFEE VILLAGE SPECIFIC PLAN (SP No. 158, Planning Area 2-7)
EXISTING - C-P-S (SCENIC HIGHWAY COMMERCIAL)
PROPOSED - C-P-S (SCENIC HIGHWAY COMMERCIAL)

SITE AREA:

GROSS ACREAGE:	2.01 (87,556 S.F.)
NET ACREAGE:	2.01

INTENDED OCCUPANCY / USE:
R-1 / HOTEL

DISTRICTS / UTILITIES:

SCHOOL DISTRICT:	MURRIETA VALLEY UNIFIED SCHOOL DISTRICT
WATER UTILITY:	EASTERN MUNICIPAL WATER DISTRICT
SEWER:	EASTERN MUNICIPAL WATER DISTRICT
GAS:	SOUTHERN CAL GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON
TELEPHONE:	SPECTRUM
CABLE TELEVISION:	SPECTRUM

STATEMENT OF OPERATIONS:
THE PROPOSED HOME2SUITES BY HILTON IS A 106 ROOM HOTEL. AS SUCH, IT WILL BE OPERATIONAL 365 DAYS PER YEAR, 24 HOURS A DAY, THOUGH THE STAFFING LEVELS WILL VARY ACCORDING TO THE DAY OF THE WEEK, TIME OF DAY AND NUMBER OF GUESTS. AT FULL CAPACITY, THE HOTEL WILL HAVE APPROXIMATELY 3-4 FRONT OFFICE STAFF, A MAINTENANCE PERSON, AND NUMEROUS ROOM CLEANERS. DURING THE NIGHT SHIFT THERE WILL LIKELY ONLY BE ONE OR TWO EMPLOYEES AT THE FACILITY.

NUMBER OF ROOMS / ROOM MIX:
106 ROOMS / T.B.D.

PARKING TABULATION:
80 PARKING SPACES + 26 RECIPROCAL PARKING

BUILDING HEIGHT / NUMBER OF STORIES:
53'-0" / 4 STORIES (PROPOSED INCREASED HEIGHT VIA CUP)

HEIGHT RESTRICTIONS:
NONE

BUILDING HEIGHT / NUMBER OF STORIES:
53'-0" / 4 STORIES (PROPOSED INCREASED HEIGHT VIA VARIANCE)

*** NOTES:**
- THIS PROPOSED PROJECT WILL REQUIRE A VARIANCE FOR HEIGHT AND SETBACKS.

PROTOTYPE DESIGN RESTRICTIONS:
UNKNOWN

PROPOSED SHARED FACILITIES:
PARKING ON LIVING SPACES LOT

THIS PROPOSED PROJECT WILL REQUIRE A VARIANCE FOR REDUCTION IN FRONT YARD SETBACK.
- NO PORTION OF PROPERTY IS WITHIN A HIGH FIRE SEVERITY ZONE.
- NO PORTION OF PROPERTY IS WITHIN A DESIGNATION WETLAND.

DESIGN INFORMATION

OWNER:
APOLLO V DEVELOPMENT GROUP, LLC
CONTACT: CHINTU PATEL
CHINTUPATEL@GMAIL.COM
(760) 855-8347

ARCHITECT:
NOAA GROUP
4990 N HARBOR DRIVE, SUITE 201
SAN DIEGO, CA 92106
CONTACT: JOE HOLASEK
JCH@NOAAINC.COM
(619) 507-1001

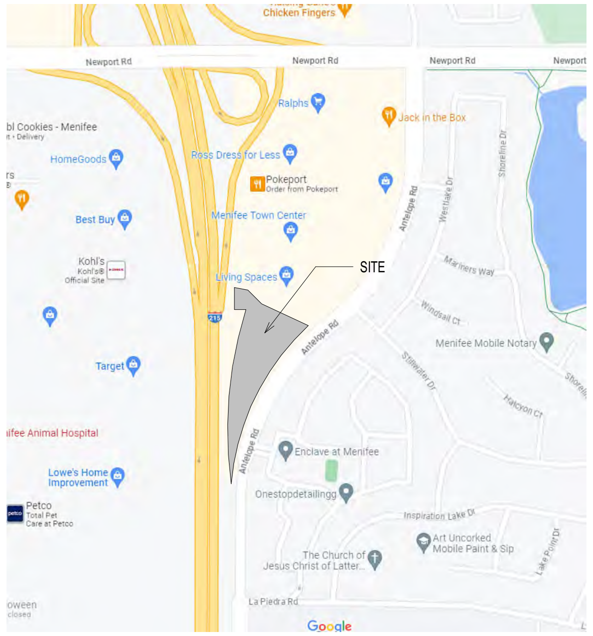
CIVIL ENGINEER:
HARIYA INC.
26121 WALLACK PLACE
LOMA LINDA, CA 92354
CONTACT: MANOJ HARIYA
MHARIYA@HARIYAINC.COM
(909) 499-8270

LANDSCAPE ARCHITECT:
GMP
3176 LIONSHEAD AVE., SUITE 102
CARLSBAD, CA 92010
CONTACT: KATIE BARRETO
KBARRETO@GMPLANDARCH.COM
(858) 558-8977

BUILDING AREA:	
BUILDING COVARAGE:	19%
POOL AREA:	2,707 S.F.

1ST FLOOR =	16,333 S.F
2ND FLOOR =	15,942 S.F.
3RD FLOOR =	15,945 S.F.
TH FLOOR =	15,950 S.F.
POOL AREA=	2,707 S.F.
FAR=	0.7

TOTAL S.F (EXCLUDING POOL AREA) = 64,170 SQ.FT.



VICINITY MAP

N.T.S.

SHEET INDEX

ARCHITECTURAL	
A-001	COVER SHEET
A-101	EXISTING SITE PLAN
A-102	PROPOSED SITE PLAN
A-111	1ST FLOOR PLAN
A-112	2ND FLOOR PLAN
A-113	3RD FLOOR PLAN
A-114	4TH FLOOR PLAN
A-115	ROOF PLAN
A-701	RENDERED ELEVATIONS
A-702	RENDERED PERSPECTIVES
CIVIL	
C-01	CONCEPTUAL GRADING PLAN
C-02	DETAILS & SECTION
C-03	STORM DRAIN PLAN
C-04	UTILITY PLAN
LANDSCAPE	
L-1	CONCEPTUAL LANDSCAPE PLAN
L-2	CONCEPTUAL LANDSCAPE PLAN
L-3	CONCEPTUAL SHADING PLAN
L-4	MAINTENANCE PLAN

NOAA
group
architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

DANUBE TALANT
No. C38946
REN 11/30/2023

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE

ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

COVER SHEET

Scale: As indicated
Sheet No:

A-001

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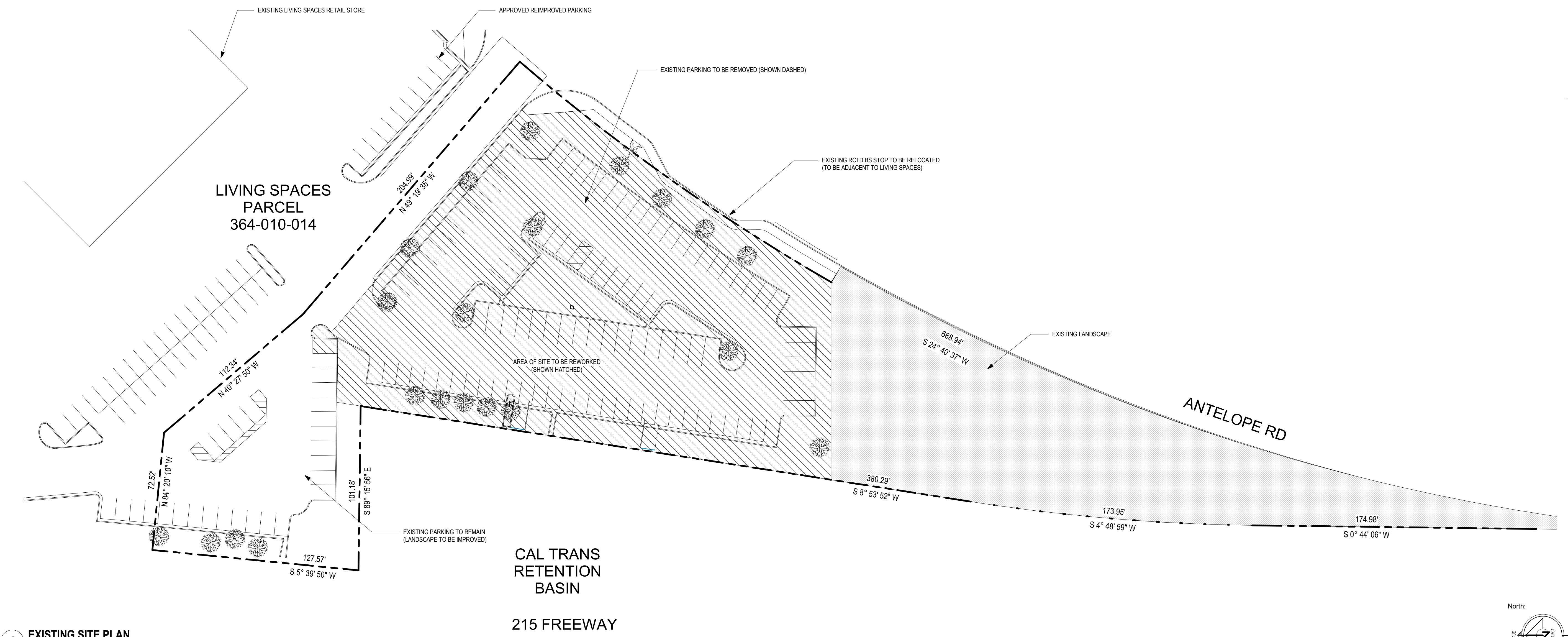

1 EXISTING SITE PLAN
Ref: A-201 / Scale: 1" = 30'-0"

North:

NOAA group architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

DANUBE TALANT
No. C38946
REN 11/30/2023

DO NOT SCALE DRAWINGS.
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HOME2SUITES MENIFEE

ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
△	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

EXISTING SITE PLAN

Scale: 1" = 30'-0"
Sheet No:

A-101

8/17/2023 10:15:30 AM

BUILDING INFORMATION

STATEMENT OF OPERATIONS:
THE PROPOSED HOME2SUITES BY HILTON IS A 106 ROOM HOTEL. AS SUCH, IT WILL BE OPERATIONAL 365 DAYS PER YEAR, 24 HOURS A DAY, THOUGH THE STAFFING LEVELS WILL VARY ACCORDING TO THE DAY OF THE WEEK, TIME OF DAY AND NUMBER OF GUESTS. AT FULL CAPACITY, THE HOTEL WILL HAVE APPROXIMATELY 3-4 FRONT OFFICE STAFF, A MAINTENANCE PERSON, AND NUMEROUS ROOM CLEANERS. DURING THE NIGHT SHIFT THERE WILL LIKELY ONLY BE ONE OR TWO EMPLOYEES AT THE FACILITY.

PARKING TABULATION:
81 PARKING SPACES + 27 RECIPROCAL PARKING

INTENDED OCCUPANCY / USE:
R-1 / HOTEL

TOTAL BUILDING SQUARE FOOTAGE:
65,463 S.F.

NUMBER OF ROOMS / ROOM MIX:
106 ROOMS / T.B.D.

SITE ADDRESS:
30141 ANTELOPE RD.
MENIFEE, CA 92584

ZONING:
MENIFEE VILLAGE SPECIFIC PLAN
EXISTING - C-P-S (SCENIC HIGHWAY COMMERCIAL)
PROPOSED - C-P-S (SCENIC HIGHWAY COMMERCIAL)

SITE ACREAGE:
2.01 ACRES
GROSS ACREAGE: 2.01
NET ACREAGE: 2.01

BUILDING HEIGHT / NUMBER OF STORIES:
53'-0" / 4 STORIES (PROPOSED INCREASED HEIGHT VIA VARIANCE)

*** NOTES:**
- THIS PROPOSED PROJECT WILL REQUIRE A VARIANCE FOR HEIGHT AND SETBACKS.

HEIGHT RESTRICTIONS:
NONE

PROTOTYPE DESIGN RESTRICTIONS:
UNKNOWN

PROPOSED SHARED FACILITIES:
PARKING ON LIVING SPACES LOT

ACCESSORS PARCEL NO:
364-010-015

LEGAL DESCRIPTION:
2.01 ACRES IN PAR 1 PM 187/027 PM 27426 SUBDIVISIONNAME PM 27426 ACRES 002.01 LOTTYPE PARCEL PARCEL 1 RECMAPTYPE PARCEL MAP MAPPLATB 187 MAPPLATP 027

SITE AREA:
GROSS ACREAGE: 2.01
NET ACREAGE: 2.01

DISTRICTS / UTILITIES:

SCHOOL DISTRICT:	MURRIETA VALLEY UNIFIED SCHOOL DISTRICT
WATER UTILITY:	EASTERN MUNICIPAL WATER DISTRICT
SEWER:	EASTERN MUNICIPAL WATER DISTRICT
GAS:	SOUTHERN CAL GAS COMPANY
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON
TELEPHONE:	SPECTRUM
CABLE TELEVISION:	SPECTRUM

DESIGN INFORMATION

OWNER:
PRATIK SHAH
2660 PUMMELO COURT
ESCONDIDO, CA 92027
CONTACT: PATRIK SHAH
PRATIK@APOLLODEVELOPER.COM
(760) 622-8723

ARCHITECT:
NOAA GROUP
4990 N HARBOR DRIVE, SUITE 201
SAN DIEGO, CA 92106
CONTACT: JOE HOLASEK
JCH@NOAAINC.COM
(619) 507-1001

CIVIL ENGINEER:
HARIYA INC.
26121 WALLACK PLACE
LOMA LINDA, CA 92354
CONTACT: MANOJ HARIYA
MHARIYA@HARIYAINC.COM
(909) 499-8270

LANDSCAPE ARCHITECT:
GMP
3176 LIONSHEAD AVE., SUITE 102
CARLSBAD, CA 92010
CONTACT: KATIE BARRETO
KBARRETO@GMPLANDARCH.COM
(858) 558-8977

NOTES:

1. SURFACE LOAD AND CAPIBILITIES - FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED TO SUPPORT THE IMPOSE LOADS OF FIRE APPARATUS [75,000 POUND LIVE LOAD (GROSS VEHICULAR WEIGHT) DISTRIBUTED OVER TWO AXLES] AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES [REAR WHEEL DRIVE APPARATUS] FOR THE LENGTH AND GRADE(S) OF THE FIRE APPARATUS ACCESS ROAD.

2. FIRE APPARATUS ACCESS ROAD WIDTH VERTICAL CLEARANCE - FIRE APPARATUS ACCESS ROADS SHALL HAVE AN WITH AN UNOBSTRUCTED VERTICAL CLEARANCE OF 13 FEET 6 INCHES.

3. KNOX BOX - A RAPID ENTRY KNOX BOX SHALL BE INSTALLED ON THE OUTSIDE OF THE BUILDING AND POOL AREA LOCATIONS.

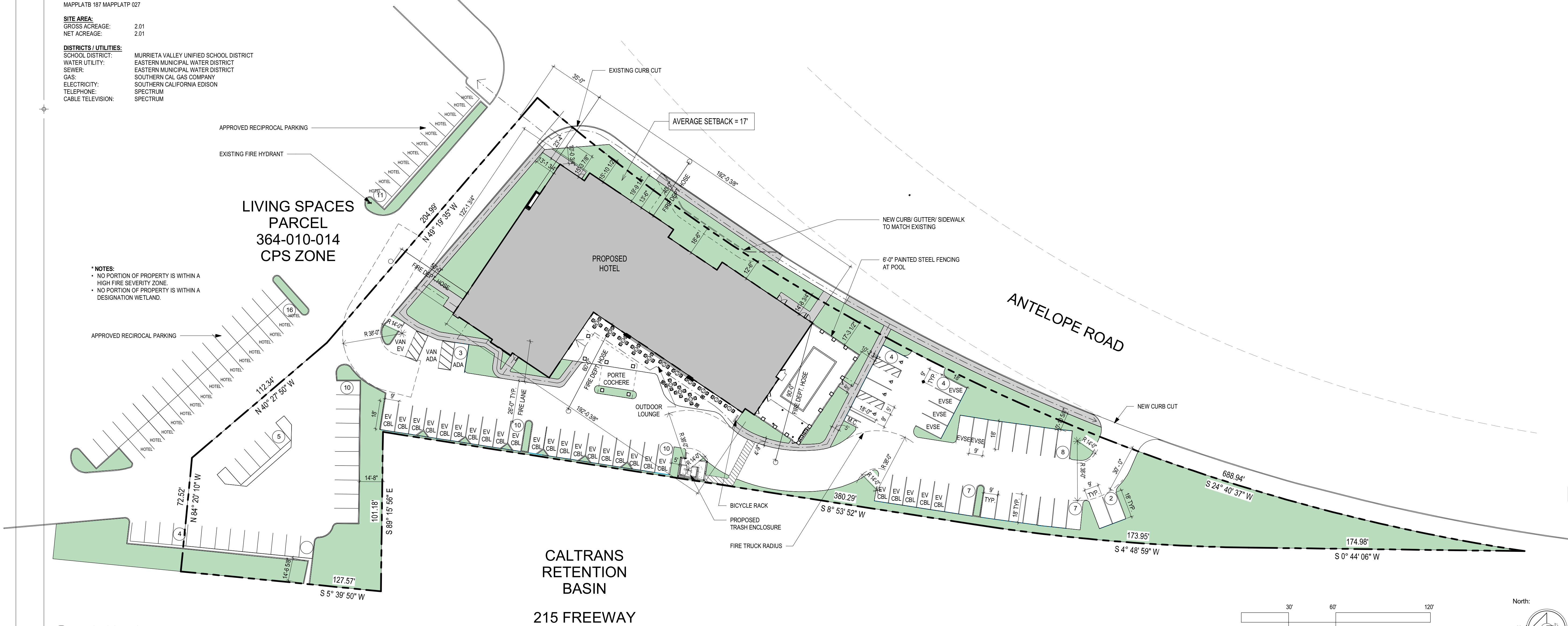
4. STANDPIPE SYSTEM - STANDPIPE SYSTEM SHALL BE PROVIDED IN NEW BUILDINGS AND STRUCTURES IN ACCORDANCE WITH SECTIONS 905.2 THROUGH 905.10.

PARKING :

REQUIRED:	1 SPACE/ ROOM 2 SPACES/ RESIDENT MANAGER
106 ROOMS:	106 SPACES REQUIRED (NO RESIDENT MANAGER) 106 PROVIDED (INCLUDES: 5 ADA & 24 EV CAPABLE)

NOTE: 80 SPACES ARE ON-SITE AND 26 SPACES ARE ON THE ADJACENT LIVING SPACES SITE.

TOTAL LOT AREA:	87,556
TOTAL LOT AREA FOR LS CALC:	83,182
TOTAL LANDSCAPE (FRONT YARD AT BUILDING):	19,073 = 23%
23% > 10%	OK



* NOTES:
- NO PORTION OF PROPERTY IS WITHIN A HIGH FIRE SEVERITY ZONE.
- NO PORTION OF PROPERTY IS WITHIN A DESIGNATION WETLAND.

1 PROPOSED SITE PLAN
Ref: A-201 / Scale: 1" = 30'-0"

30' 60' 120'

North:
TRUE PROJECT

4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE

ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

PROPOSED SITE PLAN

Scale: As indicated
Sheet No:

A-102

8/17/2023 1:24:32 PM

1 **FIRST FLOOR PLAN**
Ref: A-201 / Scale: 1/8" = 1'-0"

North:

NOAA
group
architects

4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

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HOME2SUITES MENIFEE
ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE		
NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

1ST FLOOR PLAN

Scale: 1/8" = 1'-0"
Sheet No:

A-111

8/17/2023 1:21:17 PM

1 SECOND FLOOR PLAN
Ref: A-201 / Scale: 1/8" = 1'-0"

NOAA
group
architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE
ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

2ND FLOOR PLAN

Scale: 1/8" = 1'-0"
Sheet No:

North: TRUE PROJECT

A-112

8/17/2023 10:15:48 AM

1 **THIRD FLOOR PLAN**
Ref: A-201 / Scale: 1/8" = 1'-0"

NOAA group architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

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ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE
ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:

Sheet Name:

3RD FLOOR PLAN

Scale: 1/8" = 1'-0"

Sheet No:

North: TRUE PROJECT

A-113

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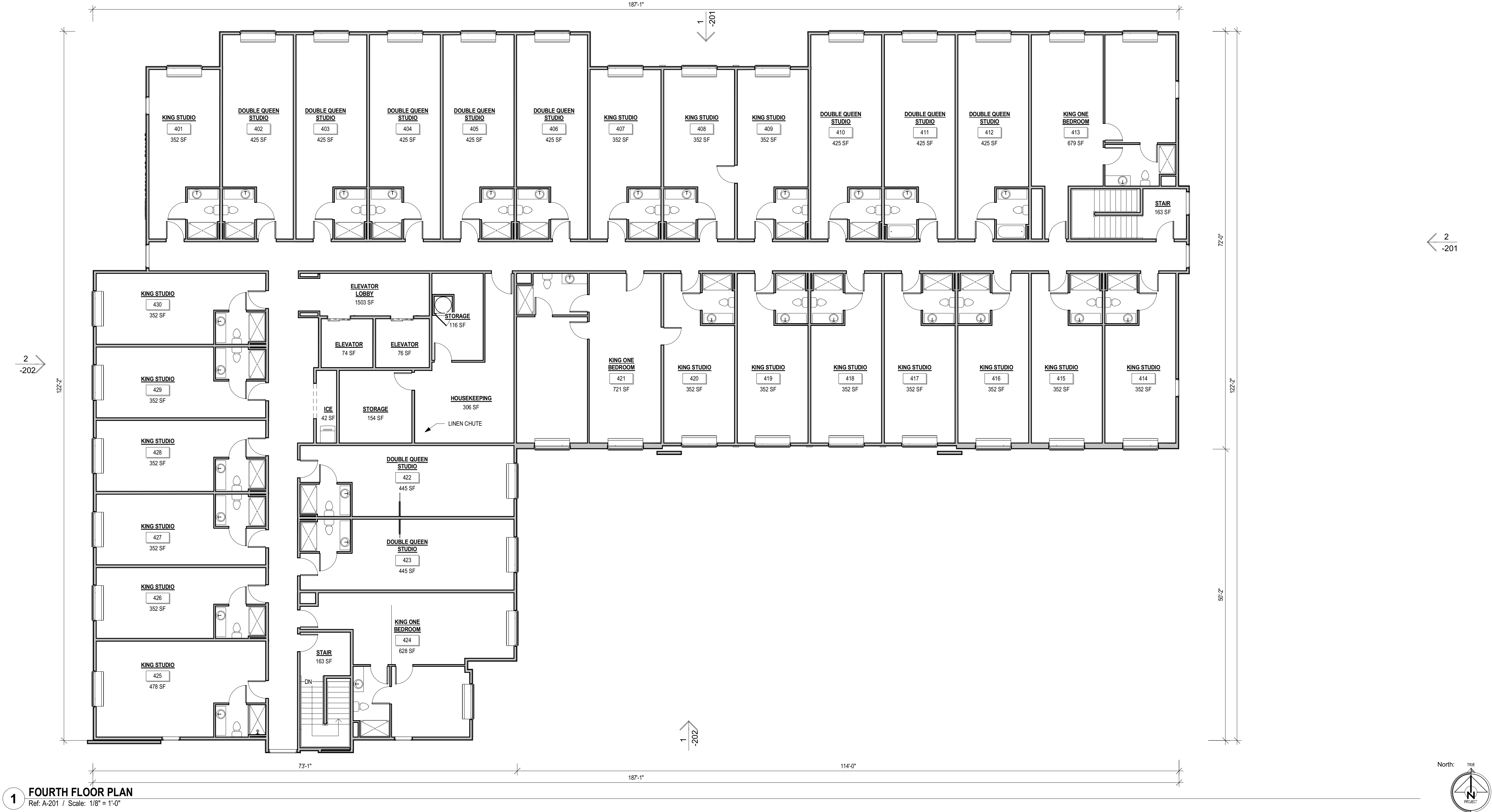

1 **FOURTH FLOOR PLAN**
Ref: A-201 / Scale: 1/8" = 1'-0"

NOAA
group
architects

4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE
ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE		
NO	DATE	ISSUE
△ -	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
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Revision:
Sheet Name:

4TH FLOOR PLAN

Scale: 1/8" = 1'-0"
Sheet No:

North: TRUE N PROJECT

A-114

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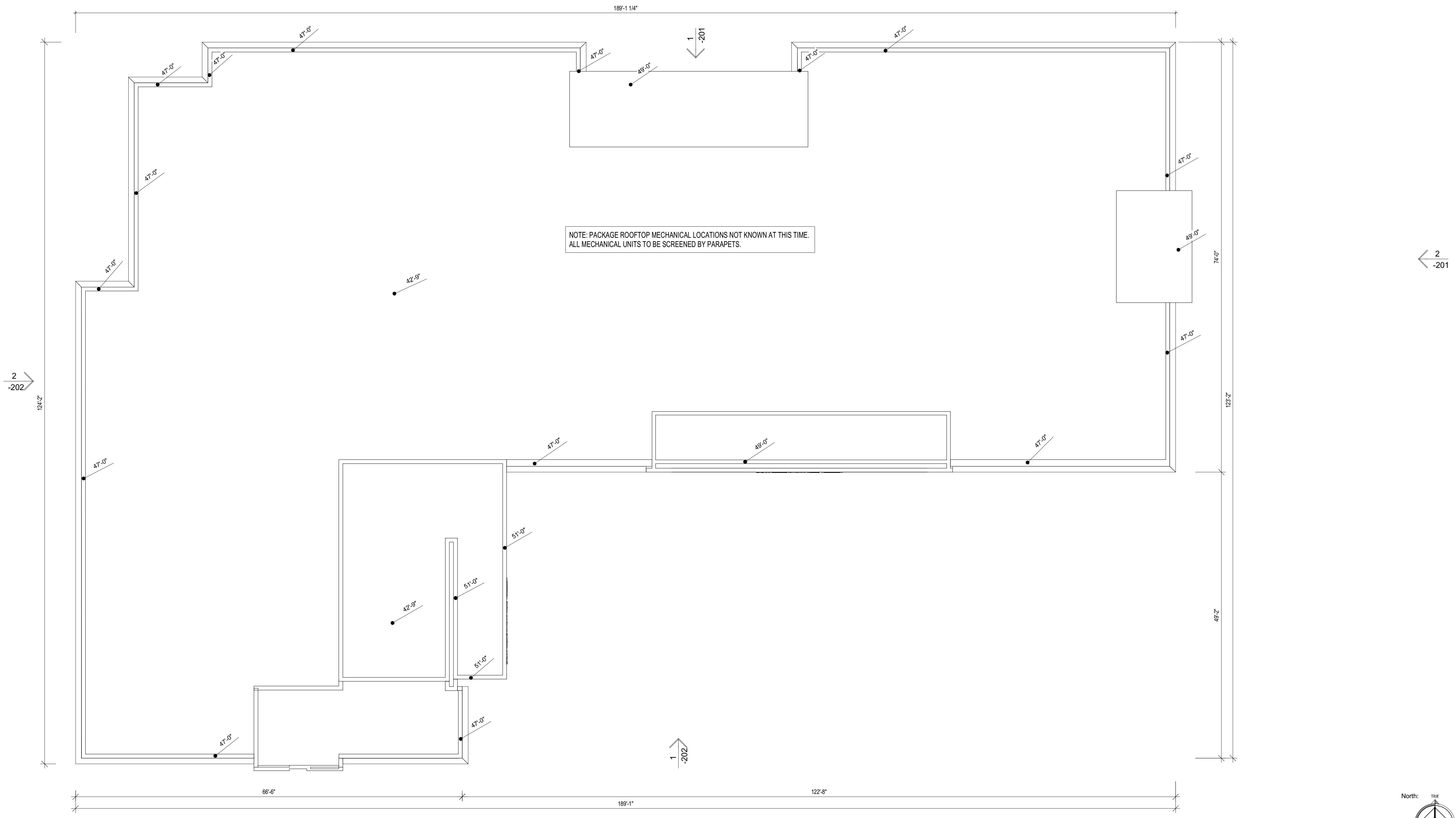

NOTE: PACKAGE ROOFTOP MECHANICAL LOCATIONS NOT KNOWN AT THIS TIME.
ALL MECHANICAL UNITS TO BE SCREENED BY PARAPETS.

1 ROOF PLAN
Ref: A-201 / Scale: 1/8" = 1'-0"

NOAA group architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH
THE ARCHITECT.

HOME2SUITES MENIFEE
ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE
-	--/--/--	DESCRIPTION

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

ROOF PLAN

Scale: 1/8" = 1'-0"
Sheet No:

North: TRUE PROJECT

A-115

8/17/2023 10:15:52 AM

1 **SOUTH EXTERIOR ELEVATION - RENDERED**
Scale: 1/32" = 1'-0"

2 **NORTH EXTERIOR ELEVATION - RENDERED**
Scale: 1/32" = 1'-0"

3 **WEST EXTERIOR ELEVATION - RENDERED**
Scale: 1/32" = 1'-0"

4 **EAST EXTERIOR ELEVATION - RENDERED**
Scale: 1/32" = 1'-0"

NOAA
group
architects
4990 N Harbor Drive, Ste 201
San Diego, CA 92106

tel: 619-297-8066
web: www.noaainc.com

LICENSED ARCHITECT
DANUBE TALANT
No. C38946
REN 11/30/2023
STATE OF CALIFORNIA

DO NOT SCALE DRAWINGS.
ANY DISCREPANCIES TO BE REVIEWED WITH THE ARCHITECT.

HOME2SUITES MENIFEE

ANTELOPE RD.
MENIFEE, CA 92584

REVISION SCHEDULE

NO	DATE	ISSUE DESCRIPTION
-	--/--/--	

Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

RENDERED ELEVATIONS

Scale: 1/32" = 1'-0"
Sheet No:

A-701

8/17/2023 10:16:51 AM

Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Appendix B

Applicable Noise Regulations

NOISE ELEMENT N-1: NOISE-SENSITIVE LAND USES

Only areas below are considered part of the General Plan.

Noise-sensitive Land Uses

Goal & Policies

- **N-1:** Noise-sensitive land uses are protected from excessive noise and vibration exposure.

Policies: Policy & Regulation

- **N-1.1:** Assess the compatibility of proposed land uses with the noise environment when preparing, revising, or reviewing development project applications.
- **N-1.2:** Require new projects to comply with the noise standards of local, regional, and state building code regulations, including but not limited to the city's Municipal Code, Title 24 of the California Code of Regulations, the California Green Building Code, and subdivision and development codes.
- **N-1.3:** Require noise abatement measures to enforce compliance with any applicable regulatory mechanisms, including building codes and subdivision and zoning regulations, and ensure that the recommended mitigation measures are implemented.
- **N-1.4:** Regulate the control of nuisances, such as residential party noise and barking dogs, through the city's Municipal Code.
- **N-1.5:** Protect agricultural uses from noise complaints that may result from routine farming practices.
- **N-1.6:** Coordinate with the County of Riverside and adjacent jurisdictions to minimize noise impacts from adjacent land uses along the city's boundaries, especially its rural edges.
- **N-1.7:** Mitigate exterior and interior noises to the levels listed in the table below to the extent feasible, for stationary sources adjacent to sensitive receptors:
-

Table N-1
Stationary Source Noise Standards

Land Use (Residential)	Interior Standards	Exterior Standards
10 p.m. - 7 a.m.	40 Leq (10 minute)	45 Leq (10 minute)
7 a.m. - 10 p.m.	55 Leq (10 minute)	65 Leq (10 minute)

Policies: Sitting & Design

- **N-1.8:** Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state, and city noise standards and guidelines as a part of new development review.
- **N-1.9:** Limit the development of new noise-producing uses adjacent to noise-sensitive receptors and require that new noise-producing land be are designed with adequate noise abatement measures.
- **N-1.10:** Guide noise-tolerant land uses into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors adjacent to the I-215 or within the projected noise contours of any adjacent airports.

- **N-1.11:** Discourage the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation.
- **N-1.12:** Minimize potential noise impacts associated with the development of mixed-use projects (vertical or horizontal mixed-use) where residential units are located above or adjacent to noise-generating uses.
- **N-1.13:** Require new development to minimize vibration impacts to adjacent uses during demolition and construction.

Policies: Transportation Noise

- **N-1.14:** Minimize vibration impacts on people and businesses near light and heavy rail lines or other sources of ground-borne vibration through the use of setbacks and/or structural design features that reduce vibration to levels at or below the guidelines of the Federal Transit Administration. Require new development within 100 feet of rail lines to demonstrate, prior to project approval, that vibration experienced by residents and vibration-sensitive uses would not exceed these guidelines.
- **N-1.15:** Employ noise mitigation practices and materials, as necessary, when designing future streets and highways, and when improvements occur along existing road segments. Mitigation measures should emphasize the establishment of natural buffers or setbacks between the arterial roadways and adjoining noise-sensitive areas.
- **N-1.16:** Collaborate with transportation providers, including airport owners, the Federal Aviation Administration, Caltrans, Southern California Association of Governments, neighboring jurisdictions, and railroad owners and operators, to prepare, maintain, and update transportation-related plans that minimize noise impacts and identify appropriate mitigation measures.
- **N-1.17:** Prevent the construction of new noise-sensitive land uses within airport noise impact zones. New residential land uses within the 65 dB CNEL contours of any public-use or military airports, as defined by the Riverside County Airport Land Use Commission, shall be prohibited.
- **N-1.18:** Work with the Southern California Regional Rail Authority and railroad owners and operators to reduce the noise impacts on noise-sensitive uses adjacent to railroad tracks.
- **N-1.19:** Monitor proposals for future transit systems and require noise control to be considered in the selection of transportation systems that may affect the city.
- **N-1.20:** Adhere to any applicable Riverside County Airport Land Use Commission land use compatibility criteria, including density, intensity, and coverage standards.

General Plan Exhibits

- Exhibit N-1: Future Noise Contours

§ 8.01.010 HOURS OF CONSTRUCTION.

Any construction within the city located within one-fourth mile from an occupied residence shall be permitted Monday through Saturday, except nationally recognized holidays, 6:30 a.m. to 7:00 p.m. There shall be no construction permitted on Sunday or nationally recognized holidays unless approval is obtained from the City Building Official or City Engineer.

(Ord. 2010-83, passed 11-16-2010)

Appendix C

Manufacturer Data Sheets

25HBC5
Comfort 15 Heat Pump with Puron® Refrigerant 1−1/2 to 5 Nominal Tons

Carrier
turn to the experts™

Product Data

Puron™
the environmentally sound refrigerant

Carrier heat pumps with Puron® refrigerant provide a collection of features unmatched by any other family of equipment. The 25HBC has been designed utilizing Carrier's Puron refrigerant. The environmentally sound refrigerant allows consumers to make a responsible decision in the protection of the earth's ozone layer.

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency when matched with appropriate coil components. Refer to the combination ratings in the Product Data for system combinations that meet Energy Star® guidelines.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 15 SEER/ 12.5 EER / 8.0 - 9.0 HSPF
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 69 dBA
- Sound levels as low as 68 dBA with accessory sound blanket

Comfort

- System supports Edge® Thermidistat™ or standard thermostat controls

Reliability

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- High pressure switch
- Loss of charge switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

WeatherArmor™ protection package:

- Solid, durable sheet metal construction
- Dense wire coil guard standard
- Baked-on powder paint

Applications

- Long-line - up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient cooling (down to -20°F/-28.9°C) with accessory kit

ELECTRICAL DATA

UNIT SIZE	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MIN WIRE SIZE†		MAX LENGTH ft (m))‡		MAX FUSE** or BRK AMPS
		MAX	MIN	LRA	RLA	FLA		60° C	75° C	60° C	75° C	
18−30	208/230/1	253	197	48.0	9.0	0.5	11.8	14	14	67 (20.4)	63 (19.2)	20
24−30				58.3	12.8	0.5	16.5	14	14	48 (14.6)	45 (13.7)	25
30−30				73.0	14.1	0.5	18.1	14	14	44 (13.4)	41 (12.5)	30
36−30				79.0	16.7	1.2	22.1	12	12	57 (17.4)	54 (16.5)	35
42−30				109.0	21.1	1.2	27.6	10	10	72 (21.9)	69 (21.0)	40
48−30				117.0	21.8	1.2	28.5	10	10	70 (21.3)	67 (20.4)	40
60−30				134.0	26.4	1.2	34.2	8	10	91 (27.7)	56 (17.1)	50

* Permissible limits of the voltage range at which the unit will operate satisfactorily

† If wire is applied at ambient greater than 30°C, consult table 310−16 of the NEC (NFPA 70). The ampacity of non−metallic−sheathed cable (NM), trade name ROMEX, shall be that of 60°C conditions, per the NEC (NFPA 70) Article 336−26. If other than uncoated (no−plated), 60 or 75°C insulation, copper wire (solid wire for 10 AWG or smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

** Time−Delay fuse.

FLA – Full Load Amps
LRA – Locked Rotor Amps
MCA – Minimum Circuit Amps
RLA – Rated Load Amps

NOTE: Control circuit is 24−V on all units and requires external power source. Copper wire must be used from service disconnect to unit.
All motors/compressors contain internal overload protection.
Complies with 2007 requirements of ASHRAE Standards 90.1

A-WEIGHTED SOUND POWER (dBA)

UNIT SIZE	STANDARD RATING dBA	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18−30	73	49.5	60.0	65.0	69.0	65.5	62.0	55.0
24−30	69	48.5	59.5	61.5	62.5	61.0	59.0	53.5
30−30	71	51.0	58.5	61.5	65.5	62.5	60.0	53.5
36−30	72	55.5	59.5	63.5	66.5	64.5	61.5	55.5
42−30	74	56.5	64.0	67.0	68.5	65.0	62.0	57.5
48−30	74	55.5	62.0	66.0	69.0	65.0	62.0	56.0
60−30	74	59.0	62.0	65.0	68.0	65.0	62.5	62.0

NOTE: Tested in accordance with AHRI Standard 270−08 (not listed in AHRI).

A-WEIGHTED SOUND POWER (dBA) WITH SOUND SHIELD

UNIT SIZE	STANDARD RATING dBA	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18−30	72	50.5	60.0	65.0	67.5	64.5	61.5	53.5
24−30	68	49.5	58.5	61.5	62.0	61.0	58.5	51.5
30−30	69	50.5	58.5	61.5	64.0	61.5	58.5	51.5
36−30	70	54.5	57.5	63.0	66.0	64.0	61.0	54.0
42−30	72	56.5	64.5	66.5	66.5	64.5	61.0	54.5
48−30	72	55.5	62.5	66.0	68.0	64.0	60.0	53.0
60−30	73	58.5	62.5	65.0	67.0	64.0	61.0	56.5

NOTE: Tested in accordance with AHRI Standard 270−08 (not listed in AHRI).

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE−SERIES	REQUIRED SUBCOOLING °F (°C)
18−30	12 (6.7)
24−30	14 (7.8)
30−30	10 (5.6)
36−30	8 (4.4)
42−30	10 (5.6)
48−30	11 (6.1)
60−30	10 (5.6)

Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Appendix D

CadnaA Analysis Data and Results

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570

Date: 09 Oct 2023

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	0.00
Night-time Penalty (dB)	0.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (NONE)	
Strictly acc. to AzB	

Receivers

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1				41.5	41.5	0.0	0.0		x	Total	5.00	r	1711.40	757.89	5.00

Point Sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft²)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1605.12	959.74	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1609.06	960.41	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1609.71	956.57	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1605.75	955.88	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1599.42	951.41	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1603.47	952.27	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1604.16	948.30	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1600.24	947.53	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1593.86	942.88	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1597.87	943.91	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1598.69	940.04	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1594.77	939.18	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1588.24	934.68	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1592.24	935.54	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1593.19	931.62	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1589.10	930.76	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1582.86	926.28	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1586.82	927.10	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1587.59	923.18	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1583.46	922.28	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1582.86	917.67	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1579.63	912.72	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1567.65	913.68	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1570.92	911.49	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1565.41	910.32	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1568.98	908.09	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1563.17	907.83	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1566.61	905.33	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1560.93	904.25	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1564.29	901.88	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1558.73	900.72	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1562.09	898.53	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1556.58	897.45	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1559.85	895.21	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1577.29	909.21	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1574.15	904.43	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1571.74	900.59	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1568.55	896.03	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1566.14	892.45	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1563.17	887.63	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1560.64	884.00	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1557.45	879.31	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1555.04	875.56	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1551.94	870.82	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1543.91	842.66	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1546.92	840.61	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1539.64	839.07	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1542.61	837.19	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1538.34	833.88	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1541.08	831.96	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1547.40	836.34	3.50

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft²)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1546.20	834.66	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1544.90	832.95	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1549.86	834.63	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1548.70	832.89	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1547.67	831.21	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1581.72	836.43	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1584.73	834.48	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1588.76	831.99	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1591.50	830.00	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1595.67	827.23	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1598.37	825.53	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1604.25	819.10	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1600.32	813.08	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1598.74	810.70	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1595.43	805.67	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1593.96	803.41	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1590.30	798.08	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1588.87	795.83	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1580.80	798.49	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1577.93	800.44	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1569.49	806.01	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1566.92	807.79	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1560.11	812.10	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1557.58	813.81	3.50
Seated Person				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1550.20	818.59	3.50
Seated Person				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1547.67	820.34	3.50
Person in Pool				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1559.36	828.12	3.50
Person in Pool				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1563.05	833.50	3.50
Person in Pool				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1565.22	824.27	3.50
Person in Pool				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1568.85	829.64	3.50
Person in Pool				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1571.35	820.26	3.50
Person in Pool				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1574.93	825.52	3.50
Person in Pool				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1577.43	816.51	3.50
Person in Pool				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1580.90	821.78	3.50
Person in Pool				74.6	74.6	74.6	Lw	V2		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1583.18	812.50	3.50
Person in Pool				73.0	73.0	73.0	Lw	V1		0.0	0.0	0.0				24.00	0.00	24.00	0.0		(none)	3.50	r	1586.71	817.92	3.50
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1586.34	857.35	57.00
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1593.30	867.81	57.00
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1600.53	878.79	57.00
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1607.38	889.26	57.00
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1614.57	899.89	57.00
Rooftop HVAC				73.0	73.0	73.0	Lw	AC		0.0	0.0	0.0							0.0		(none)	4.00	g	1621.59	910.40	57.00

Buildings

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	
							Begin	
							(ft)	
Building		+			0		53.00	r

Geometry - Buildings

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinates			
							Begin		x	y	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
Building		+			0		53.00	r	1611.26	1049.81	53.00	0.00
									1572.19	988.17	53.00	0.00
									1614.18	960.44	53.00	0.00
									1550.96	864.75	53.00	0.00
									1553.63	862.94	53.00	0.00
									1549.94	856.92	53.00	0.00
									1572.95	841.89	53.00	0.00
									1574.30	843.85	53.00	0.00
									1609.10	821.28	53.00	0.00
									1647.26	879.07	53.00	0.00
									1642.30	882.13	53.00	0.00
									1662.61	913.37	53.00	0.00
									1667.94	909.96	53.00	0.00
									1703.28	963.79	53.00	0.00
									1698.09	967.31	53.00	0.00
									1708.85	982.81	53.00	0.00
									1679.01	1001.99	53.00	0.00
									1680.72	1004.45	53.00	0.00

Sound Level Spectra

Name	ID	Type	1/3 Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Female Voices - Raised	V1	Lw (c)				46.8	66.3	71.1	68.8	64.8	60.0	55.1	73.0	74.6	Pearsons et al (1977)
Male Voices - Raised	V2	Lw (c)				66.2	70.2	74.5	69.5	64.5	59.7	55.0	74.6	77.5	Pearsons et al (1977)
Carrier 25HBC5 (5 ton)	AC	Lw	A			59.8	63.8	66.3	68.3	65.3	62.3	57.8	73.0	78.8	Manufacturer

Appendix E

Construction Noise Calculation Results

Noise Attenuation by Distance Calculation

Job:	Home2Suites Menifee
Job #:	S230903
Date:	10/9/2023
Source:	Backhoe
Phase:	Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 65 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**54.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**50.8**			

Summation

Number of Sources: 6

Level during 8 hour day: **68.6**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Bulldozer
Phase: Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 76 at 50 feet

Distances

Source Elevation 0 feet at 5 feet above grade
Receiver Elevation: 0 feet at 5 feet above grade
Source to Receiver Distance: 163 feet

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level **65.7** at 163 feet

Hours of Use: **8**
Duty Cycle (%): **40**
Level During 8 Hour day: **61.8**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Dump Truck
Phase: Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 77 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**66.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**62.8**			

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Excavator
Phase: Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 78 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**67.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**63.8**			

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Water Truck
Phase: Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 72 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**61.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**57.8**			

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Vibratory Roller
Phase: Demolition/Grading/Compaction

Noise Source

Noise Level (dBA) 76 at 50 feet

Distances

Source Elevation 0 feet at 5 feet above grade
Receiver Elevation: 0 feet at 5 feet above grade
Source to Receiver Distance: 163 feet

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level **65.7** at 163 feet
Hours of Use: **8**
Duty Cycle (%): **20**
Level During 8 Hour day: **58.7**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Concrete Mixer Truck
Phase: Building Construction/Utilities

Noise Source

Noise Level (dBA) 72 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**61.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**57.8**			

Summation

Number of Sources: 4

Level during 8 hour day: **65.6**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Concrete Pump Truck
Phase: Building Construction/Utilities

Noise Source

Noise Level (dBA) 74 at 50 feet

Distances

Source Elevation 0 feet at 5 feet above grade
Receiver Elevation: 0 feet at 5 feet above grade
Source to Receiver Distance: 163 feet

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level **63.7** at 163 feet
Hours of Use: **8**
Duty Cycle (%): **20**
Level During 8 Hour day: **56.7**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Excavator
Phase: Building Construction/Utilities

Noise Source

Noise Level (dBA) 78 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**67.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**63.8**			

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Forklift
Phase: Building Construction/Utilities

Noise Source

Noise Level (dBA) 67 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**56.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**40**			
Level During 8 Hour day:	**52.8**			

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Paver
Phase: Paving

Noise Source

Noise Level (dBA) 73 at 50 feet

Distances

Source Elevation	0	feet	at	5	feet above grade
Receiver Elevation:	0	feet	at	5	feet above grade
Source to Receiver Distance:	163	feet			

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level	**62.7**	at	163	feet
Hours of Use:	**8**			
Duty Cycle (%):	**50**			
Level During 8 Hour day:	**59.7**			

Summation

Number of Sources: 2

Level during 8 hour day: **62.3**

Noise Attenuation by Distance Calculation

Job: Home2Suites Menifee
Job #: S230903
Date: 10/9/2023
Source: Vibratory Roller
Phase: Paving

Noise Source

Noise Level (dBA) 76 at 50 feet

Distances

Source Elevation 0 feet at 5 feet above grade
Receiver Elevation: 0 feet at 5 feet above grade
Source to Receiver Distance: 163 feet

Path Calculation

Source to Receiver Direct Path Distance: **163** feet

Sound Pressure Level **65.7** at 163 feet
Hours of Use: **8**
Duty Cycle (%): **20**
Level During 8 Hour day: **58.7**

HOME 2 SUITES

TRAFFIC ASSESSMENT LETTER

CITY OF MENIFEE, CA

DECEMBER 28, 2023

JOB NUMBER: 19913

RICK ENGINEERING COMPANY

rickengineering.com

HOME 2 SUITES
TRAFFIC ASSESSMENT
CITY OF MENIFEE, CA

DECEMBER 28, 2023

PREPARED FOR:

CITY OF MENIFEE
29844 HAUN ROAD
MENIFEE, CA 92586
AND
APOLLO DEVELOPMENT GROUP, LLC
2661 PUMMELO COURT
ESCONDIDO, CA 92037

REGISTERED PROFESSIONAL ENGINEER
BRIAN R. STEPHENSON
No. 2419
TRAFFIC
STATE OF CALIFORNIA

PREPARED BY:

RICK
ENGINEERING COMPANY

TABLE OF CONTENTS

EXHIBITS

TABLES

APPENDICES

1.0- INTRODUCTION/BACKGROUND

1.1-INTRODUCTION

The following traffic assessment has been prepared to evaluate potential operational deficiencies and transportation improvements that may need to be considered in association with the traffic generated by the proposed Home 2 Suites project. Per the *City of Menifee LOS Traffic Study Guidelines (October 2020)*, the City requires a traffic study for any development which could have a significant impact on the City's transportation network. At a minimum, intersections where the proposed project will add 50 or more peak hour trips should be studied and roadway segments where the project would add 500 or more daily trips (ADT) would require roadway segment analysis. Based on the *Institute of Transportation Engineers (ITE)* 11th Edition trip generation rates for *All Suites* type of lodging, the project falls below the 500 ADT and the 50 peak hour trip thresholds. However, the City can request additional analysis for any City identified project specific issues. The City identified the intersection of Antelope Road/Newport Road and the section of Antelope Road in which the project is fronting as significant per the City's general plan, thus, requiring LOS analysis for this project.

1.2-PROJECT DESCRIPTION

The Home 2 Suites project (the project) is located at 30141 Antelope Road, east of I- 215, west of Antelope Road, south of Newport Road and north of La Piedra Road, in the City of Menifee. The project proposes to remove an existing parking lot and construct a 4-story, 65,463 square foot all-suites hotel, consisting of 106 rooms with an extended stay option within Menifee Village Shopping Center.

The project will provide on-site parking with 81 standard parking stalls and 27 reciprocal parking that will be shared with the adjacent commercial property currently occupied by Living Spaces.

The project proposes access via a new driveway and an existing shared driveway off of Antelope Road. Regional access to the site is provided by the I-215 Freeway, and local access to the site is provided via Antelope Road, Newport Road, Menifee Road, and Scott Road.

The project is within the Menifee Village Specific Plan and is consistent with the General Plan. No rezoning or specific plan amendments are required or proposed. The project opening year is assumed to be in 2024.

The intersections within the project vicinity were analyzed for the following scenarios:

- Existing Conditions
- Existing plus Project Conditions

Exhibit 1 shows the project vicinity map. **Exhibit 2** shows the proposed site plan.

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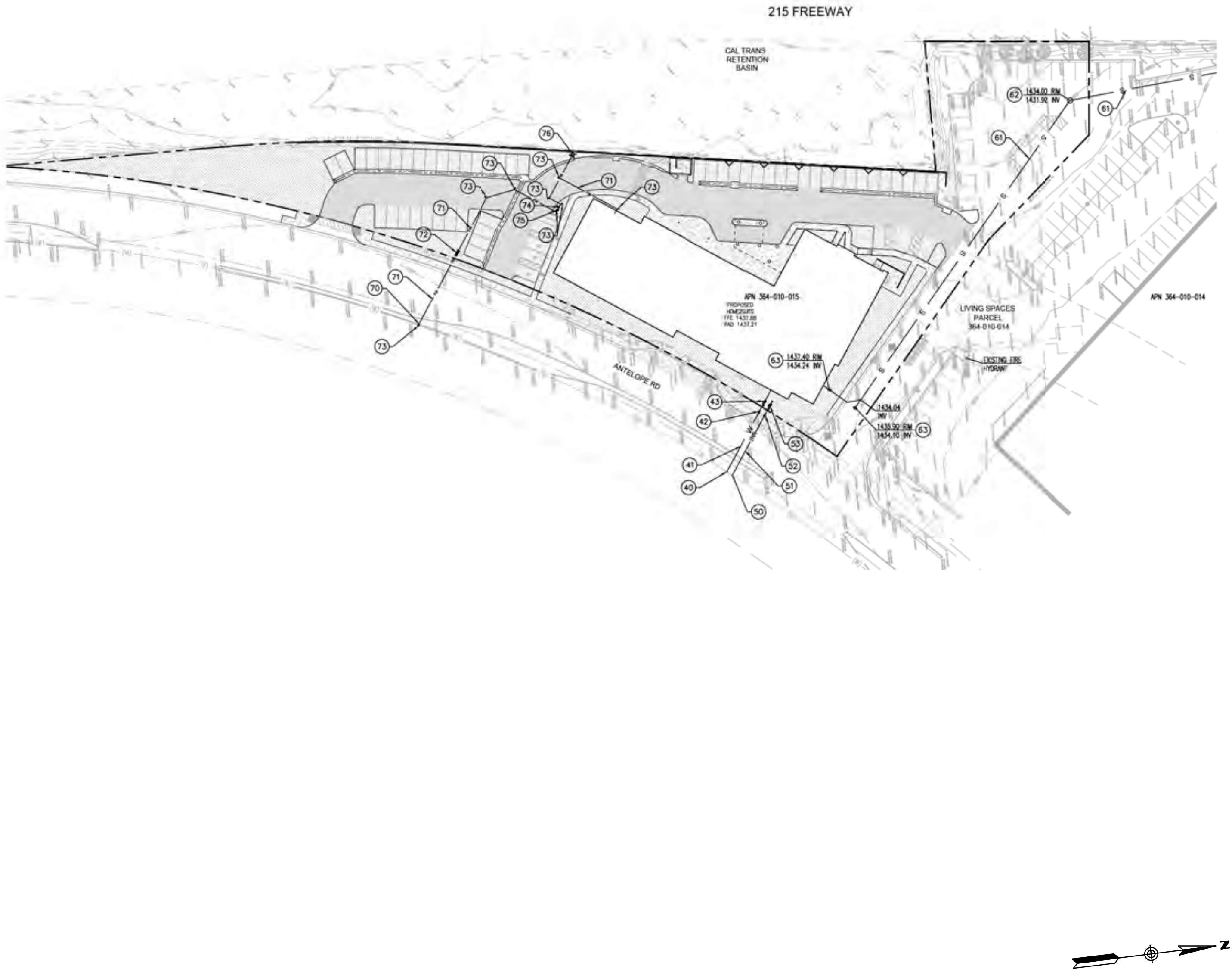
EXHIBIT 1

VICINITY MAP

MENIFEE HOME 2 SUITES



NOT TO SCALE

EXHIBIT 2

PROPOSED PROJECT SITE PLAN

MENIFEE HOME 2 SUITES

2.0- ANALYSIS APPROACH AND METHODOLOGY

2.1- ANALYSIS APPROACH

This traffic assessment was prepared based on the *City of Menifee LOS Traffic Study Guidelines (October 2020)* and additional coordination with City of Menifee staff on the Scoping Form.

Appendix A contains Project Scoping Form.

2.2- TRAFFIC ANALYSIS METHODOLOGY

Intersection Analysis Methodology

The Level of Service (LOS) for signalized intersections was calculated using the methodologies described in Chapter 19 of the 6th Edition Highway Capacity Manual (HCM 6). The LOS for signalized intersections is defined in terms of control delay, which is made up of several factors that relate to right-of-way control, geometrics and traffic volumes. The signalized intersection analysis also considers intersection spacing and coordination.

The LOS for two-way controlled intersections was calculated using the methodologies described in Chapters 20 of the 6th Edition HCM. The LOS for a two-way stop-controlled intersection is determined by the computed control delay for each minor street movement and major street left-turns, and not for the intersection as a whole. The LOS reported reflects the highest delay and associated LOS for an individual movement, typically occurring on the stop-controlled approach.

The computerized analysis of signalized and unsignalized intersection operations was performed utilizing the *Synchro 11* traffic analysis software. The *Synchro 11 s*oftware supports HCM 6 methodologies for signalized and stop controlled intersections and was utilized to produce the analysis results.

The criteria for the LOS grade designations are provided in **Table 1**. LOS provides a quick overview of how well an intersection is performing. Within the City of Menifee, LOS D or better is considered acceptable for all signalized and unsignalized intersections during the peak hours.

Queuing analysis was conducted utilizing the *SimTraffic* application, which is a component of the Synchro 11 software. A 60-minute seeding time and a 60-minute recording time was used to conduct the simulations. The analysis results show the 95th percentile queue for the individual movements at each intersection that experienced delay.

TABLE 1
LOS CRITERIA FOR INTERSECTIONS

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤10	≤10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤20	>10 and ≤15	Operations with good progression but with some restricted movements.
C	>20 and ≤35	>15 and ≤25	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤55	>25 and ≤35	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤80	>35 and ≤50	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	>50	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Source: 6th Edition Highway Capacity Manual.

3.0 EXISTING CONDITIONS

3.1- EXISTING ROADWAY NETWORK

The following is a brief description of the existing roadways within the study area:

Newport Road runs east-west from Goetz Road to Laguna Vista Road and turns into Domenigoni Parkway east of Laguna Vista Road. Near the project site, Newport Road is classified as a six-lane divided expressway from Haun Road to Antelope Road, and a six-lane divided urban arterial east of Antelope Road. The posted speed limit is 45 mph between Haun Road and Laguna Vista Drive and 55 mph east of Laguna Vista Drive. East of Menifee Road, class II bike lanes are provided on both sides of the street. On-street parking is generally prohibited.

Antelope Road runs north-south from south City limits until it becomes Tally Road north of Renaissance Circle. Near the project site, it’s classified and functions as a four-lane major, south of Newport Road and a four-lane secondary north of Newport Road. Bike lanes are not provided on this street and parking is generally prohibited. The posted speed limit is 40 mph.

Exhibit 3 illustrates the existing transportation conditions within the project area.

3.2- EXISTING TRAFFIC VOLUMES

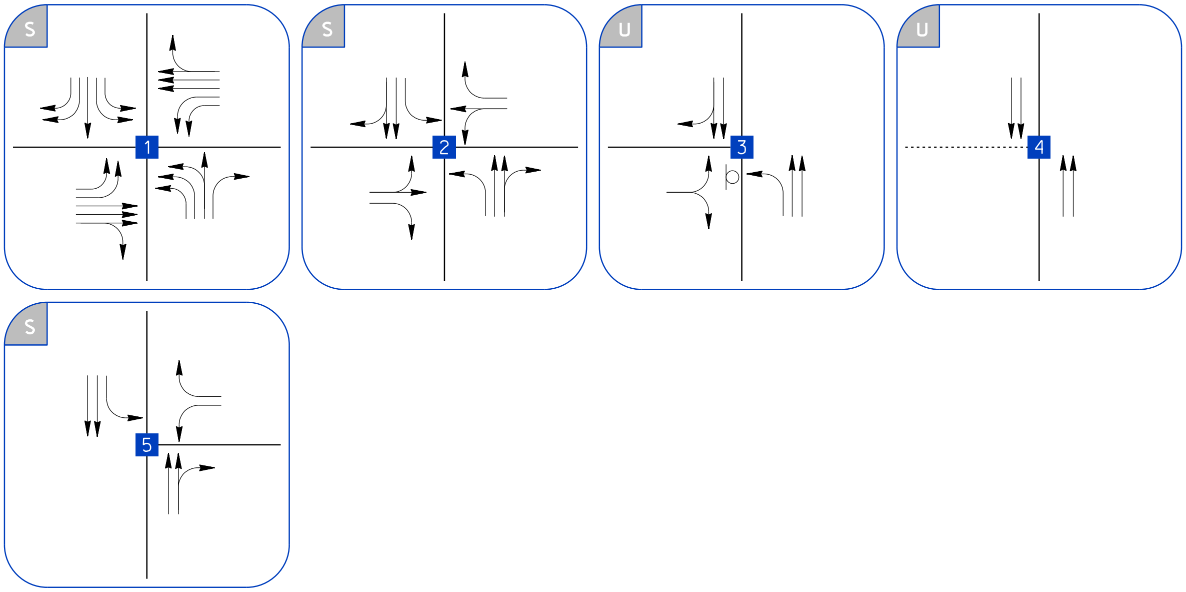
Existing traffic data at the study intersections listed below was obtained from traffic counts conducted by Field Data Services, Inc. (FDS) on Thursday, December 7, 2023, while schools were in session. The turning movement counts were conducted during the weekday AM (7-9) and PM (4-6) peak periods and included cars, pedestrians and bicyclists.

Study intersections:

- Antelope Road/Newport Road
- Antelope Road/Stillwater Drive
- Antelope Road/La Piedra Road
- Antelope Road/Living Spaces-Project Dwy 1 (volumes were interpolated between Stillwater Drive counts and La Piedra Road counts)

Exhibit 4 shows the existing intersection turning movement counts within the study area.

Appendix B contains the intersection turning movement count sheets.



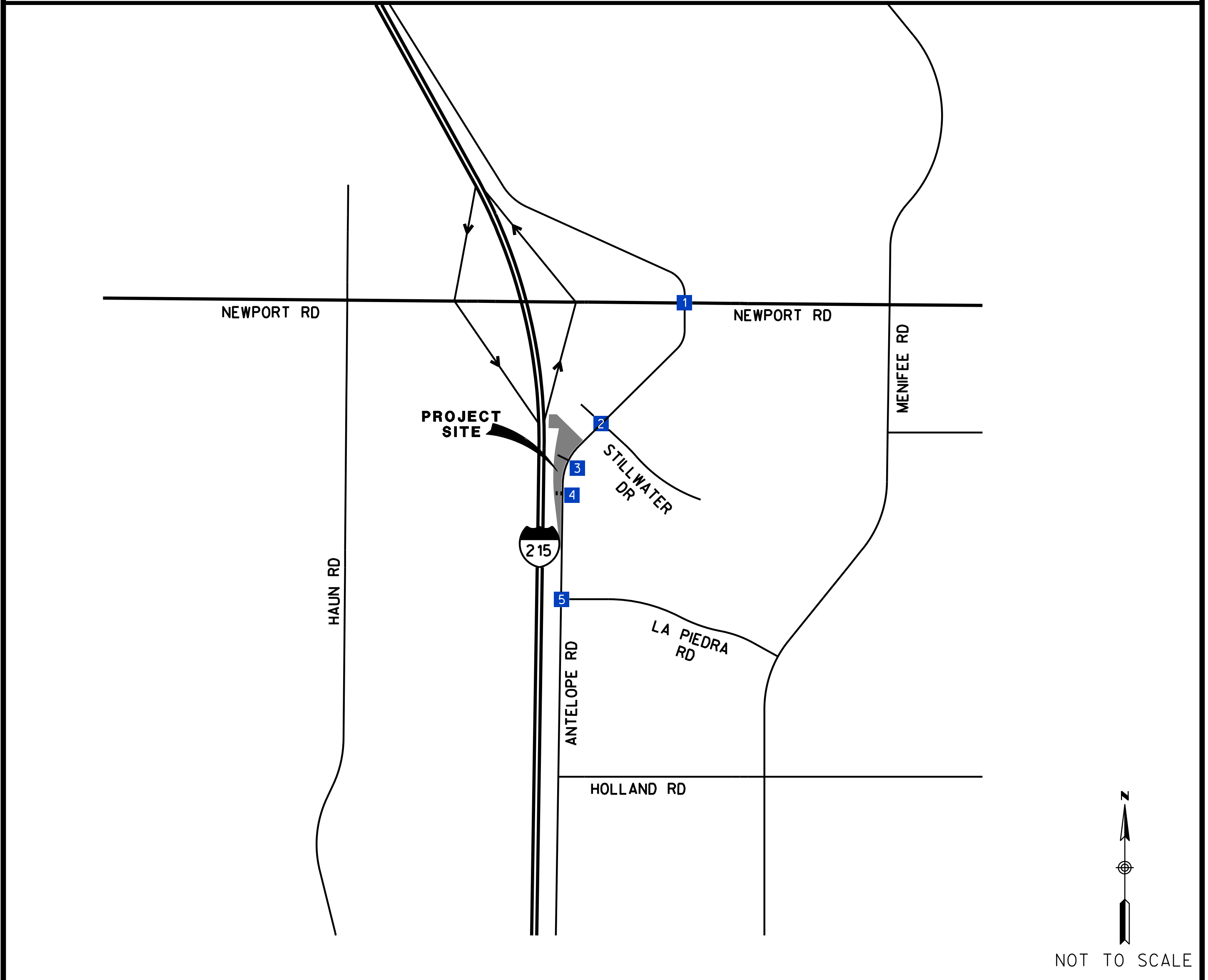


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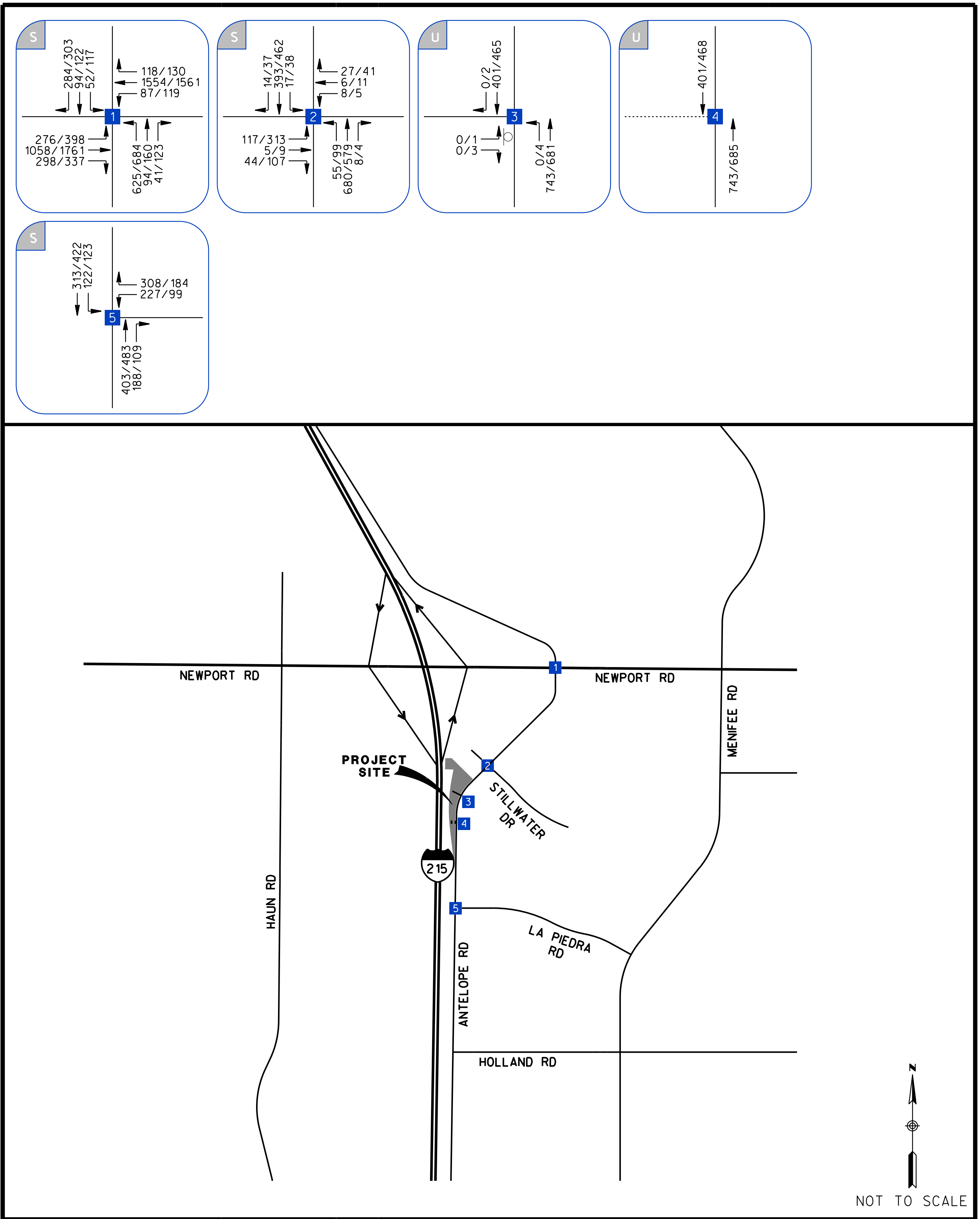
EXHIBIT 3

EXISTING CONDITIONS

MENIFEE HOME 2 SUITES

LEGEND

X =INTERSECTION NUMBER
S =SIGNALIZED
U =UNSIGNALIZED
○ =STOP CONTROL
...... =FUTURE DRIVEWAY



RICK™
ENGINEERING COMPANY

EXHIBIT 4

EXISTING TRAFFIC VOLUMES

MENIFEE HOME 2 SUITES

LEGEND

- X =INTERSECTION NUMBER
- S =SIGNALIZED
- U =UNSIGNALIZED
- ○ =STOP CONTROL
- ······ =FUTURE DRIVEWAY

XX/XX =AM/PM PEAK HR VOLUMES

3.3- EXISTING TRAFFIC OPERATIONS

The existing intersection operations results are based on existing base traffic volumes and existing intersection geometry.

Table 2 shows that all the studied intersections currently operate at acceptable levels of service (LOS D or better) for existing conditions.

Appendix C contains the intersection capacity analysis worksheets for all scenarios.

TABLE 2

EXISTING INTERSECTION OPERATIONS

#	INTERSECTION	CONTROL	DIR.	EXISTING (2023)			
				AM Peak		PM Peak	
				DELAY [1]	LOS [2]	DELAY [1]	LOS [2]
1	Antelope Road/Newport Road	(S)	-	47.4	D	51.8	D
2	Antelope Road/Stillwater Drive	(S)	-	32.7	C	40.2	D
3	Antelope Road/Living Spaces-Proj Dwy 1	(TWSC)	NB-L	0.0	A	8.4	A
			EB-LR	0.0	A	11.8	B
4	Antelope Road/Proj Dwy 2 (future)	N/A	-	0.0	-	0.0	-
5	Antelope Road/La Piedra Road	(S)	-	18.7	B	17.4	B

Footnotes:

Results calculated utilizing the methodologies described in Chapters 19 and 20 in the 6th edition of the HCM

[1] Delay is measured in seconds per vehicle. [2] Level of Service

(S)=Signal, (TWSC)=Two-Way Stop Controlled, N/A = Not Applicable

NB=Northbound, EB=Eastbound, etc.

L=Left turn lane, R=Right turn lane, LR=Left-Right lane.

4.0- PROJECT TRAFFIC

4.1- TRIP GENERATION

The project traffic volumes generated by the proposed development were estimated utilizing average driveway trip rates published in the *Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition* for an All-suites Hotel. The project is expected to generate approximately 466 Average Daily Traffic (ADT) with 36 (19 inbound and 17 outbound) AM peak hour trips and 38 (19 inbound and 19 outbound) PM peak hour trips.

Table 3 summarizes the anticipated trips that would be generated by the project.

TABLE 3
PROJECT TRIP GENERATION SUMMARY

LAND USE	ITE CODE	QUANTITY		DWY Rate[2]	ADT[3]	AM PEAK HOUR						PM PEAK HOUR					
						Peak Hr Rate	SPLIT		VOLUMES			Peak Hr Rate	SPLIT		VOLUMES		
							IN	OUT	IN	OUT	TOTAL		IN	OUT	IN	OUT	TOTAL
All Suites Hotel	310	**106**	RM[1]	4.4	**466**	0.34	53%	47%	**19**	**17**	**36**	0.36	49%	51%	**19**	**19**	**38**

[1] RM = Rooms

[2] Refer to ITE Trip Generation Manual, 11th Edition.

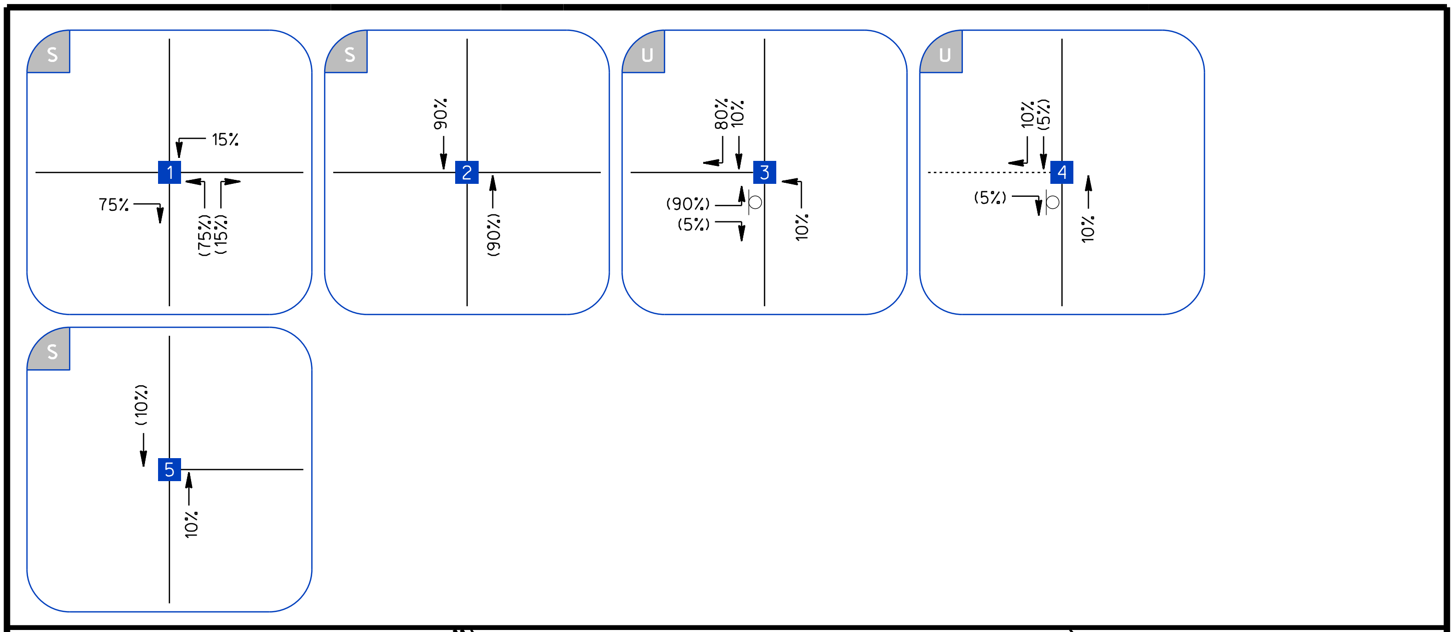
[3] ADT = Average Daily Traffic

4.2- TRIP DISTRIBUTION

The project traffic distribution was estimated based on the site's proximity to the nearby major roadways, freeways, existing, future traffic patterns, as well as adjacent land uses, and our knowledge of local traffic patterns in the surrounding area. Once the project distributions were established the project traffic volumes were added to the project area intersections.

Exhibit 5 illustrates the project distribution percentages.

Exhibit 6 illustrates the anticipated project traffic volumes.



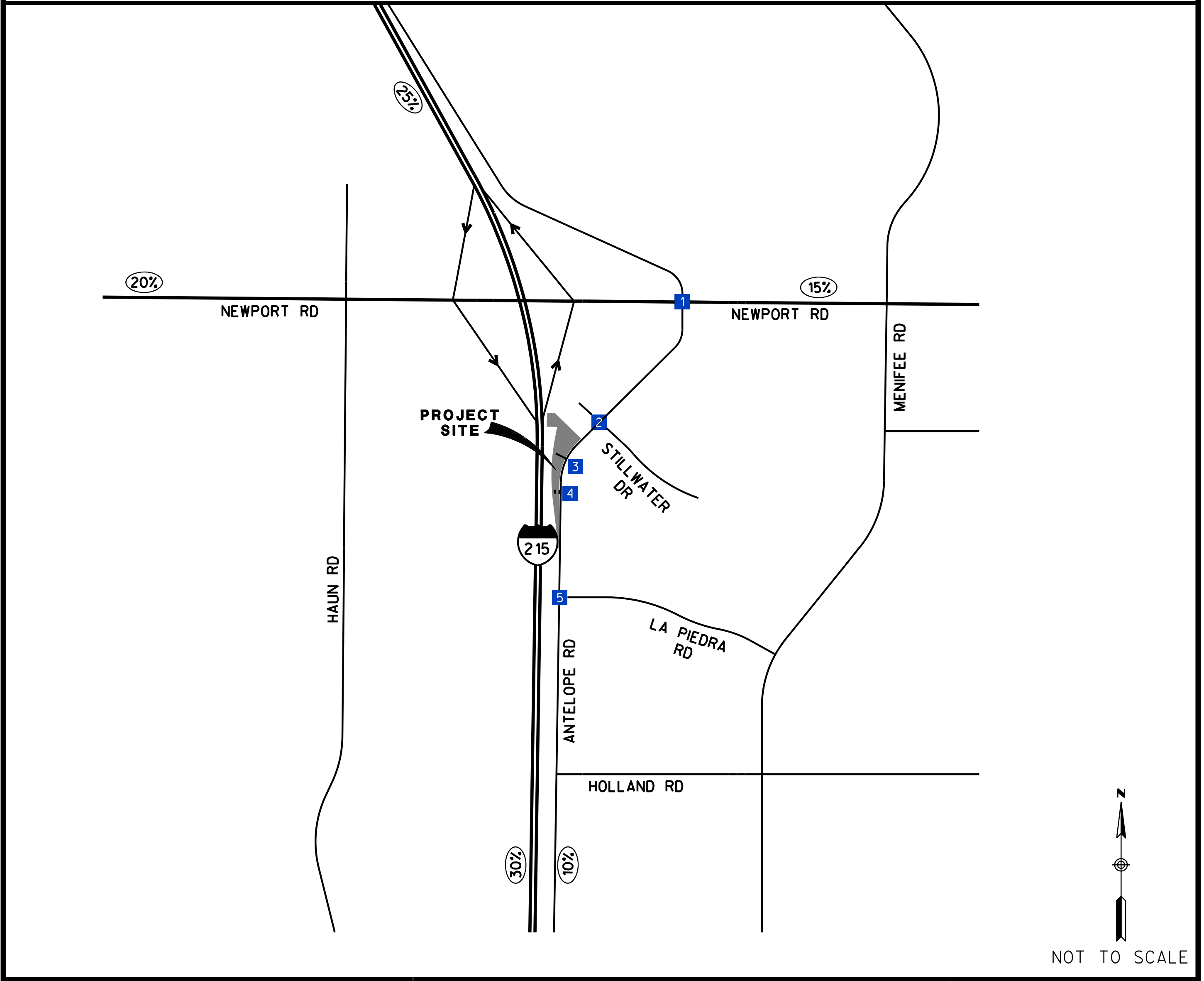


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EXHIBIT 5

PROJECT TRIP DISTRIBUTION

MENIFEE HOME 2 SUITES

LEGEND

X =INTERSECTION NUMBER
S =SIGNALIZED
U =UNSIGNALIZED
○ =STOP CONTROL
······ =FUTURE DRIVEWAY

(XX%)=PERCENT DISTRIBUTION
XX% =INBOUND PERCENT DISTRIBUTION
(XX%)=OUTBOUND PERCENT DISTRIBUTION

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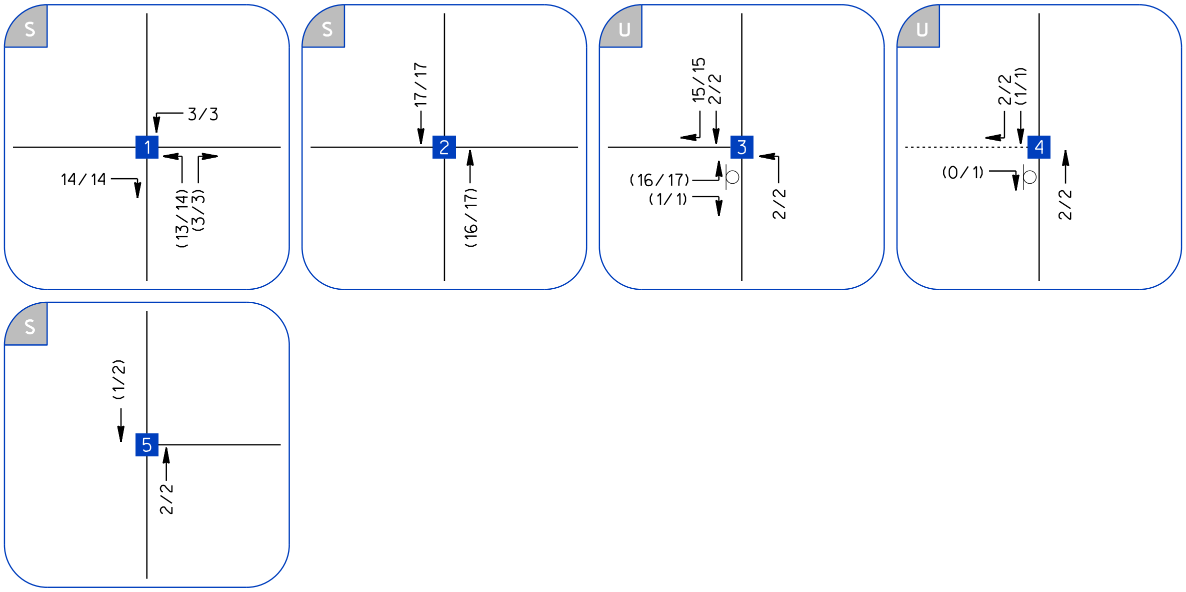
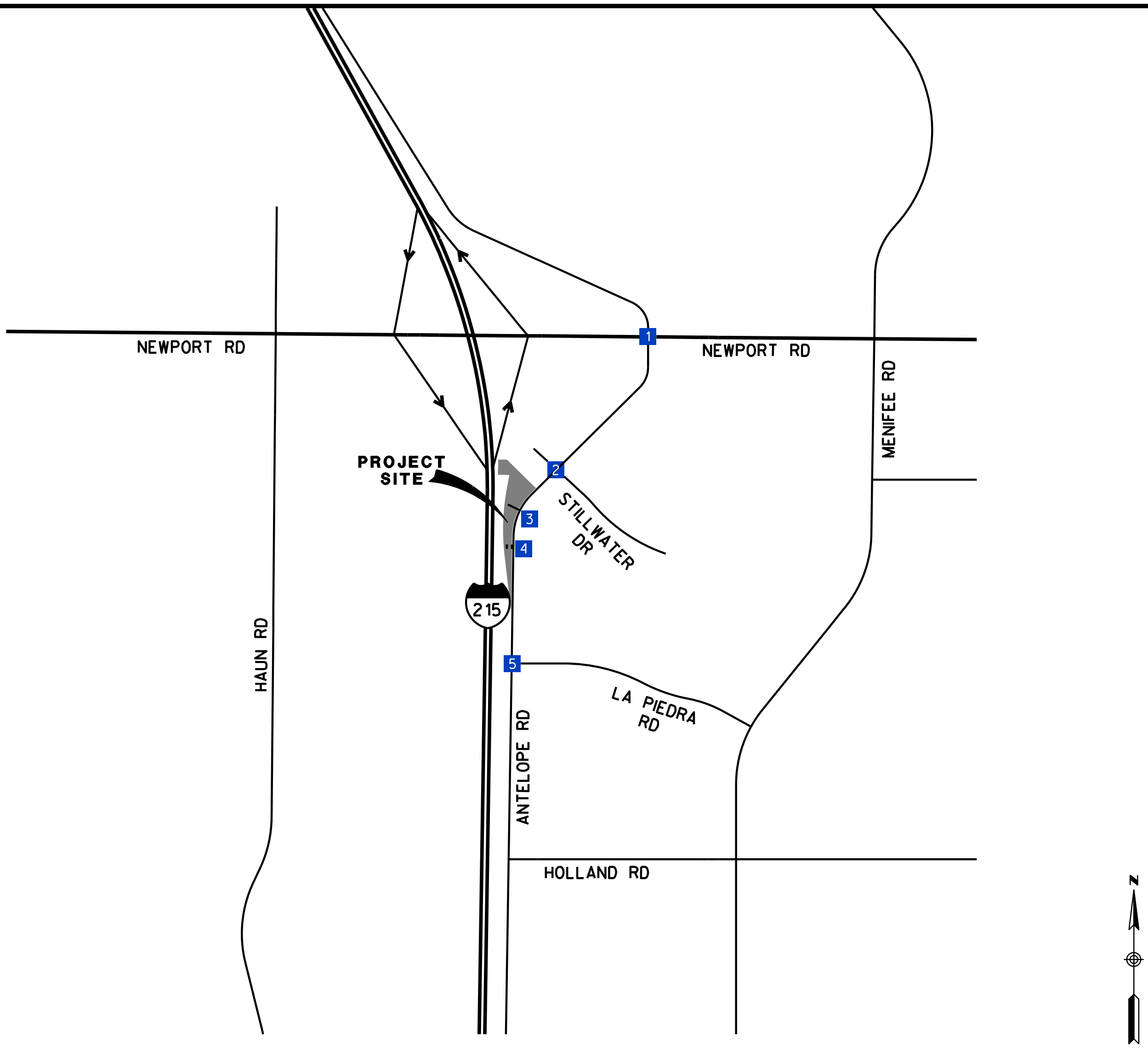
19-DEC-2023 11:05





NOT TO SCALE

RICK
ENGINEERING COMPANY

EXHIBIT 6

PROJECT TRAFFIC VOLUMES

MENIFEE HOME 2 SUITES

LEGEND

X =INTERSECTION NUMBER
S =SIGNALIZED
U =UNSIGNALIZED
○ =STOP CONTROL
┄┄ =FUTURE DRIVEWAY

XX/XX = INBOUND AM/PM PEAK HR VOLUMES
(XX/XX) = OUTBOUND AM/PM PEAK HR VOLUMES

5.0- PROJECT OPENING TRAFFIC CONDITIONS

5.1-EXISTING PLUS PROJECT TRAFFIC OPERATIONS

Exhibit 7 illustrates the Existing Plus Project traffic volumes.

Table 4 shows that all the studied intersections continue to operate at acceptable levels of service (LOS D or better) with project volumes added.

TABLE 4

EXISTING PLUS PROJECT INTERSECTION OPERATIONS SUMMARY

#	INTERSECTION	CONTROL	DIR.	EXISTING (2023)				EXISTING + PROJECT				INCREMENTAL DELAY (sec)		TRAFFIC IMPACT?
				AM Peak		PM Peak		AM Peak		PM Peak				
				DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	DELAY [1]	LOS [2]	AM	PM	YES/NO
1	Antelope Road/Newport Road	(S)	-	47.4	D	51.8	D	47.5	D	52.7	D	0.1	0.9	NO
2	Antelope Road/Stillwater Drive	(S)	-	32.7	C	40.2	D	32.0	C	40.9	D	-0.7	0.7	NO
3	Antelope Road/Living Spaces-Proj Dwy 1	(TWSC)	NB-L	0.0	A	8.4	A	8.3	A	8.5	A	8.3	0.1	NO
			EB-LR	0.0	A	11.8	B	17.4	C	17.5	C	17.4	5.7	NO
4	Antelope Road/Proj Dwy 2	(TWSC)	EB-R	0.0	A	0.0	A	0.0	A	9.9	A	0.0	9.9	NO
5	Antelope Road/La Piedra Road	(S)	-	18.7	B	17.4	B	23.4	C	15.0	B	4.7	-2.4	NO

Footnotes:

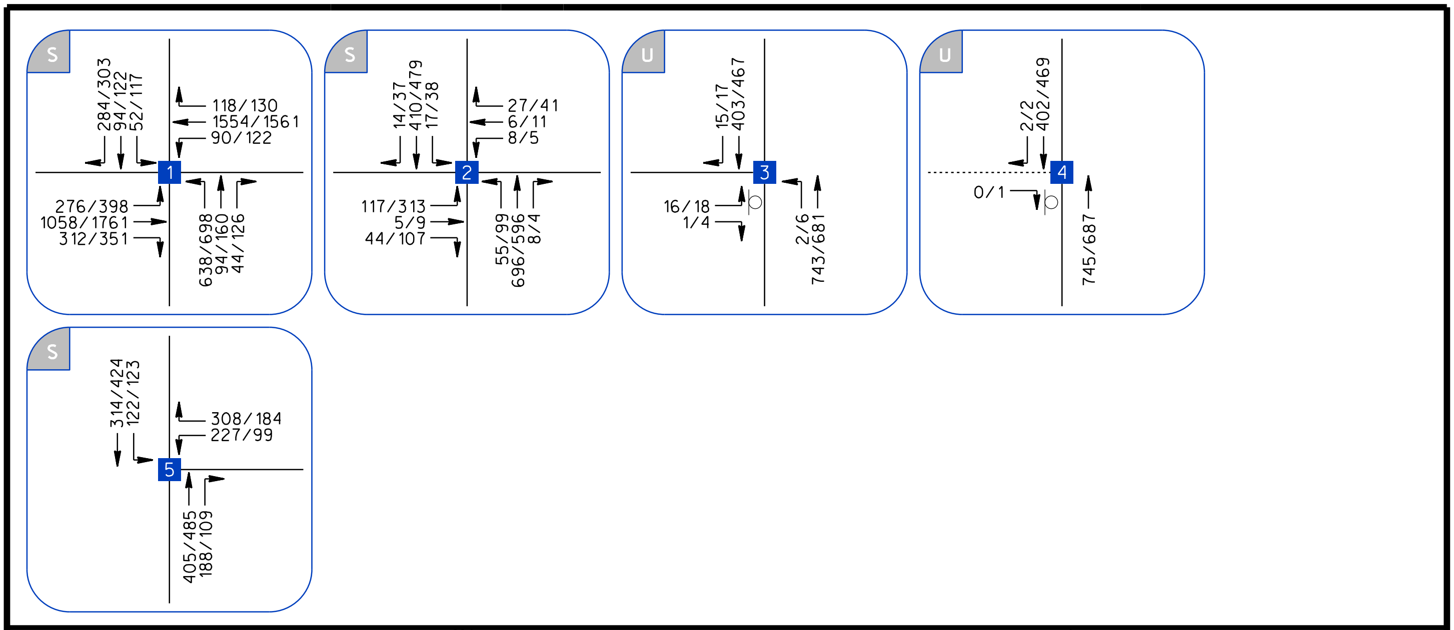
Results calculated utilizing the methodologies described in Chapters 19 and 20 in the 6th edition of the HCM

[1] Delay is measured in seconds per vehicle. [2] Level of Service

(S)=Signal, (TWSC)=Two-Way Stop Controlled

NB=Northbound, EB=Eastbound, etc.

L=Left turn lane, R=Right turn lane, LR=Left-Right lane.



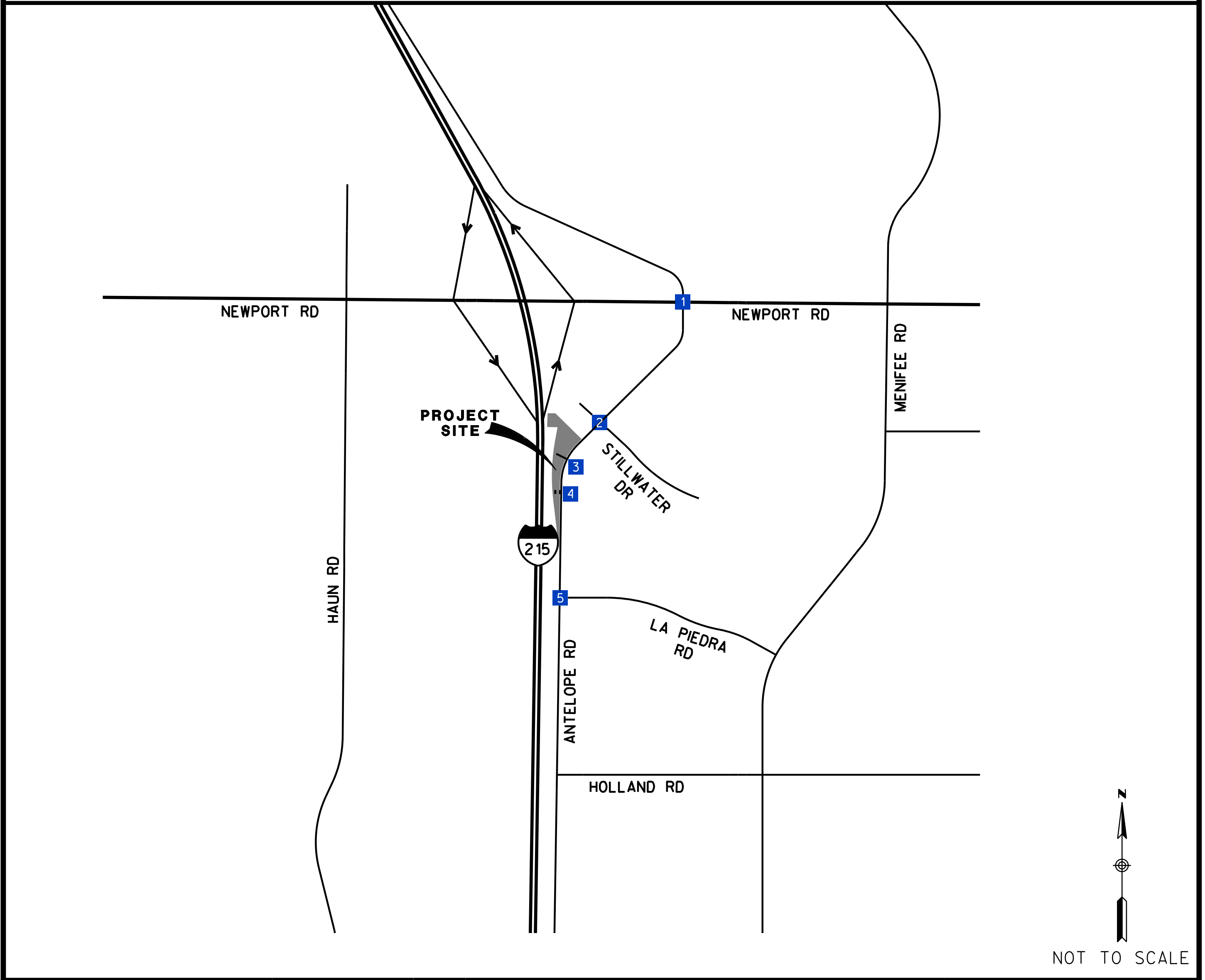


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EXHIBIT 7

EXISTING + PROJECT
TRAFFIC VOLUMES

MENIFEE HOME 2 SUITES

LEGEND

X =INTERSECTION NUMBER
S =SIGNALIZED
U =UNSIGNALIZED
○ =STOP CONTROL
······ =FUTURE DRIVEWAY
XX/XX =AM/PM PEAK HR VOLUMES

6.0- QUEUING ANALYSIS

The 95th percentile queue lengths were analyzed at the project driveways to determine if the existing or proposed storage lengths are sufficient. The Existing plus Project conditions were used to calculate the anticipated queues at the intersection turn lanes. The analysis is performed during the AM and PM peak hours. The SimTraffic application within the Synchro software program was used to perform the queuing analysis.

Table 5 contains a summary of the anticipated queue lengths at the project driveways.

TABLE 5
QUEUE SUMMARY

#	INTERSECTION	CONTROL	DIR.	No. OF LANES	STORAGE[1]	EXISTING + PROJECT	
						AM Peak	PM Peak
						QUEUE [2]	QUEUE [2]
3	Antelope Road/Living Spaces-Proj Dwy 1	(TWSC)	NB-L	1	120	0	0
			EB-LR	1	125	33	41
4	Antelope Road/Proj Dwy 2	(TWSC)	EB-R	1	50	0	0

Footnotes:

[1] Storage lengths, in feet, based on existing or proposed storage per lane

[2] Queue is equal to the 95th percentile queue length, in feet, based on SimTraffic 11 software results.

(TWSC)=Two-Way Stop Controlled

NB=Northbound, EB=Eastbound, etc.

L=Left turn lane, R=Right turn lane, LR=Left-Right lane.

An impact is assumed to occur if the queue extends 25 feet or more of the available storage, which is the typical storage for one car. As shown in Table 5, the projected queues are anticipated to fall within the existing storage or proposed storage.

Appendix D contains the queue results.

7.0- VEHICLE MILES TRAVELED (VMT) ASSESSMENT

This VMT Assessment is prepared in accordance with the California Environmental Quality Act (CEQA) Senate Bill (SB 743) requirements provided in *City of Menifee Traffic Impact Analysis Guidelines for Vehicle Miles traveled (June 2020).*

A VMT screening evaluation was conducted based on City's screening criteria, to determine if a project will be required to conduct a full VMT analysis. The criteria listed below was utilized to determine if the project would be screened out from VMT analysis due to project characteristics and/or location:

Transit Priority Area (TPA) Screening:

Projects located within a TPA may be presumed to have a less than significant impact. A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Currently, no TPA's exist in the City of Menifee, therefore, this project is not screened out under this criterion.

Low VMT Area Screening:

Per City's guidelines, WRCOG screening tool can be utilized to identify if a project is in a low VMT-generating area. The screening tool shows that the proposed project is located within a low VMT-generating area and presumed to have less than significant impact. Therefore, this project is screened out of this criterion and subsequently screened out of a detailed VMT analysis.

Appendix E contains the WRCOG Screening Tool Map.

Project Type Screening:

Local-serving projects may be presumed to have less than significant impact. The City of Menifee provides a list of uses that are local serving in nature, which includes a local-serving hotel. Based on this, the proposed all-suites hotel project is also screened out of this criterion and subsequently screened out of a detailed VMT analysis.

8.0- CONCLUSION

This traffic assessment evaluated the potential impacts due to the proposed Home 2 Suites project. The project is estimated to generate approximately 466 Average Daily Traffic (ADT) with 36 AM peak hour trips and 38 PM peak hour trips. Although, the project falls below the 500 ADT and the 50 peak hour trip thresholds to prepare LOS analysis per the *City of Menifee LOS Traffic Study Guidelines (October 2020)*, City identified the intersection of Antelope Road/Newport Road and the section of Antelope Road in which the project is fronting as significant per the City's general plan, thus, requiring LOS analysis for this project.

Intersection Analysis Findings

Based on the results of the analysis, all the studied intersections currently operate at acceptable levels of service (LOS D or better) and are expected to continue to operate at LOS D or better with the addition of the proposed project.

Queuing Analysis Findings

The results of the queuing analysis for the Existing plus Project scenario at the project driveways shows that the 95th percentile queue lengths are anticipated to fall within the existing or proposed storage.

VMT Assessment Findings

Based on the *City of Menifee Traffic Impact Analysis Guidelines for Vehicle Miles traveled (June 2020)*, the City requires a VMT analysis for this project, to address SB-743 for CEQA impacts. However, due to the nature of the project being a local-serving hotel and located in a low-VMT generating area, as shown in the WRCOG Screening Tool, the project is presumed to have less than significant impact and screened out of a VMT analysis.

APPENDIX A

PROJECT SCOPING FORM

Attachment A: Project Scoping Form

This scoping form shall be completed and submitted to the City of Menifee to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Home 2 Suites
Project Address:	30141 Antelope Road
Project Opening Year:	2024
Project Description:	All-suites hotel, consisting of 106 rooms with an extended stay option within Menifee Village Shopping Center.

	Consultant:	**Developer:**
Name:	Rick Engineering Company	Apollo Development Group
Address:	5620 Friars Road	2661 Pummelo Court
	San Diego, CA 92110	Escondido, CA 92037
Telephone:	619-291-0707	
Fax/Email:		

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition

Current General Plan Land Use:	Proposed General Plan Land Use:
Commercial - Menifee Village Specific Plan	Commercial - Menifee Village Specific Plan
Current Zoning:	Proposed Zoning:
C-P-S (Scenic Highway Commercial)	C-P-S (Scenic Highway Commercial)

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	19	17	36
PM Trips	0	0	0	19	19	38

Trip Internalization: ☐ Yes ☒ No (_______% Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (_______% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 11 of the guidelines related to LOS assessment and Pages 24-26).

Is the project screened from VMT assessment? ☒ Yes ☐ No

VMT screening justification (see Pages 24-26 of the guidelines): ________________________

Low VMT Area

Local Serving Hotel

VMT Analysis Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used ______________________________
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Signatures

TIA Preparer: Aida Edgington City (Approved by): _______________________________

10/12/2023

ATTACHMENT A

SCOPING AGREEMENT FOR TRAFFIC STUDY

This letter acknowledges the City Menifee Engineering Department requirements for the traffic study of the following project. The analysis must follow the latest City Traffic Study Guidelines dated October 2020

Case No. -
Related Cases -
SP No. -
EIR No. -
GPA No. -
CZ No. -
Project Name: Home 2 Suites
Project Location: 30141 Antelope Road
Project Description: All-suites hotel, consisting of 106 rooms with an extended stay option within Menifee Village Shopping Center.

	Consultant	Developer
Name:	Rick Engineering Company	Apollo Development Group
Address:	5620 Friars Road San Diego, CA 92110	2661 Pummelo Court Escondido, CA 92037
Telephone:	619-291-0707	

A. Trip Generation Source: ITE Trip Generation Manual, 11th Edition

Existing Land Use Commercial - Menifee Village Specific Plan
Proposed Land Use Commercial - Menifee Village Specific Plan
Existing Zoning C-P-S (Scenic Highway Commercial)
Proposed Zoning C-P-S (Scenic Highway Commercial)
Total Daily Trips

	In	Out	Total
AM Trips	19	17	36
PM Trips	19	19	38

Internal Trip Allowance ☐ Yes ☒ No (% Trip Discount)

Pass-By Trip Allowance ☐ Yes ☒ No (% Trip Discount)

(Attach additional sheet if this is a multi-use site with a breakdown of trips generated)

B. Trip Geographic Distribution: N % S % E % W %
(See attached exhibit for detailed assignment) See Exhibit 5 in the report

C. Background Traffic

Project Completion Year: 2024
Annual Ambient Growth Rate: % N/A
Other area projects to be included: -

Please contact the Engineering Department or use the most recently provided data

Model/Forecast methodology if required ______

D. Horizon Year Analysis: Does this project require a Horizon Year Analysis? ☐ Yes ☒ No

E. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Antelope Road/Newport Road
2. Antelope Road/Stillwater Drive
3. Antelope Road/Living Spaces Dwy-Project Dwy 1
4. Antelope Road/Project Dwy 2
5. Antelope Road/La Piedra Road
6.
7.
8.

F. Study Roadway Segments:

1.
2. N/A
3.
4.
5.
6.
7.
8.

G. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or one-mile radius of boundaries? ☒ Yes ☐ No

If so, name of Jurisdiction: Caltrans

H. Site Plan (please attach a legible 11'X17' copy)

I. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department)

______

______

Recommended by:

Aida Edgington
12/21/2023

Consultant's Representative ______ Date

Scoping Agreement Submitted on ______ Date

Scoping Agreement Resubmitted on ______ Date

Approved Scoping Agreement:

______

City of Menifee ______ Date

APPENDIX B

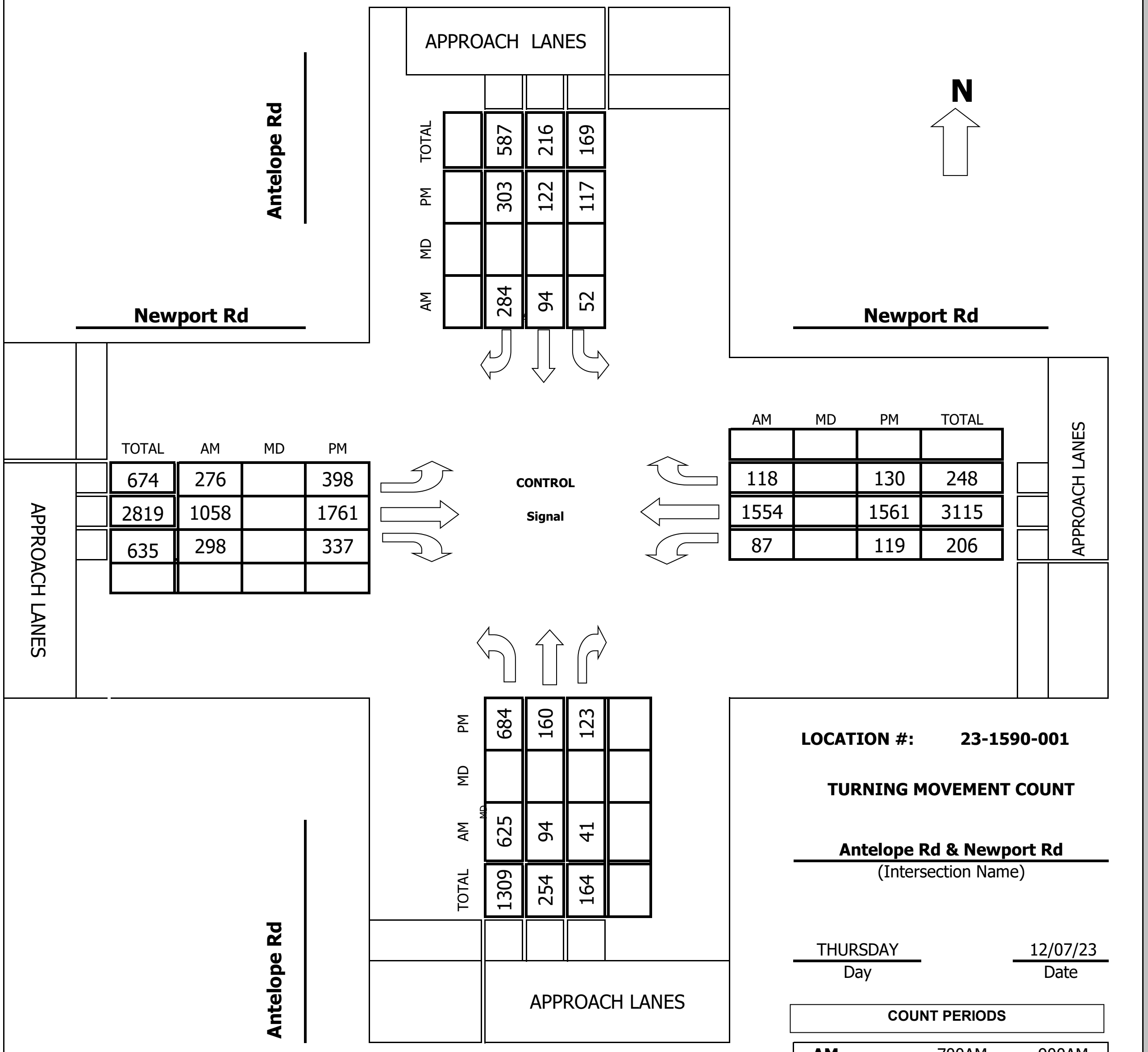
TRAFFIC COUNTS

Intersection Turning Movement
Prepared by:

Field Data Services of Arizona, Inc.
520.316.6745

Project #: 23-1590-001

TMC SUMMARY OF Antelope Rd & Newport Rd



TOTAL		587	216	169
PM		303	122	117
MD				
AM		284	94	52

TOTAL	AM	MD	PM
674	276		398
2819	1058		1761
635	298		337

AM	MD	PM	TOTAL
118		130	248
1554		1561	3115
87		119	206

PM	684	160	123	
MD				
AM	625	94	41	
TOTAL	1309	254	164	

LOCATION #: 23-1590-001

TURNING MOVEMENT COUNT

Antelope Rd & Newport Rd
(Intersection Name)

THURSDAY
Day

12/07/23
Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 745 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

Field Data Services of Arizona, Inc.
520.316.6745

veracitytrafficgroup

N-S STREET: Antelope Rd DATE: 12/07/23 LOCATION: Menifee

E-W STREET: Newport Rd DAY: THURSDAY PROJECT# 23-1590-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2.5	0.5	1	2	1	2	2	3	0	2	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	108	5	11	25	13	47	18	304	43	10	406	6	996
7:15 AM	130	12	28	25	29	66	42	254	66	10	384	27	1073
7:30 AM	179	18	10	16	24	82	61	253	70	22	373	39	1147
7:45 AM	164	15	10	11	28	81	48	265	102	21	388	28	1161
8:00 AM	175	27	13	12	23	67	82	268	57	20	382	26	1152
8:15 AM	125	23	9	16	20	72	85	254	67	25	393	30	1119
8:30 AM	161	29	9	13	23	64	61	271	72	21	391	34	1149
8:45 AM	136	13	13	14	17	74	57	276	76	41	362	29	1108
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	1178	142	103	132	177	553	454	2145	553	170	3079	219	8905
Approach %	82.78	9.98	7.24	15.31	20.53	64.15	14.40	68.05	17.54	4.90	88.78	6.31	
App/Depart	1423	/	815	862	/	900	3152	/	2380	3468	/	4810	

AM Peak Hr Begins at: 745 AM

PEAK													
Volumes	625	94	41	52	94	284	276	1058	298	87	1554	118	4581
Approach %	82.24	12.37	5.39	12.09	21.86	66.05	16.91	64.83	18.26	4.95	88.35	6.71	
PEAK HR. FACTOR:		0.884			0.896			0.983			0.982		0.986

CONTROL: Signal

COMMENT 1:

GPS: 33.685069, -117.167265

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745
veracitytrafficgroup

N-S STREET: Antelope Rd
0
E-W STREET: Newport Rd

DATE: 12/07/23
DAY: THURSDAY

LOCATION: Menifee
PROJECT# 23-1590-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2.5	0.5	1	2	1	2	2	3	0	2	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	181	39	24	25	26	89	81	406	65	43	388	23	1390
4:15 PM	134	46	36	34	24	89	111	480	70	29	384	38	1475
4:30 PM	160	49	35	31	34	65	102	389	134	25	375	37	1436
4:45 PM	141	38	25	36	24	77	109	498	86	35	397	24	1490
5:00 PM	190	38	35	29	35	75	97	401	75	28	365	34	1402
5:15 PM	193	35	28	21	29	86	90	473	42	31	424	35	1487
5:30 PM	133	29	19	29	33	93	94	435	70	34	366	32	1367
5:45 PM	167	43	21	27	25	95	99	449	63	18	347	44	1398
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	1299	317	223	232	230	669	783	3531	605	243	3046	267	11445
Approach %	70.64	17.24	12.13	20.51	20.34	59.15	15.92	71.78	12.30	6.83	85.66	7.51	
App/Depart	1839	/	1367	1131	/	1078	4919	/	3986	3556	/	5014	

PM Peak Hr Begins at: 430 PM

PEAK Volumes	684	160	123	117	122	303	398	1761	337	119	1561	130	5815
Approach %	70.73	16.55	12.72	21.59	22.51	55.90	15.95	70.55	13.50	6.57	86.24	7.18	
PEAK HR. FACTOR:		0.919			0.975			0.900			0.923		0.976

CONTROL: Signal
COMMENT 1: 0
GPS: 33.685069, -117.167265

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Antelope Rd
E-W STREET: Newport Rd

Date: 12/07/23
Day: THURSDAY

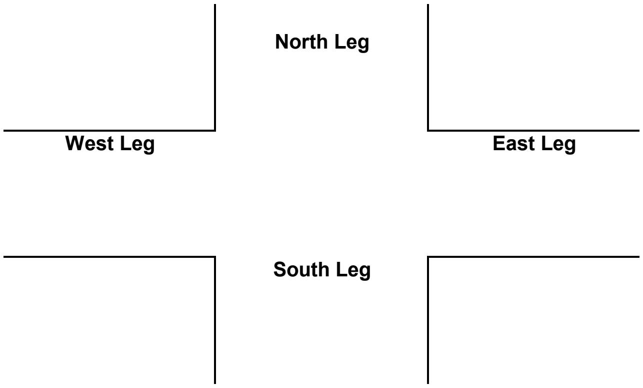
City: Menifee
Project #: 23-1590-001

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	1	0
7:15 AM	0	0	0	0
7:30 AM	1	2	2	0
7:45 AM	1	0	1	0
8:00 AM	0	0	1	0
8:15 AM	0	0	1	0
8:30 AM	0	0	0	3
8:45 AM	0	1	0	0
TOTAL	**2**	**3**	**6**	**3**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	1	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	1	0
8:30 AM	1	0	1	0
8:45 AM	1	0	1	0
TOTAL	**3**	**0**	**3**	**0**

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	2	0	1	0
4:30 PM	0	3	2	1
4:45 PM	3	1	2	2
5:00 PM	1	0	1	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	1	0	0	0
TOTAL	**7**	**4**	**6**	**3**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	1	2	0	0
4:45 PM	0	0	0	0
5:00 PM	1	0	0	0
5:15 PM	0	0	0	0
5:30 PM	2	0	0	0
5:45 PM	1	0	0	0
TOTAL	**5**	**2**	**0**	**0**

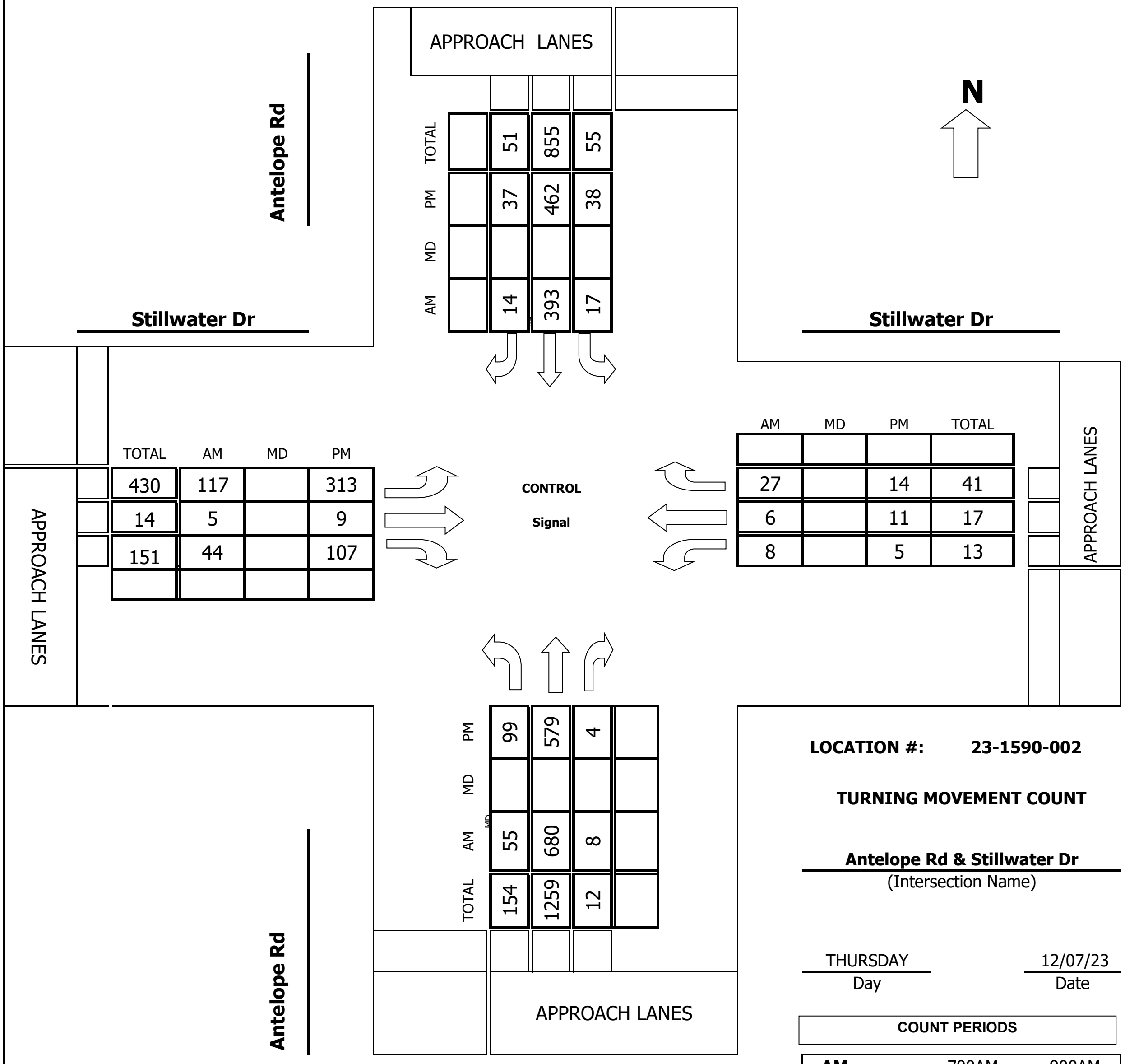


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 23-1590-002

TMC SUMMARY OF Antelope Rd & Stillwater Dr



TOTAL	51	855	55
PM	37	462	38
MD			
AM	14	393	17

TOTAL	AM	MD	PM
430	117		313
14	5		9
151	44		107

AM	MD	PM	TOTAL
27		14	41
6		11	17
8		5	13

PM	99	579	4
MD			
AM	55	680	8
TOTAL	154	1259	12

LOCATION #: 23-1590-002

TURNING MOVEMENT COUNT

Antelope Rd & Stillwater Dr
(Intersection Name)

THURSDAY	12/07/23
Day	Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	
PM PEAK HOUR	430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET: Antelope Rd
DATE: 12/07/23
LOCATION: Menifee

E-W STREET: Stillwater Dr
DAY: THURSDAY
PROJECT# 23-1590-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0.5	0.5	1	0.5	0.5	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	103	1	5	65	0	12	0	3	3	0	15	211
7:15 AM	8	125	1	4	69	0	15	0	5	3	0	9	239
7:30 AM	14	145	1	4	80	3	9	2	4	4	1	12	279
7:45 AM	10	191	0	4	112	1	18	0	8	3	1	8	356
8:00 AM	18	163	3	2	93	2	27	1	10	2	1	8	330
8:15 AM	11	174	4	7	99	4	31	3	9	3	3	5	353
8:30 AM	16	152	1	4	89	7	41	1	17	0	1	6	335
8:45 AM	12	107	0	1	87	6	49	3	8	3	2	5	283
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	93	1160	11	31	694	23	202	10	64	21	9	68	2386
Approach %	7.36	91.77	0.87	4.14	92.78	3.07	73.19	3.62	23.19	21.43	9.18	69.39	
App/Depart	1264	/	1430	748	/	779	276	/	52	98	/	125	

AM Peak Hr Begins at: 745 AM

PEAK													
Volumes	55	680	8	17	393	14	117	5	44	8	6	27	1374
Approach %	7.40	91.52	1.08	4.01	92.69	3.30	70.48	3.01	26.51	19.51	14.63	65.85	
PEAK HR. FACTOR:		0.924			0.906			0.703			0.854		0.965

CONTROL: Signal
COMMENT 1:
GPS: 33.681402, -117.168359

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET: Antelope Rd
0
E-W STREET: Stillwater Dr

DATE: 12/07/23
DAY: THURSDAY

LOCATION: Menifee
PROJECT# 23-1590-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0.5	0.5	1	0.5	0.5	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	23	128	3	7	122	4	74	0	22	1	1	8	393
4:15 PM	31	143	1	13	103	6	87	3	26	1	0	2	416
4:30 PM	21	166	2	11	128	5	83	0	30	1	3	4	454
4:45 PM	30	128	0	9	110	8	76	5	27	0	1	4	398
5:00 PM	22	133	2	11	105	17	77	2	28	2	1	2	402
5:15 PM	26	152	0	7	119	7	77	2	22	2	6	4	424
5:30 PM	32	155	4	10	106	7	74	5	19	0	0	5	417
5:45 PM	24	127	1	12	99	6	102	1	21	1	1	3	398
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	209	1132	13	80	892	60	650	18	195	8	13	32	3302
Approach %	15.44	83.60	0.96	7.75	86.43	5.81	75.32	2.09	22.60	15.09	24.53	60.38	
App/Depart	1354	/	1814	1032	/	1095	863	/	111	53	/	282	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	99	579	4	38	462	37	313	9	107	5	11	14	1678
Approach %	14.52	84.90	0.59	7.08	86.03	6.89	72.96	2.10	24.94	16.67	36.67	46.67	

PEAK HR. FACTOR:		0.902			0.932			0.949			0.625		0.924

CONTROL: Signal
COMMENT 1: 0
GPS: 33.681402, -117.168359

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Antelope Rd
E-W STREET: Stillwater Dr

Date: 12/07/23
Day: THURSDAY

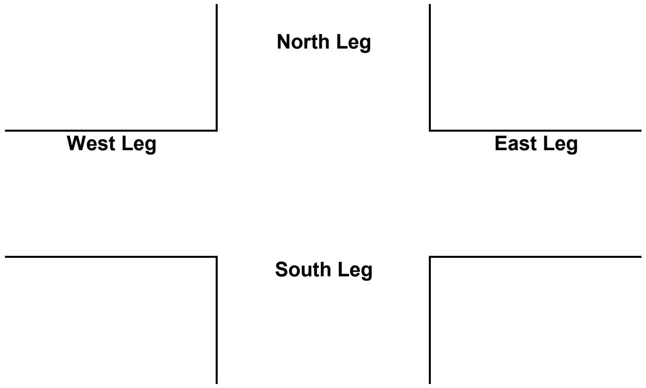
City: Menifee
Project #: 23-1590-002

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	2	1
7:45 AM	0	0	0	1
8:00 AM	0	3	0	4
8:15 AM	0	0	0	0
8:30 AM	0	2	2	0
8:45 AM	0	0	4	0
TOTAL	**0**	**5**	**8**	**6**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	1
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**1**

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	1	1	0
4:15 PM	0	2	0	0
4:30 PM	0	0	0	0
4:45 PM	0	3	0	0
5:00 PM	1	2	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**2**	**8**	**1**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	1
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	1
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**2**

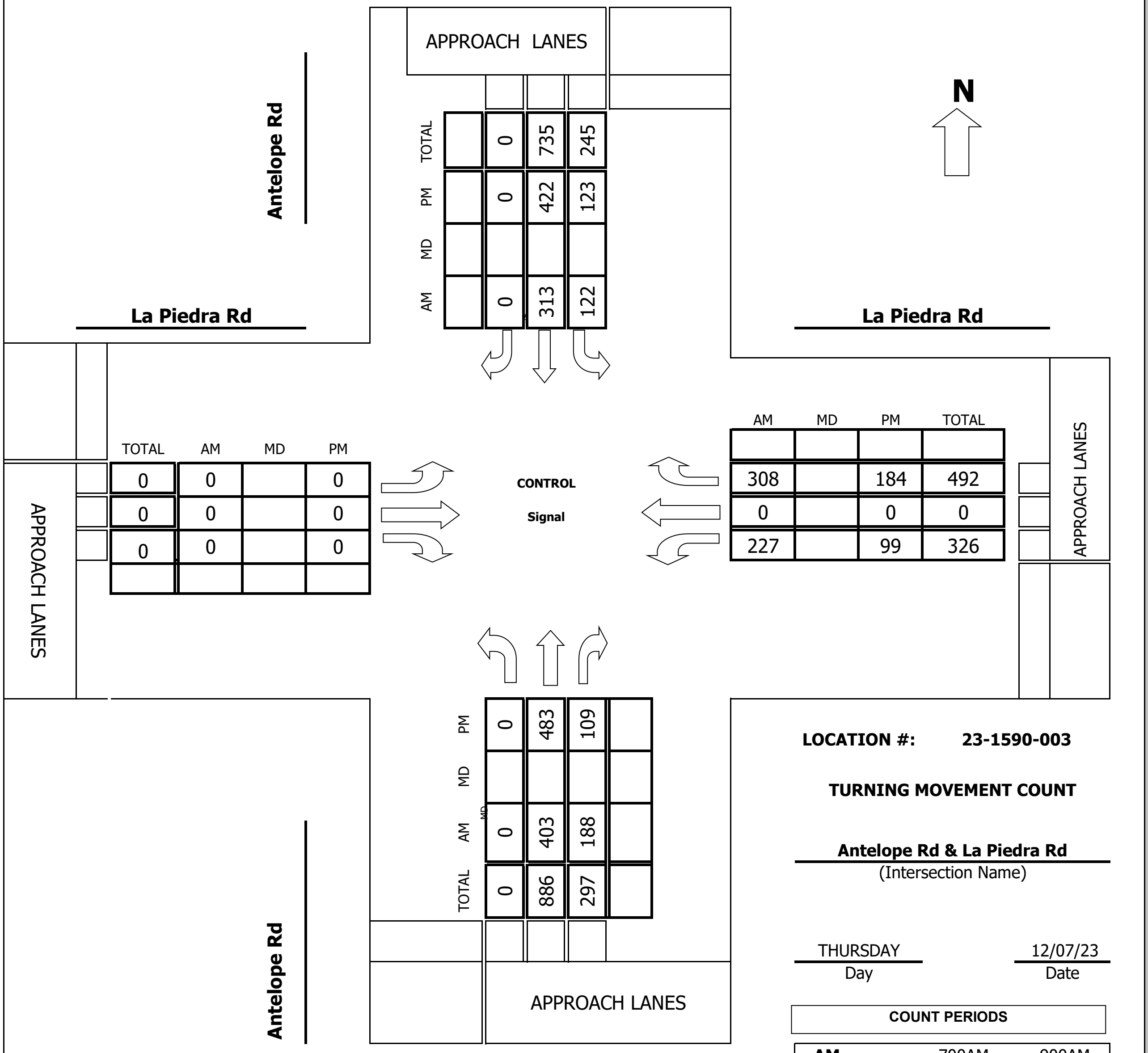


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: **23-1590-003**

TMC SUMMARY OF Antelope Rd & La Piedra Rd



TOTAL		0	735	245
PM		0	422	123
MD				
AM		0	313	122

TOTAL	AM	MD	PM
0	0		0
0	0		0
0	0		0

AM	MD	PM	TOTAL
308		184	492
0		0	0
227		99	326

PM	0	483	109	
MD				
AM	0	403	188	
TOTAL	0	886	297	

LOCATION #: **23-1590-003**

TURNING MOVEMENT COUNT

Antelope Rd & La Piedra Rd
(Intersection Name)

THURSDAY	12/07/23
Day	Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 745 AM

NOON PEAK HOUR

PM PEAK HOUR 400 PM

Intersection Turning Movement
Prepared by:

Field Data Services of Arizona, Inc.
520.316.6745

veracitytrafficgroup

N-S STREET: Antelope Rd

DATE: 12/07/23

LOCATION: Menifee

E-W STREET: La Piedra Rd

DAY: THURSDAY

PROJECT# 23-1590-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	1	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	75	2	6	55	0	0	0	0	12	0	24	174
7:15 AM	0	82	14	15	46	0	0	0	0	24	0	39	220
7:30 AM	0	89	15	18	69	0	0	0	0	30	0	57	278
7:45 AM	0	111	33	36	90	0	0	0	0	47	0	82	399
8:00 AM	0	102	65	28	71	0	0	0	0	78	0	77	421
8:15 AM	0	99	73	38	77	0	0	0	0	61	0	82	430
8:30 AM	0	91	17	20	75	0	0	0	0	41	0	67	311
8:45 AM	0	72	17	18	80	0	0	0	0	26	0	35	248
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	721	236	179	563	0	0	0	0	319	0	463	2481
Approach %	0.00	75.34	24.66	24.12	75.88	0.00	####	####	####	40.79	0.00	59.21	
App/Depart	957	/	1184	742	/	882	0	/	415	782	/	0	

AM Peak Hr Begins at: 745 AM

PEAK													
Volumes	0	403	188	122	313	0	0	0	0	227	0	308	1561
Approach %	0.00	68.19	31.81	28.05	71.95	0.00	####	####	####	42.43	0.00	57.57	

PEAK HR. FACTOR:	0.859	0.863	0.000	0.863	0.908

CONTROL: Signal

COMMENT 1:

GPS: 33.677002, -117.170321

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745
veracitytrafficgroup

N-S STREET: Antelope Rd
0
E-W STREET: La Piedra Rd

DATE: 12/07/23
DAY: THURSDAY

LOCATION: Menifee
PROJECT# 23-1590-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	1	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	119	27	27	106	0	0	0	0	27	0	38	344
4:15 PM	0	121	24	26	92	0	0	0	0	28	0	56	347
4:30 PM	0	143	30	40	127	0	0	0	0	28	0	43	411
4:45 PM	0	100	28	30	97	0	0	0	0	16	0	47	318
5:00 PM	0	124	25	23	95	0	0	0	0	21	0	35	323
5:15 PM	0	128	28	22	122	0	0	0	0	22	0	38	360
5:30 PM	0	133	29	31	83	0	0	0	0	33	0	45	354
5:45 PM	0	88	14	24	102	0	0	0	0	16	0	48	292
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	956	205	223	824	0	0	0	0	191	0	350	2749
Approach %	0.00	82.34	17.66	21.30	78.70	0.00	####	####	####	35.30	0.00	64.70	
App/Depart	1161	/	1306	1047	/	1015	0	/	428	541	/	0	

PM Peak Hr Begins at: 400 PM

PEAK Volumes	0	483	109	123	422	0	0	0	0	99	0	184	1420
Approach %	0.00	81.59	18.41	22.57	77.43	0.00	####	####	####	34.98	0.00	65.02	
PEAK HR. FACTOR:		0.855			0.816			0.000			0.842		0.864

CONTROL: Signal
COMMENT 1: 0
GPS: 33.677002, -117.170321

Field Data Services of Arizona, Inc. 520.316.6745 veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Antelope Rd
E-W STREET: La Piedra Rd

Date: 12/07/23
Day: THURSDAY

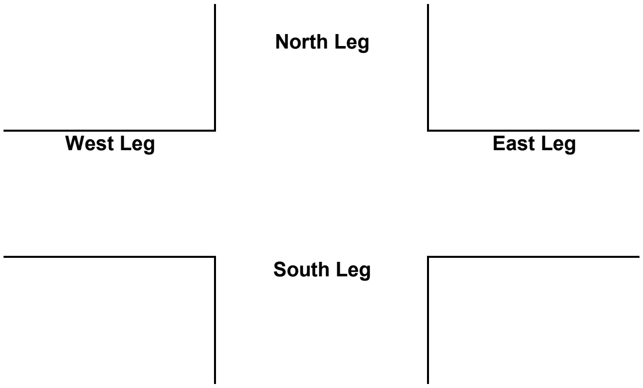
City: Menifee
Project #: 23-1590-003

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	1	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	1	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**2**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	1	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**1**	**0**

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	4	0
4:15 PM	0	0	1	0
4:30 PM	0	0	2	0
4:45 PM	0	0	0	0
5:00 PM	0	0	1	0
5:15 PM	0	0	1	0
5:30 PM	0	0	1	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**10**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



APPENDIX C

INTERSECTION CAPACITY ANALYSIS WORKSHEETS

1: Antelope Road & Newport Road

12/20/2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱	↰↰	↑↑↱	↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (vph)	276	1058	87	1554	625	94	41	52	94	284
Future Volume (vph)	276	1058	87	1554	625	94	41	52	94	284
Turn Type	Prot	NA	Prot	NA	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	1	6	5	2	8	8		4	4	1
Permitted Phases							8			4
Detector Phase	1	6	5	2	8	8	8	4	4	1
Switch Phase										
Minimum Initial (s)	4.0	15.0	4.0	15.0	15.0	15.0	15.0	15.0	15.0	4.0
Minimum Split (s)	22.5	28.0	22.5	28.0	27.0	27.0	27.0	22.5	22.5	22.5
Total Split (s)	22.8	60.8	22.6	60.6	34.0	34.0	34.0	22.6	22.6	22.8
Total Split (%)	16.3%	43.4%	16.1%	43.3%	24.3%	24.3%	24.3%	16.1%	16.1%	16.3%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Max	None	Max	None	None	None	None	None	None
Act Effct Green (s)	16.2	68.0	9.0	60.8	26.7	26.7	26.7	15.3	15.3	33.5
Actuated g/C Ratio	0.12	0.49	0.06	0.43	0.19	0.19	0.19	0.11	0.11	0.24
v/c Ratio	0.70	0.57	0.40	0.77	0.78	0.79	0.11	0.14	0.47	0.40
Control Delay	69.4	26.1	67.9	37.4	63.3	71.6	0.6	57.2	66.5	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	26.1	67.9	37.4	63.3	71.6	0.6	57.2	66.5	20.5
LOS	E	C	E	D	E	E	A	E	E	C
Approach Delay		33.4		38.9		62.6			35.0	
Approach LOS		C		D		E			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 6:EBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

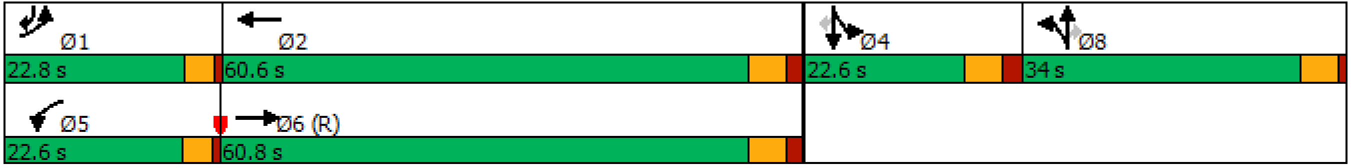
Maximum v/c Ratio: 0.79

Intersection Signal Delay: 40.5 Intersection LOS: D

Intersection Capacity Utilization 72.9% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Antelope Road & Newport Road



HCM 6th Signalized Intersection Summary
1: Antelope Road & Newport Road

Timing Plan: Existing AM
12/20/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱		↰↰	↑↑↱		↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (veh/h)	276	1058	298	87	1554	118	625	94	41	52	94	284
Future Volume (veh/h)	276	1058	298	87	1554	118	625	94	41	52	94	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	279	1069	301	88	1570	119	558	198	41	53	95	287
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1767	497	140	1888	143	640	336	285	374	202	572
Arrive On Green	0.10	0.45	0.45	0.04	0.39	0.39	0.18	0.18	0.18	0.11	0.11	0.11
Sat Flow, veh/h	3456	3959	1114	3456	4842	367	3563	1870	1585	3456	1870	2790
Grp Volume(v), veh/h	279	919	451	88	1104	585	558	198	41	53	95	287
Grp Sat Flow(s),veh/h/ln	1728	1702	1670	1728	1702	1804	1781	1870	1585	1728	1870	1395
Q Serve(g_s), s	11.1	28.7	28.7	3.5	41.0	41.0	21.3	13.6	3.0	1.9	6.7	12.8
Cycle Q Clear(g_c), s	11.1	28.7	28.7	3.5	41.0	41.0	21.3	13.6	3.0	1.9	6.7	12.8
Prop In Lane	1.00		0.67	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	1520	745	140	1328	704	640	336	285	374	202	572
V/C Ratio(X)	0.83	0.60	0.61	0.63	0.83	0.83	0.87	0.59	0.14	0.14	0.47	0.50
Avail Cap(c_a), veh/h	464	1520	745	459	1328	704	738	387	328	410	222	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	29.4	29.4	66.1	38.5	38.6	55.9	52.7	48.4	56.5	58.7	49.3
Incr Delay (d2), s/veh	8.9	1.8	3.6	4.5	6.2	11.1	10.1	1.8	0.2	0.2	1.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	12.1	12.3	1.6	18.1	20.2	10.5	6.6	1.2	0.9	3.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	31.2	33.0	70.7	44.7	49.6	65.9	54.5	48.6	56.7	60.3	50.0
LnGrp LOS	E	C	C	E	D	D	E	D	D	E	E	D
Approach Vol, veh/h		1649			1777			797			435	
Approach Delay, s/veh		38.4			47.6			62.2			53.1	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.6	60.6		21.1	9.7	68.5		30.1				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	18.8	54.6		16.6	18.6	54.8		29.0				
Max Q Clear Time (g_c+I1), s	13.1	43.0		14.8	5.5	30.7		23.3				
Green Ext Time (p_c), s	0.5	8.2		0.4	0.2	10.9		1.8				

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	44	6	27	55	680	17	393
Future Volume (vph)	5	44	6	27	55	680	17	393
Turn Type	NA	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases	6		2		3	8	7	4
Permitted Phases		6		2				
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	4.0	15.0	4.0	15.0
Minimum Split (s)	28.0	28.0	28.0	28.0	9.5	24.0	9.5	28.0
Total Split (s)	28.0	28.0	29.4	29.4	13.0	33.0	9.6	29.6
Total Split (%)	28.0%	28.0%	29.4%	29.4%	13.0%	33.0%	9.6%	29.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	Max	None	None	None	None
Act Effct Green (s)	15.4	15.4	23.6	23.6	7.6	24.5	5.6	18.6
Actuated g/C Ratio	0.18	0.18	0.28	0.28	0.09	0.29	0.07	0.22
v/c Ratio	0.39	0.11	0.03	0.05	0.36	0.70	0.15	0.54
Control Delay	37.1	0.6	26.1	0.2	45.2	31.6	44.1	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	0.6	26.1	0.2	45.2	31.6	44.1	32.8
LOS	D	A	C	A	D	C	D	C
Approach Delay	27.5		8.8			32.6		33.2
Approach LOS	C		A			C		C

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 85.2

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

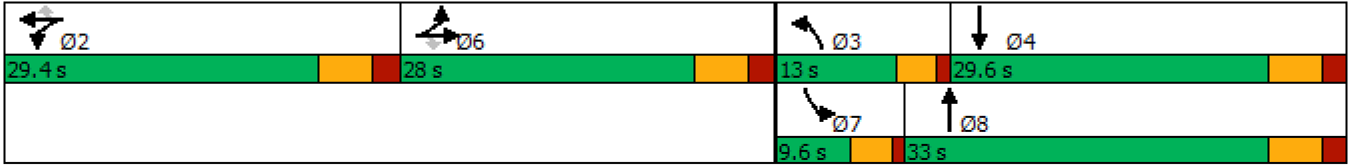
Maximum v/c Ratio: 0.70

Intersection Signal Delay: 31.5 Intersection LOS: C

Intersection Capacity Utilization 59.1% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Antelope Road & Stillwater Drive



2: Antelope Road & Stillwater Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		↰	↱		↰	↱	↖	↑↱		↖	↑↱	
Traffic Volume (veh/h)	117	5	44	8	6	27	55	680	8	17	393	14
Future Volume (veh/h)	117	5	44	8	6	27	55	680	8	17	393	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	5	45	8	6	28	57	701	8	18	405	14
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	13	286	299	224	455	73	885	10	29	775	27
Arrive On Green	0.18	0.18	0.18	0.29	0.29	0.29	0.04	0.25	0.25	0.02	0.22	0.22
Sat Flow, veh/h	1714	71	1585	1039	779	1585	1781	3599	41	1781	3505	121
Grp Volume(v), veh/h	126	0	45	14	0	28	57	346	363	18	205	214
Grp Sat Flow(s),veh/h/ln	1785	0	1585	1818	0	1585	1781	1777	1863	1781	1777	1849
Q Serve(g_s), s	5.1	0.0	2.0	0.5	0.0	1.0	2.6	14.9	14.9	0.8	8.3	8.3
Cycle Q Clear(g_c), s	5.1	0.0	2.0	0.5	0.0	1.0	2.6	14.9	14.9	0.8	8.3	8.3
Prop In Lane	0.96		1.00	0.57		1.00	1.00		0.02	1.00		0.07
Lane Grp Cap(c), veh/h	322	0	286	522	0	455	73	437	458	29	393	409
V/C Ratio(X)	0.39	0.00	0.16	0.03	0.00	0.06	0.78	0.79	0.79	0.62	0.52	0.52
Avail Cap(c_a), veh/h	482	0	428	522	0	455	197	589	618	122	515	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	28.2	20.8	0.0	21.1	38.7	28.8	28.8	39.8	27.9	27.9
Incr Delay (d2), s/veh	0.8	0.0	0.3	0.1	0.0	0.3	16.2	5.3	5.0	19.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.7	0.2	0.0	0.4	1.4	6.7	7.0	0.5	3.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	0.0	28.4	20.9	0.0	21.3	54.9	34.0	33.8	58.9	29.0	29.0
LnGrp LOS	C	A	C	C	A	C	D	C	C	E	C	C
Approach Vol, veh/h		171			42			766			437	
Approach Delay, s/veh		29.7			21.2			35.5			30.2	
Approach LOS		C			C			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		29.4	7.3	24.0		20.7	5.3	26.0				
Change Period (Y+Rc), s		6.0	4.0	6.0		6.0	4.0	6.0				
Max Green Setting (Gmax), s		23.4	9.0	23.6		22.0	5.6	27.0				
Max Q Clear Time (g_c+I1), s		3.0	4.6	10.3		7.1	2.8	16.9				
Green Ext Time (p_c), s		0.1	0.0	2.0		0.7	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			32.7									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	1021	1083	1620	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1021	1083	1620	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1620	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	1083	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1083	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

5: Antelope Road & La Piedra Road

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↰	↱	↑↱	↰	↑↑
Traffic Volume (vph)	227	308	403	122	313
Future Volume (vph)	227	308	403	122	313
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	41.1	41.1	41.4	22.5	22.5
Total Split (s)	42.0	42.0	45.0	23.0	68.0
Total Split (%)	38.2%	38.2%	40.9%	20.9%	61.8%
Yellow Time (s)	4.1	4.1	4.4	3.6	4.4
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.4	4.6	6.4
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.4	15.4	18.5	12.5	30.7
Actuated g/C Ratio	0.26	0.26	0.31	0.21	0.51
v/c Ratio	0.55	0.51	0.59	0.37	0.19
Control Delay	27.1	6.1	19.4	29.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	6.1	19.4	29.1	7.8
LOS	C	A	B	C	A
Approach Delay	15.0		19.4		13.8
Approach LOS	B		B		B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 60
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 16.4 Intersection LOS: B
Intersection Capacity Utilization 52.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Antelope Road & La Piedra Road

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↑↱		↰	↑↑
Traffic Volume (veh/h)	227	308	403	188	122	313
Future Volume (veh/h)	227	308	403	188	122	313
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	338	443	207	134	344
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	473	421	654	303	300	1861
Arrive On Green	0.27	0.27	0.28	0.28	0.17	0.52
Sat Flow, veh/h	1781	1585	2452	1092	1781	3647
Grp Volume(v), veh/h	249	338	333	317	134	344
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1674	1781	1777
Q Serve(g_s), s	7.1	11.8	9.9	10.0	4.0	3.0
Cycle Q Clear(g_c), s	7.1	11.8	9.9	10.0	4.0	3.0
Prop In Lane	1.00	1.00		0.65	1.00	
Lane Grp Cap(c), veh/h	473	421	493	464	300	1861
V/C Ratio(X)	0.53	0.80	0.68	0.68	0.45	0.18
Avail Cap(c_a), veh/h	1078	959	1156	1089	553	3691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	20.3	19.0	19.1	22.2	7.5
Incr Delay (d2), s/veh	0.9	3.6	1.6	1.8	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.4	3.9	3.8	1.7	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	23.9	20.7	20.9	23.2	7.5
LnGrp LOS	B	C	C	C	C	A
Approach Vol, veh/h	587		650			478
Approach Delay, s/veh	22.1		20.8			11.9
Approach LOS	C		C			B

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.6	22.9				37.5		21.9
Change Period (Y+Rc), s	4.6	6.4				6.4		6.1
Max Green Setting (Gmax), s	18.4	38.6				61.6		35.9
Max Q Clear Time (g_c+I1), s	6.0	12.0				5.0		13.8
Green Ext Time (p_c), s	0.3	4.4				2.5		2.0

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱	↰↰	↑↑↱	↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (vph)	398	1761	119	1561	684	160	123	117	122	303
Future Volume (vph)	398	1761	119	1561	684	160	123	117	122	303
Turn Type	Prot	NA	Prot	NA	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	1	6	5	2	8	8		4	4	1
Permitted Phases							8			4
Detector Phase	1	6	5	2	8	8	8	4	4	1
Switch Phase										
Minimum Initial (s)	4.0	15.0	4.0	15.0	15.0	15.0	15.0	15.0	15.0	4.0
Minimum Split (s)	22.5	28.0	22.5	28.0	23.0	23.0	23.0	22.5	22.5	22.5
Total Split (s)	24.4	64.8	22.6	63.0	30.0	30.0	30.0	22.6	22.6	24.4
Total Split (%)	17.4%	46.3%	16.1%	45.0%	21.4%	21.4%	21.4%	16.1%	16.1%	17.4%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Max	None	Max	None	None	None	None	None	None
Act Effct Green (s)	19.6	67.1	10.3	57.8	26.0	26.0	26.0	15.6	15.6	37.2
Actuated g/C Ratio	0.14	0.48	0.07	0.41	0.19	0.19	0.19	0.11	0.11	0.27
v/c Ratio	0.85	0.89	0.48	0.83	0.95	0.96	0.32	0.31	0.60	0.39
Control Delay	75.4	38.8	68.3	40.9	81.9	98.8	10.2	59.4	71.7	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	38.8	68.3	40.9	81.9	98.8	10.2	59.4	71.7	19.7
LOS	E	D	E	D	F	F	B	E	E	B
Approach Delay		44.6		42.7		77.8			40.0	
Approach LOS		D		D		E			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 6:EBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 49.1 Intersection LOS: D

Intersection Capacity Utilization 90.4% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Antelope Road & Newport Road

1: Antelope Road & Newport Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑↱		↰↰	↑↑↑↱		↰↰	↰↑	↱	↰↰	↑	↱↱
Traffic Volume (veh/h)	398	1761	337	119	1561	130	684	160	123	117	122	303
Future Volume (veh/h)	398	1761	337	119	1561	130	684	160	123	117	122	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	406	1797	344	121	1593	133	636	250	126	119	124	309
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	458	2109	398	175	1955	163	636	334	283	385	208	680
Arrive On Green	0.13	0.49	0.49	0.05	0.41	0.41	0.18	0.18	0.18	0.11	0.11	0.11
Sat Flow, veh/h	3456	4313	815	3456	4802	401	3563	1870	1585	3456	1870	2790
Grp Volume(v), veh/h	406	1413	728	121	1129	597	636	250	126	119	124	309
Grp Sat Flow(s),veh/h/ln	1728	1702	1724	1728	1702	1798	1781	1870	1585	1728	1870	1395
Q Serve(g_s), s	16.2	50.8	52.3	4.8	41.2	41.3	25.0	17.7	9.9	4.4	8.8	13.2
Cycle Q Clear(g_c), s	16.2	50.8	52.3	4.8	41.2	41.3	25.0	17.7	9.9	4.4	8.8	13.2
Prop In Lane	1.00		0.47	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	1665	843	175	1386	732	636	334	283	385	208	680
V/C Ratio(X)	0.89	0.85	0.86	0.69	0.81	0.82	1.00	0.75	0.45	0.31	0.60	0.45
Avail Cap(c_a), veh/h	504	1665	843	459	1386	732	636	334	283	410	222	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	31.2	31.6	65.4	36.8	36.8	57.5	54.5	51.3	57.3	59.2	45.0
Incr Delay (d2), s/veh	16.3	5.6	11.4	4.9	5.4	9.7	35.6	9.0	1.1	0.5	3.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	21.8	24.1	2.3	18.1	20.0	14.4	9.2	4.1	2.0	4.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	36.9	43.0	70.3	42.2	46.6	93.1	63.5	52.4	57.7	63.1	45.5
LnGrp LOS	E	D	D	E	D	D	F	E	D	E	E	D
Approach Vol, veh/h		2547			1847			1012			552	
Approach Delay, s/veh		44.9			45.4			80.7			52.1	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.5	63.0		21.6	11.1	74.5		30.0				
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	20.4	57.0		16.6	18.6	58.8		25.0				
Max Q Clear Time (g_c+I1), s	18.2	43.3		15.2	6.8	54.3		27.0				
Green Ext Time (p_c), s	0.4	9.5		0.4	0.2	4.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

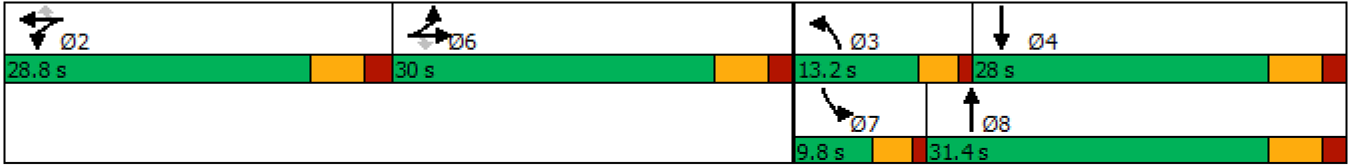
User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

	→	↘	←	↖	↖	↑	↘	↓
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰↑	↱	↰↑	↱	↰	↑↱	↰	↑↱
Traffic Volume (vph)	9	107	11	41	99	579	38	462
Future Volume (vph)	9	107	11	41	99	579	38	462
Turn Type	NA	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases	6		2		3	8	7	4
Permitted Phases		6		2				
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	4.0	15.0	4.0	15.0
Minimum Split (s)	28.0	28.0	28.0	28.0	9.5	28.0	9.5	28.0
Total Split (s)	30.0	30.0	28.8	28.8	13.2	31.4	9.8	28.0
Total Split (%)	30.0%	30.0%	28.8%	28.8%	13.2%	31.4%	9.8%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	Max	None	None	None	None
Act Effct Green (s)	21.7	21.7	22.9	22.9	8.8	26.8	5.8	19.6
Actuated g/C Ratio	0.23	0.23	0.24	0.24	0.09	0.28	0.06	0.21
v/c Ratio	0.87	0.25	0.04	0.09	0.66	0.64	0.38	0.75
Control Delay	57.8	4.7	30.3	0.4	63.7	34.6	55.8	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	4.7	30.3	0.4	63.7	34.6	55.8	42.2
LOS	E	A	C	A	E	C	E	D
Approach Delay	44.6		8.6			38.8		43.2
Approach LOS	D		A			D		D

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 95.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 61.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Antelope Road & Stillwater Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	313	9	107	5	11	41	99	579	4	38	462	37
Future Volume (veh/h)	313	9	107	5	11	41	99	579	4	38	462	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	10	116	5	12	45	108	629	4	41	502	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	391	11	358	140	337	410	137	857	5	52	629	50
Arrive On Green	0.23	0.23	0.23	0.26	0.26	0.26	0.08	0.24	0.24	0.03	0.19	0.19
Sat Flow, veh/h	1733	51	1585	542	1301	1585	1781	3620	23	1781	3335	265
Grp Volume(v), veh/h	350	0	116	17	0	45	108	309	324	41	267	275
Grp Sat Flow(s),veh/h/ln	1784	0	1585	1843	0	1585	1781	1777	1866	1781	1777	1823
Q Serve(g_s), s	16.6	0.0	5.4	0.6	0.0	1.9	5.2	14.1	14.1	2.0	12.6	12.7
Cycle Q Clear(g_c), s	16.6	0.0	5.4	0.6	0.0	1.9	5.2	14.1	14.1	2.0	12.6	12.7
Prop In Lane	0.97		1.00	0.29		1.00	1.00		0.01	1.00		0.15
Lane Grp Cap(c), veh/h	402	0	358	477	0	410	137	420	442	52	335	344
V/C Ratio(X)	0.87	0.00	0.32	0.04	0.00	0.11	0.79	0.73	0.73	0.80	0.80	0.80
Avail Cap(c_a), veh/h	486	0	432	477	0	410	186	513	538	117	444	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	28.5	24.4	0.0	24.9	39.9	31.0	31.0	42.5	34.1	34.1
Incr Delay (d2), s/veh	13.6	0.0	0.5	0.1	0.0	0.5	14.5	4.3	4.1	23.4	7.3	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	2.1	0.3	0.0	0.8	2.8	6.4	6.7	1.2	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	29.0	24.5	0.0	25.4	54.5	35.3	35.1	65.9	41.4	41.5
LnGrp LOS	D	A	C	C	A	C	D	D	D	E	D	D
Approach Vol, veh/h		466			62			741			583	
Approach Delay, s/veh		42.1			25.2			38.0			43.1	
Approach LOS		D			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.8	10.8	22.6		25.9	6.5	26.8				
Change Period (Y+Rc), s		6.0	4.0	6.0		6.0	4.0	6.0				
Max Green Setting (Gmax), s		22.8	9.2	22.0		24.0	5.8	25.4				
Max Q Clear Time (g_c+I1), s		3.9	7.2	14.7		18.6	4.0	16.1				
Green Ext Time (p_c), s		0.1	0.0	1.9		1.2	0.0	2.6				

Intersection Summary			
HCM 6th Ctrl Delay			40.2
HCM 6th LOS			D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑↑	↑↱	
Traffic Vol, veh/h	1	3	4	681	465	2
Future Vol, veh/h	1	3	4	681	465	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	4	740	505	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	884	254	507	0	-	0
Stage 1	506	-	-	-	-	-
Stage 2	378	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	285	745	1054	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	284	745	1054	-	-	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	11.8		0		0	
HCM LOS	B					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1054	-	530	-	-
HCM Lane V/C Ratio	0.004	-	0.008	-	-
HCM Control Delay (s)	8.4	-	11.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	1083	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1083	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↰	↱	↑↱	↰	↑↑
Traffic Volume (vph)	99	184	483	123	422
Future Volume (vph)	99	184	483	123	422
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	41.1	41.1	41.4	22.5	22.5
Total Split (s)	42.0	42.0	45.0	23.0	68.0
Total Split (%)	38.2%	38.2%	40.9%	20.9%	61.8%
Yellow Time (s)	4.1	4.1	4.4	3.6	4.4
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.4	4.6	6.4
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	None
Act Effct Green (s)	10.8	10.8	38.7	12.2	55.5
Actuated g/C Ratio	0.14	0.14	0.49	0.15	0.70
v/c Ratio	0.48	0.53	0.40	0.52	0.20
Control Delay	38.7	10.2	13.8	38.5	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	10.2	13.8	38.5	4.4
LOS	D	B	B	D	A
Approach Delay	20.2		13.8		12.1
Approach LOS	C		B		B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 78.8
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 14.4 Intersection LOS: B
Intersection Capacity Utilization 46.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Antelope Road & La Piedra Road

	↙	↖	↑	↗	↘	↓		
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↰	↱	↑↱		↰	↑↑		
Traffic Volume (veh/h)	99	184	483	109	123	422		
Future Volume (veh/h)	99	184	483	109	123	422		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No		No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		
Adj Flow Rate, veh/h	115	214	562	127	143	491		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	299	266	1408	317	226	2394		
Arrive On Green	0.17	0.17	0.49	0.49	0.13	0.67		
Sat Flow, veh/h	1781	1585	2975	649	1781	3647		
Grp Volume(v), veh/h	115	214	346	343	143	491		
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1754	1781	1777		
Q Serve(g_s), s	4.5	10.3	9.8	9.8	6.0	4.1		
Cycle Q Clear(g_c), s	4.5	10.3	9.8	9.8	6.0	4.1		
Prop In Lane	1.00	1.00		0.37	1.00			
Lane Grp Cap(c), veh/h	299	266	868	857	226	2394		
V/C Ratio(X)	0.38	0.80	0.40	0.40	0.63	0.21		
Avail Cap(c_a), veh/h	810	720	868	857	415	2772		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.2	31.6	12.8	12.8	32.8	4.9		
Incr Delay (d2), s/veh	0.8	5.6	1.4	1.4	2.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.0	4.2	3.9	3.9	2.7	1.2		
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	30.0	37.2	14.2	14.2	35.7	4.9		
LnGrp LOS	C	D	B	B	D	A		
Approach Vol, veh/h	329		689			634		
Approach Delay, s/veh	34.7		14.2			11.9		
Approach LOS	C		B			B		
Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.6	45.0				59.6		19.4
Change Period (Y+Rc), s	4.6	6.4				6.4		6.1
Max Green Setting (Gmax), s	18.4	38.6				61.6		35.9
Max Q Clear Time (g_c+I1), s	8.0	11.8				6.1		12.3
Green Ext Time (p_c), s	0.2	4.7				3.8		1.0
Intersection Summary								
HCM 6th Ctrl Delay			17.4					
HCM 6th LOS			B					

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱	↰↰	↑↑↱	↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (vph)	276	1058	87	1554	638	94	44	52	94	284
Future Volume (vph)	276	1058	87	1554	638	94	44	52	94	284
Turn Type	Prot	NA	Prot	NA	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	1	6	5	2	8	8		4	4	1
Permitted Phases							8			4
Detector Phase	1	6	5	2	8	8	8	4	4	1
Switch Phase										
Minimum Initial (s)	4.0	15.0	4.0	15.0	15.0	15.0	15.0	15.0	15.0	4.0
Minimum Split (s)	22.5	28.0	22.5	28.0	26.0	26.0	26.0	22.5	22.5	22.5
Total Split (s)	22.8	60.6	22.6	60.4	34.0	34.0	34.0	22.8	22.8	22.8
Total Split (%)	16.3%	43.3%	16.1%	43.1%	24.3%	24.3%	24.3%	16.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	3.0	3.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Max	None	Max	None	None	None	None	None	None
Act Effct Green (s)	16.2	68.2	9.0	61.0	27.5	27.5	27.5	15.4	15.4	33.5
Actuated g/C Ratio	0.12	0.49	0.06	0.44	0.20	0.20	0.20	0.11	0.11	0.24
v/c Ratio	0.70	0.57	0.40	0.77	0.77	0.78	0.11	0.14	0.47	0.40
Control Delay	69.4	26.2	67.9	37.3	62.0	69.8	0.6	57.1	66.4	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	26.2	67.9	37.3	62.0	69.8	0.6	57.1	66.4	21.2
LOS	E	C	E	D	E	E	A	E	E	C
Approach Delay		33.4		38.8		61.0			35.5	
Approach LOS		C		D		E			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 6:EBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

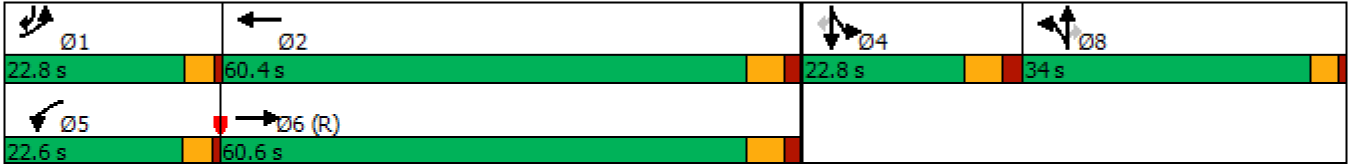
Maximum v/c Ratio: 0.78

Intersection Signal Delay: 40.3 Intersection LOS: D

Intersection Capacity Utilization 72.3% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Antelope Road & Newport Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱		↰↰	↑↑↱		↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (veh/h)	276	1058	312	87	1554	118	638	94	44	52	94	284
Future Volume (veh/h)	276	1058	312	87	1554	118	638	94	44	52	94	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	279	1069	315	88	1570	119	568	201	44	53	95	287
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1742	513	140	1881	143	653	343	291	375	203	573
Arrive On Green	0.10	0.44	0.44	0.04	0.39	0.39	0.18	0.18	0.18	0.11	0.11	0.11
Sat Flow, veh/h	3456	3914	1153	3456	4842	367	3563	1870	1585	3456	1870	2790
Grp Volume(v), veh/h	279	930	454	88	1104	585	568	201	44	53	95	287
Grp Sat Flow(s),veh/h/ln	1728	1702	1663	1728	1702	1804	1781	1870	1585	1728	1870	1395
Q Serve(g_s), s	11.1	29.2	29.2	3.5	41.1	41.1	21.7	13.8	3.3	1.9	6.7	12.8
Cycle Q Clear(g_c), s	11.1	29.2	29.2	3.5	41.1	41.1	21.7	13.8	3.3	1.9	6.7	12.8
Prop In Lane	1.00		0.69	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	1515	740	140	1323	701	653	343	291	375	203	573
V/C Ratio(X)	0.83	0.61	0.61	0.63	0.83	0.84	0.87	0.59	0.15	0.14	0.47	0.50
Avail Cap(c_a), veh/h	464	1515	740	459	1323	701	763	401	340	415	224	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	29.7	29.7	66.1	38.7	38.7	55.5	52.3	48.0	56.5	58.6	49.3
Incr Delay (d2), s/veh	8.9	1.9	3.8	4.5	6.3	11.3	9.4	1.6	0.2	0.2	1.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	12.4	12.5	1.6	18.2	20.3	10.6	6.7	1.3	0.9	3.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	31.5	33.5	70.7	45.0	50.0	65.0	53.9	48.2	56.7	60.3	49.9
LnGrp LOS	E	C	C	E	D	D	E	D	D	E	E	D
Approach Vol, veh/h		1663			1777			813			435	
Approach Delay, s/veh		38.7			47.9			61.3			53.0	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.6	60.4		21.2	9.7	68.3		29.7
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		4.0
Max Green Setting (Gmax), s	18.8	54.4		16.8	18.6	54.6		30.0
Max Q Clear Time (g_c+I1), s	13.1	43.1		14.8	5.5	31.2		23.7
Green Ext Time (p_c), s	0.5	8.0		0.4	0.2	10.9		2.0

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

Notes

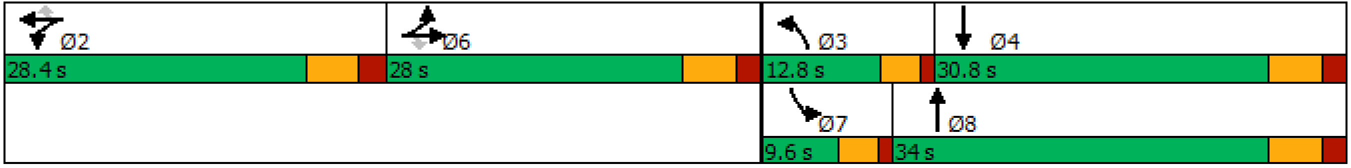
User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↑↱	↰	↑↱
Traffic Volume (vph)	5	44	6	27	55	696	17	410
Future Volume (vph)	5	44	6	27	55	696	17	410
Turn Type	NA	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases	6		2		3	8	7	4
Permitted Phases		6		2				
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	4.0	15.0	4.0	15.0
Minimum Split (s)	28.0	28.0	28.0	28.0	9.5	24.0	9.5	28.0
Total Split (s)	28.0	28.0	28.4	28.4	12.8	34.0	9.6	30.8
Total Split (%)	28.0%	28.0%	28.4%	28.4%	12.8%	34.0%	9.6%	30.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	Max	None	None	None	None
Act Effct Green (s)	16.0	16.0	23.6	23.6	7.7	24.1	5.9	20.7
Actuated g/C Ratio	0.20	0.20	0.30	0.30	0.10	0.30	0.07	0.26
v/c Ratio	0.35	0.10	0.03	0.05	0.33	0.68	0.14	0.47
Control Delay	35.9	0.5	26.9	0.1	43.9	29.4	43.4	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	0.5	26.9	0.1	43.9	29.4	43.4	28.9
LOS	D	A	C	A	D	C	D	C
Approach Delay	26.6		9.1			30.4		29.4
Approach LOS	C		A			C		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 79.4	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Antelope Road & Stillwater Drive



2: Antelope Road & Stillwater Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	117	5	44	8	6	27	55	696	8	17	410	14
Future Volume (veh/h)	117	5	44	8	6	27	55	696	8	17	410	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	5	45	8	6	28	57	718	8	18	423	14
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	13	288	288	216	439	73	911	10	29	802	26
Arrive On Green	0.18	0.18	0.18	0.28	0.28	0.28	0.04	0.25	0.25	0.02	0.23	0.23
Sat Flow, veh/h	1714	71	1585	1039	779	1585	1781	3600	40	1781	3510	116
Grp Volume(v), veh/h	126	0	45	14	0	28	57	354	372	18	214	223
Grp Sat Flow(s),veh/h/ln	1785	0	1585	1818	0	1585	1781	1777	1863	1781	1777	1849
Q Serve(g_s), s	5.0	0.0	1.9	0.5	0.0	1.1	2.6	15.0	15.1	0.8	8.5	8.6
Cycle Q Clear(g_c), s	5.0	0.0	1.9	0.5	0.0	1.1	2.6	15.0	15.1	0.8	8.5	8.6
Prop In Lane	0.96		1.00	0.57		1.00	1.00		0.02	1.00		0.06
Lane Grp Cap(c), veh/h	324	0	288	504	0	439	73	449	471	29	406	422
V/C Ratio(X)	0.39	0.00	0.16	0.03	0.00	0.06	0.78	0.79	0.79	0.61	0.53	0.53
Avail Cap(c_a), veh/h	486	0	431	504	0	439	194	615	645	123	545	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	27.9	21.3	0.0	21.5	38.4	28.2	28.2	39.5	27.4	27.4
Incr Delay (d2), s/veh	0.8	0.0	0.3	0.1	0.0	0.3	16.2	4.8	4.6	19.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.7	0.2	0.0	0.4	1.4	6.7	7.0	0.5	3.6	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	28.1	21.4	0.0	21.8	54.6	32.9	32.7	58.6	28.4	28.4
LnGrp LOS	C	A	C	C	A	C	D	C	C	E	C	C
Approach Vol, veh/h		171			42			783			455	
Approach Delay, s/veh		29.4			21.7			34.4			29.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	7.3	24.5		20.7	5.3	26.5				
Change Period (Y+Rc), s		6.0	4.0	6.0		6.0	4.0	6.0				
Max Green Setting (Gmax), s		22.4	8.8	24.8		22.0	5.6	28.0				
Max Q Clear Time (g_c+I1), s		3.1	4.6	10.6		7.0	2.8	17.1				
Green Ext Time (p_c), s		0.1	0.0	2.2		0.7	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑↑	↑↱	
Traffic Vol, veh/h	16	1	2	743	403	15
Future Vol, veh/h	16	1	2	743	403	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	1	2	808	438	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	854	227	454	0	-	0
Stage 1	446	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	298	776	1103	-	-	-
Stage 1	612	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	297	776	1103	-	-	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1103	-	308	-	-
HCM Lane V/C Ratio	0.002	-	0.06	-	-
HCM Control Delay (s)	8.3	-	17.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	745	402	2
Future Vol, veh/h	0	0	0	745	402	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	810	437	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	220	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	784	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	784	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↰	↱	↑↱	↰	↑↑
Traffic Volume (vph)	227	308	405	122	314
Future Volume (vph)	227	308	405	122	314
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	41.1	41.1	41.4	22.5	22.5
Total Split (s)	42.0	42.0	45.0	23.0	68.0
Total Split (%)	38.2%	38.2%	40.9%	20.9%	61.8%
Yellow Time (s)	4.1	4.1	4.4	3.6	4.4
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.4	4.6	6.4
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	None
Act Effct Green (s)	17.5	17.5	38.9	12.4	56.0
Actuated g/C Ratio	0.20	0.20	0.45	0.14	0.65
v/c Ratio	0.69	0.57	0.42	0.53	0.15
Control Delay	42.6	7.6	16.1	43.1	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	7.6	16.1	43.1	6.6
LOS	D	A	B	D	A
Approach Delay	22.5		16.1		16.8
Approach LOS	C		B		B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 86.1
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 18.5 Intersection LOS: B
Intersection Capacity Utilization 52.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Antelope Road & La Piedra Road

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↑↱		↰	↑↑
Traffic Volume (veh/h)	227	308	405	188	122	314
Future Volume (veh/h)	227	308	405	188	122	314
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	338	445	207	134	345
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	441	393	1044	481	204	2165
Arrive On Green	0.25	0.25	0.44	0.44	0.11	0.61
Sat Flow, veh/h	1781	1585	2455	1089	1781	3647
Grp Volume(v), veh/h	249	338	334	318	134	345
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1674	1781	1777
Q Serve(g_s), s	10.7	17.8	11.3	11.4	6.3	3.7
Cycle Q Clear(g_c), s	10.7	17.8	11.3	11.4	6.3	3.7
Prop In Lane	1.00	1.00		0.65	1.00	
Lane Grp Cap(c), veh/h	441	393	785	740	204	2165
V/C Ratio(X)	0.56	0.86	0.43	0.43	0.66	0.16
Avail Cap(c_a), veh/h	732	652	785	740	375	2507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	31.4	16.7	16.8	37.0	7.4
Incr Delay (d2), s/veh	1.1	6.3	1.7	1.8	3.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	7.3	4.7	4.6	2.9	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.9	37.7	18.4	18.6	40.6	7.4
LnGrp LOS	C	D	B	B	D	A
Approach Vol, veh/h	587		652			479
Approach Delay, s/veh	34.4		18.5			16.7
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.6	45.0				59.6		27.7
Change Period (Y+Rc), s	4.6	6.4				6.4		6.1
Max Green Setting (Gmax), s	18.4	38.6				61.6		35.9
Max Q Clear Time (g_c+I1), s	8.3	13.4				5.7		19.8
Green Ext Time (p_c), s	0.2	4.4				2.5		1.8

Intersection Summary			
HCM 6th Ctrl Delay			23.4
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱	↰↰	↑↑↱	↰↰	↰	↱	↰↰	↑	↱↱
Traffic Volume (vph)	398	1761	122	1561	698	160	126	117	122	303
Future Volume (vph)	398	1761	122	1561	698	160	126	117	122	303
Turn Type	Prot	NA	Prot	NA	Split	NA	Perm	Split	NA	pm+ov
Protected Phases	1	6	5	2	8	8		4	4	1
Permitted Phases							8			4
Detector Phase	1	6	5	2	8	8	8	4	4	1
Switch Phase										
Minimum Initial (s)	4.0	15.0	4.0	15.0	15.0	15.0	15.0	15.0	15.0	4.0
Minimum Split (s)	22.5	28.0	22.5	28.0	27.0	27.0	27.0	22.5	22.5	22.5
Total Split (s)	24.4	64.8	22.6	63.0	30.0	30.0	30.0	22.6	22.6	24.4
Total Split (%)	17.4%	46.3%	16.1%	45.0%	21.4%	21.4%	21.4%	16.1%	16.1%	17.4%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	2.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	5.0	5.0	6.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Max	None	Max	None	None	None	None	None	None
Act Effct Green (s)	19.6	67.0	10.4	57.8	26.0	26.0	26.0	15.6	15.6	37.2
Actuated g/C Ratio	0.14	0.48	0.07	0.41	0.19	0.19	0.19	0.11	0.11	0.27
v/c Ratio	0.85	0.90	0.49	0.83	0.97	0.97	0.32	0.31	0.60	0.39
Control Delay	75.4	39.4	68.3	40.9	85.8	100.3	10.1	59.4	71.7	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	39.4	68.3	40.9	85.8	100.3	10.1	59.4	71.7	19.7
LOS	E	D	E	D	F	F	B	E	E	B
Approach Delay		45.1		42.7		80.3			40.0	
Approach LOS		D		D		F			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 6:EBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 49.8 Intersection LOS: D

Intersection Capacity Utilization 91.0% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Antelope Road & Newport Road

HCM 6th Signalized Intersection Summary
1: Antelope Road & Newport Road

Timing Plan: Existing + Proj PM
12/21/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑↱		↰↰	↑↑↑↱		↰↰	↰↑	↱	↰↰	↑	↱↱
Traffic Volume (veh/h)	398	1761	351	122	1561	130	698	160	126	117	122	303
Future Volume (veh/h)	398	1761	351	122	1561	130	698	160	126	117	122	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	406	1797	358	124	1593	133	648	253	129	119	124	309
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	458	2090	410	178	1955	163	636	334	283	385	208	680
Arrive On Green	0.13	0.49	0.49	0.05	0.41	0.41	0.18	0.18	0.18	0.11	0.11	0.11
Sat Flow, veh/h	3456	4282	841	3456	4802	401	3563	1870	1585	3456	1870	2790
Grp Volume(v), veh/h	406	1423	732	124	1129	597	648	253	129	119	124	309
Grp Sat Flow(s),veh/h/ln	1728	1702	1719	1728	1702	1798	1781	1870	1585	1728	1870	1395
Q Serve(g_s), s	16.2	51.5	53.2	4.9	41.2	41.3	25.0	18.0	10.2	4.4	8.8	13.2
Cycle Q Clear(g_c), s	16.2	51.5	53.2	4.9	41.2	41.3	25.0	18.0	10.2	4.4	8.8	13.2
Prop In Lane	1.00		0.49	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	1662	839	178	1386	732	636	334	283	385	208	680
V/C Ratio(X)	0.89	0.86	0.87	0.70	0.81	0.82	1.02	0.76	0.46	0.31	0.60	0.45
Avail Cap(c_a), veh/h	504	1662	839	459	1386	732	636	334	283	410	222	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	31.5	31.9	65.3	36.8	36.8	57.5	54.6	51.4	57.3	59.2	45.0
Incr Delay (d2), s/veh	16.3	5.9	12.1	4.9	5.4	9.7	40.4	9.6	1.1	0.5	3.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	22.2	24.5	2.3	18.1	20.0	14.8	9.4	4.2	2.0	4.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	37.4	44.1	70.2	42.2	46.6	97.9	64.2	52.6	57.7	63.1	45.5
LnGrp LOS	E	D	D	E	D	D	F	E	D	E	E	D
Approach Vol, veh/h		2561			1850			1030			552	
Approach Delay, s/veh		45.4			45.5			84.0			52.1	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.5	63.0		21.6	11.2	74.3		30.0
Change Period (Y+Rc), s	4.0	6.0		6.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	20.4	57.0		16.6	18.6	58.8		25.0
Max Q Clear Time (g_c+I1), s	18.2	43.3		15.2	6.9	55.2		27.0
Green Ext Time (p_c), s	0.4	9.5		0.4	0.3	3.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

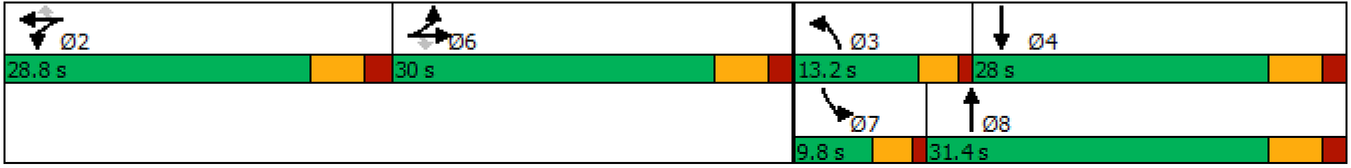
User approved changes to right turn type.

	→	↘	←	↖	↖	↑	↘	↓
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰↑	↱	↰↑	↱	↰	↑↱	↰	↑↱
Traffic Volume (vph)	9	107	11	41	99	596	38	479
Future Volume (vph)	9	107	11	41	99	596	38	479
Turn Type	NA	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases	6		2		3	8	7	4
Permitted Phases		6		2				
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	4.0	15.0	4.0	15.0
Minimum Split (s)	28.0	28.0	28.0	28.0	9.5	28.0	9.5	28.0
Total Split (s)	30.0	30.0	28.8	28.8	13.2	31.4	9.8	28.0
Total Split (%)	30.0%	30.0%	28.8%	28.8%	13.2%	31.4%	9.8%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	Max	Max	None	None	None	None
Act Effct Green (s)	21.7	21.7	22.9	22.9	8.8	27.0	5.8	19.8
Actuated g/C Ratio	0.23	0.23	0.24	0.24	0.09	0.28	0.06	0.21
v/c Ratio	0.87	0.25	0.04	0.09	0.67	0.65	0.39	0.77
Control Delay	58.0	4.7	30.4	0.4	64.0	34.9	56.0	43.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	4.7	30.4	0.4	64.0	34.9	56.0	43.2
LOS	E	A	C	A	E	C	E	D
Approach Delay	44.7		8.6			39.0		44.0
Approach LOS	D		A			D		D

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 95.3
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 41.0 Intersection LOS: D
Intersection Capacity Utilization 61.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Antelope Road & Stillwater Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	313	9	107	5	11	41	99	596	4	38	479	37
Future Volume (veh/h)	313	9	107	5	11	41	99	596	4	38	479	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	340	10	116	5	12	45	108	648	4	41	521	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	11	357	139	334	407	137	872	5	52	646	49
Arrive On Green	0.23	0.23	0.23	0.26	0.26	0.26	0.08	0.24	0.24	0.03	0.19	0.19
Sat Flow, veh/h	1733	51	1585	542	1301	1585	1781	3621	22	1781	3345	256
Grp Volume(v), veh/h	350	0	116	17	0	45	108	318	334	41	276	285
Grp Sat Flow(s),veh/h/ln	1784	0	1585	1843	0	1585	1781	1777	1866	1781	1777	1824
Q Serve(g_s), s	16.8	0.0	5.4	0.6	0.0	1.9	5.3	14.7	14.7	2.0	13.2	13.2
Cycle Q Clear(g_c), s	16.8	0.0	5.4	0.6	0.0	1.9	5.3	14.7	14.7	2.0	13.2	13.2
Prop In Lane	0.97		1.00	0.29		1.00	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	402	0	357	474	0	407	137	428	450	52	343	352
V/C Ratio(X)	0.87	0.00	0.33	0.04	0.00	0.11	0.79	0.74	0.74	0.80	0.81	0.81
Avail Cap(c_a), veh/h	483	0	429	474	0	407	185	509	534	116	441	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	28.7	24.7	0.0	25.2	40.2	31.1	31.1	42.8	34.2	34.2
Incr Delay (d2), s/veh	13.9	0.0	0.5	0.1	0.0	0.5	14.9	4.8	4.6	23.4	8.2	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	2.1	0.3	0.0	0.8	2.9	6.7	7.0	1.2	6.3	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	29.3	24.9	0.0	25.8	55.1	35.9	35.7	66.2	42.4	42.5
LnGrp LOS	D	A	C	C	A	C	E	D	D	E	D	D
Approach Vol, veh/h		466			62			760			602	
Approach Delay, s/veh		42.6			25.5			38.6			44.1	
Approach LOS		D			C			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.8	10.8	23.1		26.0	6.6	27.4				
Change Period (Y+Rc), s		6.0	4.0	6.0		6.0	4.0	6.0				
Max Green Setting (Gmax), s		22.8	9.2	22.0		24.0	5.8	25.4				
Max Q Clear Time (g_c+I1), s		3.9	7.3	15.2		18.8	4.0	16.7				
Green Ext Time (p_c), s		0.1	0.0	1.9		1.2	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			40.9									
HCM 6th LOS			D									

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑↑	↑↱	
Traffic Vol, veh/h	18	4	6	681	467	17
Future Vol, veh/h	18	4	6	681	467	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	120	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	4	7	740	508	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	901	263	526	0	-	0
Stage 1	517	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	278	735	1037	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	276	735	1037	-	-	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	658	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1037	-	311	-	-
HCM Lane V/C Ratio	0.006	-	0.077	-	-
HCM Control Delay (s)	8.5	-	17.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

4: Antelope Road & Project Dwy2

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	1	0	687	469	2
Future Vol, veh/h	0	1	0	687	469	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	747	510	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	256	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	743	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	743	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	743	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s)	-	9.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

5: Antelope Road & La Piedra Road

12/21/2023

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↰	↱	↑↱	↰	↑↑
Traffic Volume (vph)	99	184	485	123	424
Future Volume (vph)	99	184	485	123	424
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	41.1	41.1	41.4	22.5	22.5
Total Split (s)	42.0	42.0	45.0	23.0	68.0
Total Split (%)	38.2%	38.2%	40.9%	20.9%	61.8%
Yellow Time (s)	4.1	4.1	4.4	3.6	4.4
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.4	4.6	6.4
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	10.4	10.4	18.6	12.0	30.7
Actuated g/C Ratio	0.19	0.19	0.34	0.22	0.56
v/c Ratio	0.34	0.45	0.58	0.37	0.25
Control Delay	25.9	7.7	17.6	25.1	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	7.7	17.6	25.1	5.9
LOS	C	A	B	C	A
Approach Delay	14.1		17.6		10.2
Approach LOS	B		B		B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 54.5
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 46.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Antelope Road & La Piedra Road

5: Antelope Road & La Piedra Road

12/21/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↑↱		↰	↑↑
Traffic Volume (veh/h)	99	184	485	109	123	424
Future Volume (veh/h)	99	184	485	109	123	424
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	214	564	127	143	493
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	328	292	863	194	340	2053
Arrive On Green	0.18	0.18	0.30	0.30	0.19	0.58
Sat Flow, veh/h	1781	1585	2977	647	1781	3647
Grp Volume(v), veh/h	115	214	347	344	143	493
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1754	1781	1777
Q Serve(g_s), s	3.0	6.7	8.9	9.0	3.7	3.6
Cycle Q Clear(g_c), s	3.0	6.7	8.9	9.0	3.7	3.6
Prop In Lane	1.00	1.00		0.37	1.00	
Lane Grp Cap(c), veh/h	328	292	532	525	340	2053
V/C Ratio(X)	0.35	0.73	0.65	0.66	0.42	0.24
Avail Cap(c_a), veh/h	1219	1085	1307	1290	625	4173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	20.2	16.0	16.0	18.7	5.4
Incr Delay (d2), s/veh	0.6	3.6	1.4	1.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.5	3.4	3.3	1.5	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	23.8	17.4	17.4	19.5	5.5
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	329		691			636
Approach Delay, s/veh	22.2		17.4			8.6
Approach LOS	C		B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.6	22.1				36.7		15.8
Change Period (Y+Rc), s	4.6	6.4				6.4		6.1
Max Green Setting (Gmax), s	18.4	38.6				61.6		35.9
Max Q Clear Time (g_c+I1), s	5.7	11.0				5.6		8.7
Green Ext Time (p_c), s	0.3	4.7				3.8		1.1

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

APPENDIX D

QUEUE RESULTS

Intersection: 3: Antelope Road & Living Spaces/Proj Dwy1

Movement	EB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Antelope Road & Project Dwy2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 3: Antelope Road & Living Spaces/Proj Dwy1

Movement	EB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	17
95th Queue (ft)	41
Link Distance (ft)	104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Antelope Road & Project Dwy2

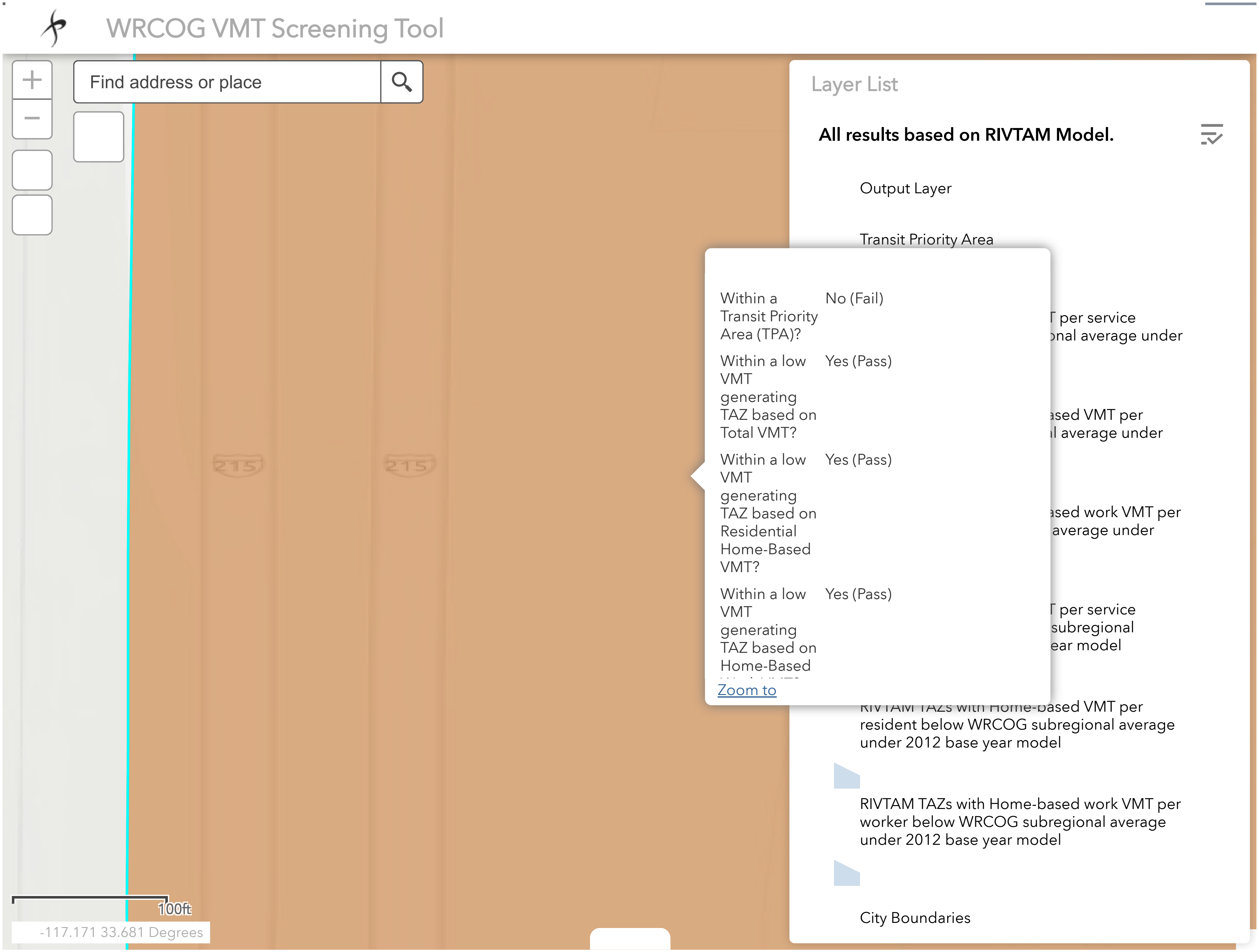
Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Zone Summary

Zone wide Queuing Penalty: 0

APPENDIX E

WRCOG SCREENING TOOL



WRCOG VMT Screening Tool

Layer List

All results based on RIVTAM Model.

Output Layer

Transit Priority Area

T per service
onal average under

ased VMT per
l average under

ased work VMT per
average under

T per service
subregional
ear model

RIVTAM TAZs with Home-based VMT per resident below WRCOG subregional average under 2012 base year model

RIVTAM TAZs with Home-based work VMT per worker below WRCOG subregional average under 2012 base year model

City Boundaries

Within a Transit Priority Area (TPA)?	No (Fail)
Within a low VMT generating TAZ based on Total VMT?	Yes (Pass)
Within a low VMT generating TAZ based on Residential Home-Based VMT?	Yes (Pass)
Within a low VMT generating TAZ based on Home-Based	Yes (Pass)

Zoom to