INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FRENCH VALLEY CHILDCARE AND EARLY CHILDHOOD LEARNING CENTER PROJECT

Riverside County, California

RIVERSIDE COUNTY
OFFICE OF ECONOMIC DEVELOPMENT

July 2024

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SUMMARY OF MITIGATION MEASURES

Biological Resources

BIO-1 A qualified biologist shall conduct a pre-construction nesting bird survey within three days prior to vegetation- or ground-disturbing activities if such activities are proposed during the nesting season (February 1 through September 15). The survey shall include 100 percent coverage of the Project site. If no active avian nests are found during survey, no further work in this regard is required. If an active avian nest is discovered during survey, vegetation- and/or ground-disturbing activities shall be redirected around the nest(s). As determined by Riverside County, the qualified biologist shall delineate the boundaries of any such buffer area. The buffer shall be established by the biologist, which can range from 50 feet (typically smaller songbirds) to 500 feet (larger raptors) to ensure that nesting behavior is not adversely affected by the vegetation- and/or ground-disturbing activity. If such activities are delayed or suspended for more than seven days after the survey, the site shall be resurveyed. Should eggs or fledglings be discovered in any native nest, these resources cannot be disturbed until the young have hatched and fledged (matured to a stage that they can leave the nest on their own).

BIO-2 A qualified biologist shall conduct a pre-construction burrowing owl/Initial Take and Avoidance Survey within 30 days prior to the beginning of project construction to determine if the Project site contains suitable burrowing owl habitat and to avoid any potential impacts to the species. The survey shall be performed pursuant to the Riverside County Multiple Species Habitat Conservation Plan (MSHCP) 30-day Pre-Construction Burrowing Owl Survey Guidelines (revised August 17, 2006) and include 100 percent coverage of the Project site. If the survey reveals no suitable habitat for burrowing owl is present, no further work in this regard is required. If active burrowing owl burrows are determined to be present, the burrow(s) shall be flagged, and a 160-foot buffer shall be established around the burrow(s) during the non-breeding season (September 1 to January 30) and a 250-foot buffer shall be created during the breeding season (February 1 to August 31). As determined by Riverside County (County), the buffer limits may vary depending on burrow location and burrowing owl sensitivity to human activity. The buffer(s) shall be sufficient to ensure that nesting behavior is not adversely affected by the construction activity. A monitoring report shall be prepared and submitted to the County for review and approval prior to reinitiating construction activities within the buffer area(s), and construction within the designated buffer area(s) shall not proceed until written authorization is received from California Department of Fish and Wildlife (CDFW). The monitoring report shall summarize the results of the owl monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area(s) without jeopardizing the survival of the owl(s). Any relocation efforts must be coordinated with the CDFW. This measure shall be implemented to the satisfaction of Riverside County and, as applicable, the CDFW.

Cultural Resources

CR-1 Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all grading and trenching activities which may impact native soils on the Project site. The Project Archaeologist shall have the authority to temporarily halt and redirect earthmoving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. The Project archeologist and the Consulting Tribes shall attend a pre-grading meeting with the County, 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 shall make themselves available to provide the training on an as-needed basis.

CR-2 Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Indians (Pechanga) for tribal monitoring. The County is also required to provide a minimum of 30 days advance notice to Pechanga of all grading and trenching activities which may impact native soils. The Pechanga Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. Upon discovery of in-situ archaeological resources, the parties shall promptly meet and confer, limit the closure area to the smallest reasonable area (including the possibility of reducing the stop-work radius to 50 feet after initial evaluation), and engage in good faith collaboration to execute the protocols outlined in the Cultural Resource Monitoring Plan for handling such unearthed resources.

CR-3 Prior to the issuance of the grading permit, a Cultural Resource Monitoring Plan (CRMP) is to be developed and provided to the Consulting Tribe for review. The Project Archaeologist, in consultation with the Consulting Tribe, the contractor, and the County, shall develop a CRMP to address the details, timing and responsibility of all activities on the Project site that may impact archaeological and tribal cultural resources. 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 AB52 consultation process, and has completed AB 52 consultation with the County as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

a. Project description and location;

b. Project grading and development scheduling;

c. Roles and responsibilities of individuals on the Project;

d. The pre-grading meeting and Cultural Resources Worker Sensitivity Training details;

e. The protocols and stipulations that the contractor, County, 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 resource's evaluation;

f. The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items;

g. Contact information of relevant individuals for the Project.

CR-4 The County shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground–disturbing activities and the Project Archaeologist or Pechanga Tribal Representative are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Pechanga Tribal Representative to the site to assess the significance of the find."

CR-5 If during ground disturbance activities, unanticipated unique archaeological resources are inadvertently 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. This mitigation shall apply to inadvertent discoveries of resources, including those with 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 Consulting Tribe.

a. All ground disturbance activities within 100 feet of the discovered resources shall be halted until a meeting is convened between the Developer, the Project Archaeologist, the Pechanga Tribal

Representative, and the County of Riverside Facilities Management to discuss the significance of the find.

b. At the meeting, the significance of the discover(ies) shall be discussed and after consultation with the Pechanga Tribal Representative and the Project Archaeologist, a decision shall be made, with the concurrence of the County of Riverside, as to the appropriate process (documentation, recovery, avoidance, etc.) for the resources, including whether the stop-work radius from the discovered resource can be reduced to 50 feet.

c. Further ground disturbance, including but not limited to, grading and trenching, shall not resume within the determined stop-work radius area of the discovery until the protocols for handling the resources has been established by all parties pursuant to the CRMP. Work shall be allowed to continue outside of the stop-work radius area and shall be monitored by Pechanga Tribal Monitors, if needed.

d. Treatment and avoidance protocols for the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with Pechanga. These protocols may include avoidance of the resources through Project design, in-place preservation of resources located in native soils and/or re-burial on the Project site with procedures so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures.

e. If the find is determined to be unique and significant and avoidance of the area cannot be feasibly achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Consulting Tribe, and shall be submitted to the County for their review and approval prior to implementation of the said plan.

f. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Developer, Project Archaeologist and the Consulting Tribe cannot agree on the significance of or the treatment for the archaeological or cultural resources, these issues shall be presented to the County of Riverside for decision. The County of Riverside shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the Project Archeologist and shall consider the cultural and religious principles and practices of the Consulting Tribe. Notwithstanding any other rights available under the law, the decision of the County of Riverside shall be appealable to the County Board of Supervisors. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-6 In the event that Native American tribal cultural resources are discovered during the course of grading (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 Pechanga. Evidence that these procedures have been following shall be provided to the County of Riverside:

a. Preservation-In-Place of the tribal 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.

b. 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 County under a confidential cover and not subject to Public Records Request.

c. 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 County of Riverside. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-7 If human remains are discovered, no further disturbance shall occur within a minimum of 100 feet of the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

CR-8 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).

CR-9 Upon completion of ground-disturbing activities that impact native soils, the Project Archeologist shall submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with County of Riverside 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. Portions of the Phase IV Report may be confidential. The County shall review the reports to determine adequate treatment compliance. Provided the reports are adequate, the County shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department.

Noise and Vibration

NOI-1 A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate.

NOI-2 Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays.

NOI-3 Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices.

INITIAL STUDY

INTRODUCTION

Environmental Assessment Determination

In accordance with Title 14 of the California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act (CEQA) (State CEQA Guidelines) Section 15060 (Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Section 65944, Government Code; Section 21080.2, Public Resources Code), the determination of the type of environmental assessment documentation for compliance with CEQA, begins with a preliminary review of whether a proposed action is a project under CEQA, and if the action is determined to be a project under CEQA, a determination of whether the project is exempt from CEQA. If the Lead Agency determines the project is not subject to or is exempt under CEQA, the agency may prepare a Notice of Exemption as the appropriate form of environmental assessment. If the preliminary review conducted by the Lead Agency determines that the project is subject to CEQA, and does not qualify under an exemption, the Agency shall prepare an Initial Study as the appropriate environmental assessment documentation. The Initial Study will determine whether a more detailed environmental assessment in the form of an Environmental Impact Report is required for the Project or if a Negative Declaration or Mitigated Negative Declaration may be adopted to complete the CEQA review process under *State CEQA Guidelines* Section 15063(b), (c).

Subsequent to the preliminary review conducted by the County of Riverside (County) as the Lead Agency, the County has determined that the preparation of an Initial Study was required as the appropriate environmental assessment under CEQA for the proposed Riverside County French Valley Childcare and Early Childhood Learning Experience Project (Project).

Purpose of the Initial Study

In accordance with *State CEQA Guidelines* Section 15063 (a) (Authority cited: Section 21083, Public Resources Code; Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21100 and 21151), the County has prepared an Initial Study to analyze the Project to determine any potential significant impacts upon the environment that would result from construction and implementation. This Initial Study is a preliminary analysis prepared by the County as Lead Agency, in consultation with other jurisdictional agencies, to inform the County decision makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the Project.

Incorporation by Reference

Pertinent documents relating to this Initial Study have been cited and incorporated, in accordance with Sections 15148 and 15150 of the State CEQA Guidelines, to eliminate the need for inclusion of large planning documents within the Initial Study. Of particular relevance are those previous studies that present information regarding description of the environmental setting, future development-related growth, and cumulative impacts. The following documents are hereby identified as being incorporated by reference:

Riverside County General Plan, June 2003 and December 2015.

Southwest Area Plan, September 2021.

French Valley Library Initial Study/Mitigated Negative Declaration, April 7, 2020

Organization

The Initial Study is organized as follows:

Introduction: Provides the purpose for the Initial Study and applicable citations pursuant to CEQA and the *State CEQA Guidelines.*

County of Riverside Environmental Assessment Form/Initial Study Checklist: Provides the Project Description; existing environmental setting; the relationship of the Project to the County General Plan; and an environmental impact assessment for each impact area within the environmental checklist. After the assessment of each impact area, the source of information, a finding of fact, applicable mitigation measures, and monitoring responsibility are provided.

References: List of references used for the environmental analyses.

Environmental Process

The Initial Study for the Project is being circulated to the public, responsible agencies, and trustee agencies for a 30-day public review period that begins on July 26, 2024 with the issuance of a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) and a close of August 24, 2024. The NOI was sent via mail to property owners/residents within 500 feet of the Project; a notice was posted in the Press Enterprise; and was posted at the Riverside County Clerk office. The Mitigated Negative Declaration and supporting documentation (Initial Study) were available for public review at the Riverside County Facilities Management Office and also at the French Valley Public Library. The Mitigation Monitoring and Reporting Program (MMRP) is contained herein under Appendix A. Comments received during the public review period will be considered as part of the Project's environmental review and included for consideration by the Board of Supervisors. The Board of Supervisors may choose to adopt the Mitigated Negative Declaration should it be determined that the Project will have no significant, unmitigatable environmental effects.

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COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM/
INITIAL STUDY CHECKLIST

Environmental Assessment (EA) Number: 202401I

Project Name: French Valley Childcare and Early Childhood Learning Experience Project

Lead Agency Name: County of Riverside

Address: 3450 14th Street, Suite 303, Riverside, CA. 92501

Contact Person: Mike Sullivan

Telephone Number: 951.955.8009

Applicant's Name: County of Riverside Office of Economic Development

Applicant's Address: 3450 14th Street, Riverside, CA. 92501

I. PROJECT INFORMATION

A. Project Description:

On March 11, 2021, President Biden signed the American Rescue Plan Act of 2021 (H.R. 1319) in to law. The $1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. On April 27, 2021, the Executive Office presented the Board of Supervisors with a preliminary ARPA funding allocation then on October 19, 2021, presented a revised funding allocation after the U.S. Treasury released the ARPA interim funding guidelines. On April 1, 2022, the U.S. Treasury effectuated the provisions of the final rule and funding guidelines. The final rule authorizes ARPA funding for impacted industries such as tourism, childcare, travel, and hospitality as well as make necessary investments in water, sewer, or broadband infrastructure. The ARPA final rule provides a broad set of enumerated eligible uses including childcare and early learning services, and as the Riverside County population increases, so does the need for additional childcare and early learning services.

The Project will design and construct an approximately 13,000 square-foot building on the same property as the French Valley Library, at 31526 Skyview Road, Winchester, California 92596. The Project will include approximately 9,000 square feet of childcare programming and 4,000 square feet for an interactive hands-on learning experience. Developing these services adjacent to the French Valley Library creates a learning hub for future generations. The Project site area, including parking, playground and building footprint is on Assessor's Parcel Numbers (APN) 480-160-021 which comprises 11.33 acres of County-owned property. The Project would be located on approximately 2.1 acres in the southeast portion of the property.

The site was routinely disked for weed abatement since at least the 1990s and was cleared of vegetation and graded between November 2009 and March 2011. The library was constructed in the middle of the site and completed in 2021. A riprap embankment and concrete ramps have been installed along a slope between the gravel road and the creek within a Riverside County Flood Control and Water Conservation District easement to direct drainage flows and protect the road. The surrounding properties are primarily low-density residential and vacant land. **Figure 1** shows the regional location and the Project site and **Figure 2** shows the overall site plan. The topography of the site is flat, but gradually slopes in a southwestern direction. The Project site is at an elevation of approximately 1370 feet above sea level.

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FIGURE 1
Regional and Project Locations

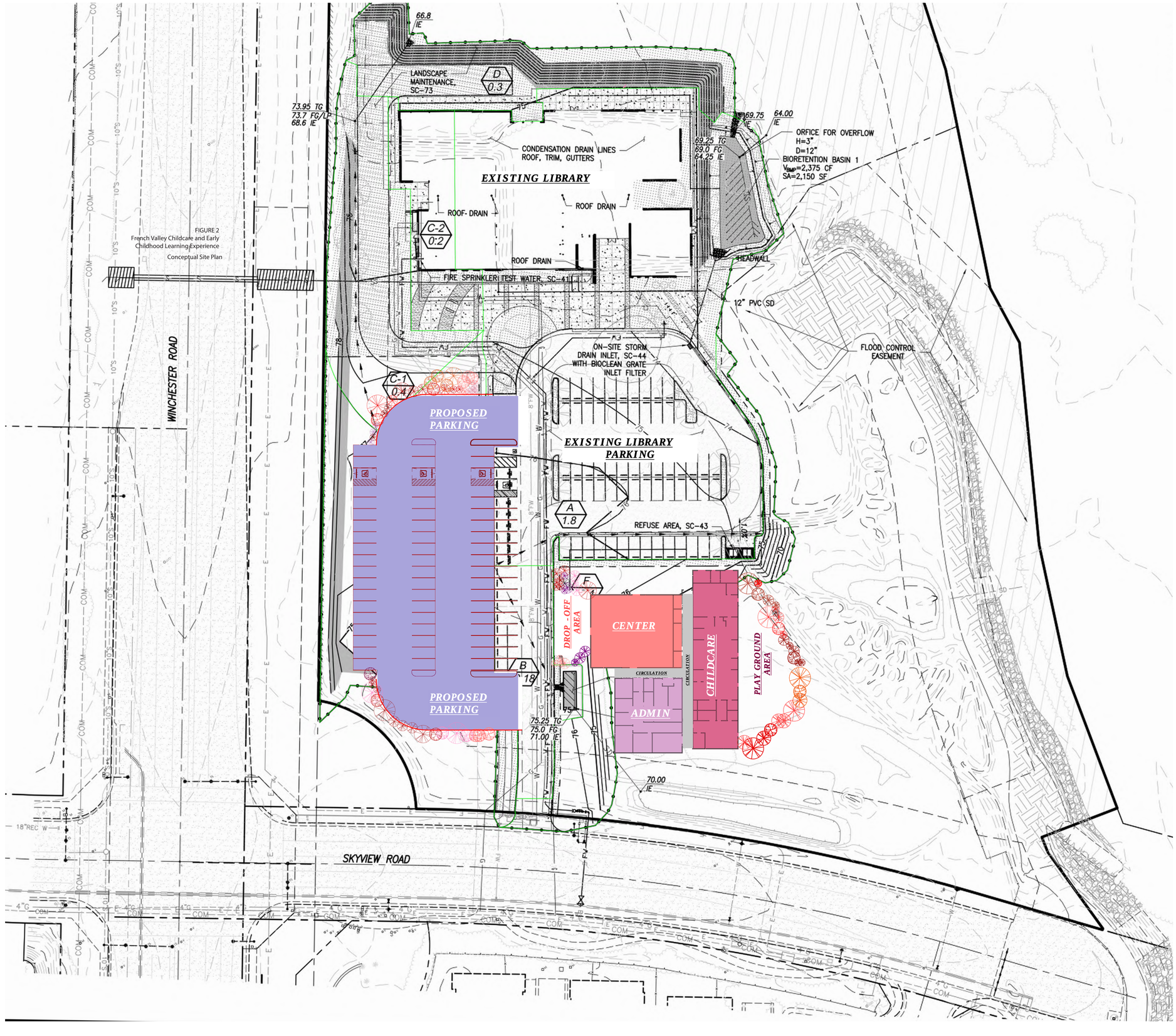


FIGURE 2
CONCEPTUAL SITE PLAN

The Project would entail the construction of a childcare and learning facility to improve local infrastructure and help ensure the welfare of the community by providing adequate day care services to the community of French Valley, and surrounding vicinity.

Additional staffing would occur from the childcare and learning center facility. The additional staffing and infrastructure would enhance the level of day care services to the surrounding community. The Project would also involve utility alterations, including stormwater drainage improvements, electrical and septic upgrades to provide service to the new building. Construction is anticipated to start in 2024 and would be completed by the end of 2025/beginning of 2026.

B. Type of Project: Site Specific ☒ Countywide ☐ Community ☐ Policy ☐

C. Total Project Area: 1 acre

Residential Acres: N/A	Lots: N/A	Units: N/A	Projected No. of Residents: N/A
Commercial Acres: N/A	Lots: N/A	Sq. Ft. of Bldg. Area: N/A	Est. No. of Employees: N/A
Industrial Acres: N/A	Lots: N/A	Sq. Ft. of Bldg. Area: N/A	Est. No. of Employees: N/A
Other: Public Facility	Lots: N/A	Sq. Ft. of Bldg. Area: 13,000	Est. No. of New Employees: 17

D. Assessor's Parcel No(s): 480-160-021

E. Street References: The Project is located at 31530 Skyview Road in the unincorporated community of French Valley, which is east of Highway 79/Winchester Road.

F. Section, Township & Range Description or reference/attach a Legal Description: The Project site is located within Township 6 South, Range 2 West, Section 32 NE, San Bernardino Baseline and Meridian, and is identified on the Bachelor Mountain 7.5-minute series USGS Topographic Quadrangle map.

G. Brief description of the existing environmental setting of the Project site and its surroundings: The Project site is currently vacant with a library immediately adjacent to the northwest. The areas adjacent to the Project site consist of low-density residential and vacant land. The land use designation and zoning for the site is Recreation (OS-R) under the Quinto Del Lago Specific Plan. The topography of the subject property consists of relatively flat land that slopes gradually in a southwestern direction. The Project site is at an elevation of approximately 215 feet below sea level. **Figure 1** illustrates the regional and local Project vicinity of the Project site and **Figure 2** shows the Project site and the location of the proposed improvements.

H. Public Agency Approvals: The Project will require the approval by the County of Riverside Board of Supervisors. The San Diego Regional Water Quality Control Board (RWQCB) will also be involved in the approval of the Project. The San Diego RWQCB is responsible for implementing the Statewide General Permit from the State Water Board. The General Permit will require the submittal and implementation of a Stormwater Pollution Prevention Program and filing of a Notice of Intent to obtain coverage under the General Permit and associated fees. A Water Quality Management Plan will also be required as a result of the Project to control for changes in stormwater runoff created during the operation of the Project. A grading and building permit will also be issued by Riverside County Facilities Management. The proposed improvements will be reviewed by Riverside County prior to construction to ensure they meet all applicable standards.

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

A. General Plan Elements/Policies:

The Project site is located within the unincorporated community of French Valley within the Southwest Area Plan of the County of Riverside General Pan and Quinta Del Lago Specific Plan. Specific plans are highly customized policy or regulatory tools that provide a bridge between the General Plan and individual development projects in a more area-specific manner than is possible with community-wide zoning ordinances. The specific plan is a tool that provides land use and development standards that are tailored to respond to special conditions and aspirations unique to the area being proposed for development. These tools are a means of addressing detailed concerns that conventional zoning cannot do. The Project site is located on County-owned land and relevant County General Plan Policies are also identified. The following applicable Quinta Del Lago Specific Plan, Southwest Area Plan and Riverside County General Plan policies would be relevant to the proposed Project.

1) **Land Use:** The Project site is designated as Open Space Recreational under the Quinto Del Lago Plan. This 11-6-acre area has been identified as recreational area to include such amenities as a tot/lot play area, softball field, basketball courts and picnic areas. Primary access is along Skyview Road and a major community center is planned along Skyview and Winchester Road. The Project would provide public services that would be compatible with the development of the site and would not result in any changes or incompatibility with the County General Plan's land use designation of the Project site or adjacent uses.

County of Riverside General Plan

LU-4.1: Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

a. Compliance with the design standards of the appropriate area plan land use category.

b. Require that structures be constructed in accordance with the requirements of the County's zoning, building, and other pertinent codes and regulations.

c. Require that an appropriate landscape plan be submitted and implemented for development projects subject to discretionary review.

d. Require that new development utilize drought tolerant landscaping and incorporate adequate drought-conscious irrigation systems.

e. Pursue energy efficiency through street configuration, building orientation, and landscaping to capitalize on shading and facilitate solar energy, as provided for in Title 24 of the California Administrative Code.

f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.

g. Encourage innovative and creative design concepts. h.

Encourage the provision of public art.

i. Include consistent and well-designed signage that is integrated with the building's architectural character.

j. Provide safe and convenient vehicular access and reciprocal access between adjacent commercial uses.

k. Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.

l. Mitigate noise, odor, lighting, and other impacts on surrounding properties.

m. Provide and maintain landscaping in open spaces and parking lots.

n. Include extensive landscaping.

o. Preserve natural features, such as unique natural terrain, drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.

p. Require that new development be designed to provide adequate space for pedestrian connectivity and access, recreational trails, vehicular access and parking, supporting functions, open space, and other pertinent elements.

q. Design parking lots and structures to be functionally and visually integrated and connected.

r. Site buildings access points along sidewalks, pedestrian areas, and bicycle routes, and include amenities that encourage pedestrian activity.

s. Establish safe and frequent pedestrian crossings.

t. Create a human-scale ground floor environment that includes public open areas that separate pedestrian space from auto traffic or where mixed, it does so with special regard to pedestrian safety.

LU-5.1: Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, transportation systems, and fire/police/medical services.

LU-5.3: Review all projects for consistency with individual urban water management plans.

LU-8.2: Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and Federal and State regulations such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.

LU 10.1 Provide sufficient commercial and industrial development opportunities in order to increase local employment levels and thereby minimize long-distance commuting.

LU 12.2 Locate employment and service uses in areas that are easily accessible to existing or planned transportation facilities.

Additional Land Use Policies Unique to the 2015 County of Riverside General Plan

LU 7.2 Notwithstanding the Public Facilities designation, public facilities shall also be allowed in any other land use designation except for the Open Space-Conservation and Open Space- Conservation Habitat land use designations. For purposes of this policy, a public facility shall include all facilities operated by the federal government, the State of California, the County of Riverside, any special district governed by or operating within the County of Riverside or any city, and all facilities operated by any combination of these agencies.

LU 11.5 Ensure that all new developments reduce Greenhouse Gas emissions as prescribed in the Air Quality Element and Climate Action Plan.

LU 18.1 ***Ensure compliance with Riverside County's water-efficient landscape policies****. Ensure that projects seeking discretionary permits and/or approvals develop and implement landscaping plans prepared in accordance with the Water-Efficient Landscape Ordinance (Ordinance No. 859), the County of Riverside Guide to California Friendly Landscaping and Riverside County's Friendly Plant List. Ensure that irrigation plans for all new development incorporate weather-based controllers and utilize state-of-the-art water-efficient irrigation components.*

LU 18.2 ***Minimize use of turf****. Minimize the use of turf in landscape medians, front-yard typical designs, parkways, other common areas, etc. and use drought tolerant planting options, mulch, or a combination thereof as a substitute. Limit the use of natural turf to those areas that serve a functional recreational element. Incorporate other aesthetic design elements, such as boulders, stamped concrete, pavers, flagstone, decomposed granite, manufactured rock products to enhance visual interest and impact.*

LU 18.3 ***Design and field check irrigation plans to reduce run-off****. Emphasize the use of subsurface irrigation techniques for landscape areas adjoining non-permeable hardscape. Utilize subsurface irrigation or other low volume irrigation technology in association with long, narrow, or irregularly shaped turf areas. Minimize use of irregularly shaped turf areas.*

2) **Circulation:** The Project consists of the construction and operation of a childcare and learning center facility. The Project would add staff but would not substantially increase the capacity of the County-owned site as the facility would serve local uses having the effect of reducing vehicle travel. There would be no substantial increase in vehicle trips associated with the Project and no effects would occur to the transportation network. The following General Plan Circulation policies would be relevant to the Project.

County of Riverside General Plan

C 1.4: *Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.*

C 2.1: *Maintain the following countywide target Levels of Service: LOS "C" along all County-maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterials, Urban Arterials, Expressways, conventional state highways or freeway ramp intersections.*

C 2.3: *Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) shall identify project-related traffic impacts and determine the significance of such impacts in compliance with CEQA.*

C 2.4: *The direct project-related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service standards.*

C 3.10: *Require private and public land developments to provide all on-site auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development project shall be undertaken to identify project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.*

C 3.26: *Plan off-street parking facilities to support and enhance the concept of walkable and transit-oriented communities.*

C 4.1: *Provide facilities for the safe movement of pedestrians within developments, as specified in the County Ordinances Regulating the Division of Land of the County of Riverside.*

3) **Biological and Multipurpose Open Space:** The Project includes site preparation and construction- related activities which would build a childcare and learning center facility. The Project would require a Water Quality Management Plan to address changes in drainage and a SWPPP to manage runoff during construction. The Project site has been previously disturbed and graded, and vegetation on the Project site is mostly disturbed land with non-native vegetation.

The following Multipurpose Open Space policies would be relevant to the Project.

Southwest Area Plan

SWAP 23.8: Protect sensitive biological resources in SWAP through adherence to policies found in the Multiple Species Habitat Conservation Plans, Environmental Lands, Wetlands, and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element.

County of Riverside General Plan

OS-2.2: Where feasible, decrease stormwater runoff by reducing pavement in development areas, and by design practices such as permeable parking bays and porous parking lots with bermed storage areas for rainwater detention.

OS-3.3: Minimize pollutant discharge into storm drainage systems and natural drainage and aquifers.

OS-16.1: Continue to implement Title 24 of the State Building Code. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24.

OS-2.2: Where feasible, decrease stormwater runoff by reducing pavement in development areas, and by design practices such as permeable parking bays and porous parking lots with bermed storage areas for rainwater detention.

OS-3.3: Minimize pollutant discharge into storm drainage systems and natural drainage and aquifers.

OS-16.1: Continue to implement Title 24 of the State Building Code. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24.

OS-18.1: Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's, if adopted.

OS-19.2: Review all proposed development for the possibility of archaeological sensitivity.

Additional Open Space Policies Unique to the 2015 County of Riverside General Plan

OS-3.4 Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Stormwater Pollution Prevention Program (SWPPP).

OS-3.6 Design the necessary stormwater detention basins, recharge basins, water quality basins, or similar water capture facilities to protect water quality. Such facilities should capture and/or treat water before it enters a watercourse. In general, these facilities should not be placed in watercourses, unless no other feasible options are available.

OS-16.14 Coordinate energy conservation activities with the County Climate Action Plan (CAP) as decreasing energy usage also helps reduce carbon emissions.

4) **Safety:** The Project is located in Zone E of the French Valley Airport Influence Area but would not involve structures greater than 100 feet and would compatible with the allowable uses in Zone E. The Project is not located within a designated wildfire area, fault zone or within ½ mile of any known fault. The following General Plan Safety policies would be relevant to the Project.

Southwest Area Plan

SWAP 24.1: Protect life and property from the hazards of flood events through adherence to the Flood and Inundation Hazards section of the General Plan Safety Element.

SWAP 24.3 Adhere to the flood proofing, flood protection requirements, and Flood Management Review requirements of the Riverside County Ordinance No. 458 Regulating Flood Hazard Areas.

SWAP 24.4 Require proposed development projects that are subject to flood hazards, surface ponding , high erosion potential or sheet flow to be submitted to the Riverside County Flood Control and Water Conservation District for Review.

County of Riverside General Plan

S-2.2: Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement as part of the environmental and development review process, for any structure proposed for human occupancy, and any structure whose damage would cause harm.

5) **Noise:** Implementation of the Project would generate noise during the demolition and construction phase of the Project, but during operation, would not substantially increase noise beyond what currently exists at the site. The following General Plan Noise policies would be relevant to the Project.

County of Riverside General Plan

N-4.1: Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:

a. 45 dBA-10-minute Leq between 10:00 p.m. and 7:00 a.m.

b. 65 dBA-10-minute Leq between 7:00 a.m. and 10:00 p.m.

N-12.2: Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.

N-15.2: Consider the following land uses sensitive to vibration:

Hospitals; Residential Areas; Concert Halls; Libraries;

Sensitive Research Operations; Schools; and Offices.

6) **Air Quality:** Implementation of the Project would potentially generate air emissions during the demolition and construction phase of the Project, but during operation, would not increase noise beyond what currently exists at the site. The following General Plan Air Quality policy would be relevant to the Project.

2015 County of Riverside General Plan

AQ-19.4 All discretionary project proposals shall analyze their project-specific GHG reduction targets in comparison to the "business as usual" (BAU) scenario for the development's operational life and the "operational life" of a new development shall be defined as a 30-year span. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. Alternatively, a project may use the CAP Screening Tables to show the attainment of the applicable number of points needed to ensure adequate GHG reductions and CAP compliance.

AQ-20.28 *Increase the energy efficiency of all existing and new County buildings and infrastructure operation (roads, water, waste disposal and treatment, buildings, etc.). Also, decrease energy use through incorporating renewable energy facilities (such as, solar array installations, individual wind energy generators, geothermal heat sources) on County facilities where feasible and appropriate.*

B. County General Plan Area Plan(s): County of Riverside General Plan, Southwest Area Plan

C. Foundation Component(s): Recreational

D. Land Use Designation(s): Open Space Recreation

E. Overlay(s), if any: None

F. Policy Area(s), if any:

G. Adjacent and Surrounding Area Plan(s), Foundation Component(s), Land Use Designation(s), and Overlay(s) and Policy Area(s), if any: Surrounding land uses include Residential, and vacant land.

H. Adopted Specific Plan Information

1) **Name and Number of Specific Plan, if any:** Quinta Del Lago 284

2) **Specific Plan Planning Area, and Policies, if any:** Planning Area 21

I. Existing Zoning: Open Space-Recreational.

J. Proposed Zoning, if any: No change.

K. Adjacent and Surrounding Zoning: Adjacent and surrounding parcels are residential.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

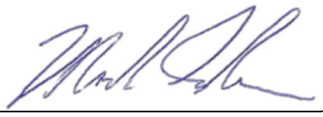
The environmental factors checked below (x) would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Agriculture & Forest Resources	☐ Hydrology / Water Quality	☐ Transportation / Traffic
☐ Air Quality	☐ Land Use / Planning	☐ Utilities / Service Systems
☒ **Biological Resources**	☐ Mineral Resources	☐ Other:
☒ **Cultural Resources**	☒ **Noise**	☐ Other:
☐ Geology / Soils	☐ Population / Housing	☐ Mandatory Findings of Significance
☐ Greenhouse Gas Emissions	☐ Public Services	

IV. DETERMINATION

On the basis of this initial evaluation:

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT 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, described in this document, have been made or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.**



Mike Sullivan
Senior Environmental Planner
County of Riverside

6-27-24
Date

☐ ☒ ☐

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
I AESTHETICS					
Would the Project					
1. Scenic Resources	☐	☒	☐	☐	☐
a) Have a substantial adverse effect on a scenic vista?					
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state-scenic highway?	☐	☐	☒	☐	☐
c) In non-urbanized area, substantially degrade views of the site and its surroundings? (Public views are those that are experienced from a 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?	☐	☒	☐	☐	☐

Source: County of Riverside General Plan; County of Riverside General Plan Figure C-8; California Department of Transportation Scenic Highway Guidelines.

Findings of Fact:

a) Scenic vistas typically include unique visual features, such as parks, open space and topographical features, and native flora. The major scenic resources in proximity to the Project site are French Valley Creek along the southeastern boundary of the site, as well as the Hogbacks (topographic ridgeline) and Bachelor Mountain approximately two miles west and east of the site. Additional topographic features critical to the County's visual character include the San Jacinto Mountains and San Gorgonio Badlands on the northeast, the Box Springs Mountains to the north, and the Santa Ana Mountains on the southwest. Rural farmland, local hills and rock outcrops, and other open space features also are considered scenic vistas in the County.[1] The Project site is currently undeveloped and is vegetated primarily by non-native species. In accordance with the Quinta Do Lago Specific Plan, properties surrounding the site have been developed with residential and recreational park uses.

The surrounding residential uses are comprised of two-story single-family homes and two- or three-story multi-family homes with associated landscaping that, in conjunction with the surrounding street trees, already obstruct public views of regional topographic features to the west and other scenic vistas within the Project view shed. Bachelor Mountain, east of the site, is visible along the horizon from Highway 79, but French Valley Creek along the southeastern edge of the site is generally not discernable due to an approximate 20-foot change in elevation profile from Highway 79.

The Project site zoning has minimum building setbacks at 50 feet and the maximum building height is 50 feet. In order to protect scenic vistas, the proposed facility will be set back approximately 250 feet from Highway 79 and 150 feet from Skyview Road. Additionally, the proposed building will be a single-story structure that will be constructed between 18 feet and 22 feet tall, heights lower than the surrounding residential structures, and well below the maximum permitted building height of 50 feet. Through incorporation of these design features, the Project would not have a substantial adverse effect on a scenic vista. Impacts would be less than significant, and mitigation is not required.

[1] *Multipurpose Open Space Element*. County of Riverside General Plan Amendment No. 960. Page OS-52. Adopted December 8, 2015.

b) Scenic Highways provide the motorist with views of distinctive natural characteristics that are not typical of other areas in the County, including, but not limited to low-lying valleys, mountain ranges, rock formations, rivers, and lakes. The intent of these policies is to conserve significant scenic resources along scenic highways for future generations and to manage development along these corridors so as to not detract from the area's natural characteristics. The closest eligible or designated State scenic highway corridor is Interstate 15, which is a State eligible scenic highway, located approximately 6.75 miles to the southwest, and a portion of Highway 79, which is a State eligible scenic highway, east of Highway 371, located approximately 18 miles to the southeast. The Project site is not visible from this State-eligible scenic highway corridors. The Project elements would not create or contribute to a new visual element or substantially degrade existing views from the State- or County- eligible scenic Corridors. Therefore, no significant impact related to an effect on scenic highway corridors will occur.

c) As of the last United States Census, the United States Census Bureau estimated French Valley's population to be 23,067 persons and the unincorporated community's land area to be approximately 10.87 square miles. The Project is located in an area with at least 1,000 persons per square mile and therefore meets the definition of Urbanized Area under Section 15387 of the CEQA Guidelines. The major scenic resources in proximity to the Project site are French Valley Creek along the southeastern boundary of the site, as well as the Hogbacks (topographic ridgeline) and Bachelor Mountain approximately two miles west and east of the site, respectively. Additional topographic features critical to the County's visual character include the San Jacinto Mountains and San Gorgonio Badlands on the northeast, the Box Springs Mountains to the north, and the Santa Ana Mountains on the southwest. Rural farmland, local hills and rock outcrops, and other open space features also are considered scenic vistas in the County. However, design elements incorporated in the Quinta Do Lago Specific Plan establish a framework to consider the relationship and compatibility of the proposed CECLC facility with its surroundings through building layout, orientation, setbacks, and height. Although the Project would introduce a new structure to the previously developed area, the childcare, early learning center, and Project elements would be compatible in scale and size with the adjacent library and surrounding residential structures and would not result in an aesthetically objectionable views to the public. The Childcare and Early Learning Center would not create any additional significant blockage or obstruction of views from surrounding roadways or viewpoints. No additional visual obstruction would occur to any prominent topographic features such as rock outcroppings, or to scenic vistas of the surrounding mountains that are already disrupted by existing vegetation and development. Therefore, a less-than-significant impact to scenic resources will occur.

d) A significant impact would occur if the Project caused a substantial increase in ambient illumination levels beyond the property line or caused new lighting to spill over onto light-sensitive land uses such as residential, some commercial, institutional, and natural areas. The Project site is located in the French Valley Community. Existing light sources from the Project site include interior lighting from the library and exterior lighting associated with the parking lot and street lighting. Additional light and glare occur in the surrounding area from vehicle luminaries, residential daytime and nighttime lighting, and minimal security lighting. Operation of the Project would not expose residential property to unacceptable light levels or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Construction activities would occur during the daytime and would be temporary. Implementation of the Project would not expose residences to unacceptable light levels or create a new source of substantial lighting or glare. Therefore, a less-than-significant significant impact related to light and glare will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
2. Mt. Palomar Observatory *a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?*	☐	☒	☐	☐	☐

Source: RCIT (GIS Database); Project Description; Ord. No. 655 (Regulating Light Pollution).

Findings of Fact:

a) Light pollution occurs when too much artificial illumination enters the night sky and reflects off of airborne water droplets and dust particles causing a condition known as "sky glow." It occurs when glare from improperly aimed and unshielded light fixtures cause uninvited illumination to cross property lines. The Mount Palomar Observatory, located in San Diego County, requires unique nighttime lighting standards so that the night sky can be viewed clearly. The Project site is located approximately 22 miles northwest of the Mt. Palomar Observatory. The Project is within the 45-mile radius Zone B of the Observatory and is subject to Ordinance No. 655. Policy LU 4.1 of the County General Plan requires new developments to be located and designed to visually enhance and not degrade the character of the surrounding area through consideration of lighting and other impacts on surrounding properties. County Ordinance No. 655 restricts new development from incorporating fixtures emitting light that would create undesirable light rays into the night sky and detrimentally affect astronomical observations and research. Additionally, Ordinance No. 655 mandates that all outdoor lighting, aside from street lighting, be low to the ground, shielded, and/or hooded in order to prevent shine onto adjacent properties and streets. Project design will ensure that impacts related to light pollution associated with Mt. Palomar Observatory are less than significant.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
II AGRICULTURE & FOREST RESOURCES					
Would the Project					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐	☐
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	☐	☐	☒	☐	☐
c) In non-urbanized area, substantially degrade views of the site and its surroundings? (Public views are those that are experienced from a 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) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐	☐
e) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?	☐	☐	☒	☐	☐
f) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐
g) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?	☐	☐	☒	☐	☐

Source: California Department of Conservation Farmland Mapping and Monitoring Program 2012 and Williamson Act Land Map 2012; RCIT Agricultural Preserve Contracts (GIS Database).

Findings of Fact:

a-d) The Project site is in an area designated as "Farmland of Local Importance" (soils that would be classified as Prime and Statewide but lack available irrigation water, etc.) by the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation.[2] The Project site is not classified as prime farmland, unique farmland, or farmland of statewide importance. The Project site will not conflict with existing agricultural zoning or land subject to a Williamson Act contract. The Childcare and Early Learning Center is not anticipated to result in rezoning that would result in the conversion of agricultural zoned land to develop with non-agricultural uses. In addition, the Project is on an existing developed site, that would implement infill development, is the continuation of providing public services, and would not induce or convert farmland to non-agricultural uses. Therefore, no significant impact related to farmland or agricultural effects will occur.

e-g) The Project site is not located in an area near forest land or near any timber resources. There is no forest land and timber resources in the vicinity of the Project site and the construction and operation of the facility would not have an effect on forest land or result in the potential conversion of forest land to non-forest land. Therefore, no significant impact related to forest land will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
III AIR QUALITY					
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?	☐	☒	☐	☐	☐

Source: SCAQMD Attainment Status, South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook Table 6-2; CalEEMod 2022.1.1.20; and SCAQMD Rules (Appendix B).

Findings of Fact:

The Air Quality section addresses the impacts of the Project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. Air pollutants of concern include ozone (O_3), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), and lead (Pb). This section analyzes the type and quantity of emissions that would be generated by the construction and operation of the Project. Geographic areas are classified as either in attainment or nonattainment for each criteria pollutant based on whether the Ambient Air Quality Standards (AAQS) have been achieved under the state and federal Clean Air Acts (CAA).

[2]Riverside County Important Farmland 2016. Sheet 1 of 3. State of California Department of Conservation, California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/ (Accessed October 23,2023,

The South Coast Air Basin (Basin), which is managed by the SCAQMD, is designated as extreme nonattainment for O_3 and $PM_{2.5}$ under the National AAQS, and nonattainment for O_3 and $PM_{2.5}$ under the California AAQS. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the Project site, methodology, and air quality modeling data are included in Appendix B to this Initial Study.

a) Air quality in the United States is governed by the Federal CAA, administered by the United States Environmental Protection Agency (EPA). In addition to being subject to the requirements of the federal CAA, air quality in California is also governed by more stringent regulations under the California CAA, administered by the California Air Resources Board (CARB) at the state level and by the Air Quality Management Districts at the regional and local levels.

The Project site is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The 2016 Air Quality Management Plan (AQMP) was adopted by the SCAQMD Governing Board in March of 2017 and addressed the 1997 8-hour and 2008 8-hour ozone standards, as well as PM2.5 standards. The AQMP is derived from General Plan assumptions, land use, population, and employment characteristics defined in consultation with local governments. As such, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. The 2022 AQMP s focused on attaining the 2015 8-hour ozone standard of 70 parts per billion (ppb). The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

The Project would construct and operate a childcare and early learning facility, and additional on-site improvements to circulation and parking. The on-site improvements would provide more efficient operation and provision of public services to children. The Project will not require changes to the designated land use and zoning by the County General Plan and Zoning Ordinance. The General Plans of cities and counties within the Basin were used as the basis for the emissions inventory within the AQMP. Individual projects and long-term programs within the region are required to be consistent with the AQMP. To demonstrate consistency with the AQMP, the population projections used to assess the need for the Project must be approved by the Southern California Association of Governments (SCAG). The Project will not substantially alter the present or planned land use of this area as the services offered by the existing Fire Station would not result in new trips as no increase in staff or capacity would occur as part of the expansion. Therefore, the Project would be consistent with the land use designation that was incorporated within the General Plan and consequently the AQMP. In addition, the Project would not emit either short- or long-term quantities of criteria pollutants which exceed the SCAQMD's significance thresholds as discussed in 6b) below. The SCAQMD does not consider projects which result in emissions which are below the SCAQMD significance thresholds to interfere with the goals established in the AQMP. Therefore, a less- than-significant impact related to consistency with the AQMP will occur.

b) According the SCAQMD methodology, any project that does not exceed, or can be mitigated to less than the daily threshold values will not add significantly to the cumulative impact. Construction and operational activities would not result in emissions in excess of SCAQMD's daily threshold values. Therefore, a less-than-significant impact related to a cumulatively considerable net increase in criteria pollutants will occur.

c) Air quality impacts can be described in potential short and long-term impacts. Short-term impacts occur during Project construction. Long-term air quality impacts occur once the Project is complete and operational. These long-term impacts would occur as a result of increased vehicle traffic to the Project site due to periodic maintenance activity. The following analysis will address whether project generated emissions will significantly contribute toward an exceedance of the ambient air quality standards or a substantial contribution to an existing or projected air quality violation.

Short-term Air Quality Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust emissions from powered construction equipment; 2) fugitive dust generated from demolition, earthmoving, excavation and other construction activities; 3) motor vehicle emissions associated with vehicle trips; 4) emissions generated from paving activity; and (5) reactive organic gases generated from architectural coating activities. The analysis assumes compliance with SCAQMD Rule 403 (Fugitive Dust). Construction activities are estimated to begin in 2024, while build-out of the Project is scheduled for the Spring of 2025. Air pollutant emissions associated with the Project could occur over the short-term from site preparation to support the proposed land use. The included analysis is based on the CalEEMod computer model. To determine whether a significant regional air quality impact would occur, Project emissions are evaluated against SCAQMD regional significance thresholds for construction activities. The Project is required to comply with SCAQMD Rule 403, which establishes control measures for fugitive dust. Compliance with this rule will reduce short-term particulate pollutant emissions and is included as part of the air quality modeling assumptions. As shown in **Table AQ-1**, the Project's construction emissions are not anticipated to result in a substantial contribution to regional emissions. Project emissions are less than the SCAQMD CEQA significance threshold values. The output for the model run is included in Appendix B. Therefore, a less-than-significant impact related to violation of air quality standards will occur.

Table AQ-1: Summary of Peak Construction Emissions (Pounds per Day)

Activity	VOC	NOX	CO	SO2	PM10	PM2.5
Site Preparation	1	5	6	<1	1	<1
Grading	1	11	12	<1	6	3
Building Construction	1	6	7	<1	<	<
Paving	1	5	5	<1	<1	<1
Architectural Coating	1	1	1	<1	<1	<1
Maximum Daily Construction Emissions	**24**	**11**	**11**	**<1**	**6**	**3**
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Significance Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod Version 2022.1.1.20.

Long-Term Air Quality Impacts

Long-term air quality impacts associated with the Project would be generated from primarily area sources. Operation of the childcare and learning center would not result in additional stationary source emissions from on-site equipment. Area sources of emissions are those associated with landscaping maintenance and energy use. The Project is not adding staff or capacity and would not generate additional trips that would result in mobile emissions. As a conservative estimate, emissions based on the new building square footage were calculated from the CalEEMod computer model. The Project's emissions were evaluated against the SCAQMD significance thresholds as shown in **Table AQ-2**. The Project's emissions were found to be below the SCAQMD operational phase emissions thresholds. Therefore, a less-than-significant impact related to long term air quality impacts will occur.

Table AQ-2: Summary of Peak Regional Operational Emissions (Pounds per Day)

Operational Activity	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Vehicles	3	2	15	<1	<1	<1
Operational Emissions	**<1**	**<1**	**2**	**<1**	**3**	**1**
SCAQMD Significance Threshold	55	55	550	150	150	55
Exceeds Significance Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.20EMFAC 2014

The localized air pollution is evaluated against the localized significance thresholds (LST) which are based on the ambient concentrations of a pollutant within the Project Source Receptor Area, the size of the Project site and distance to the nearest sensitive receptor. The LSTs represent the maximum emissions from the Project site that are not expected to cause or contribute to an exceedance of the most stringent national or state AAQS. The LSTs are based on the California AAQS, which are the most stringent AAQS established to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those sensitive receptors most susceptible to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The SCAQMD has established guidance for the use of the results of the CalEEMod model to be applied to the LST methodology. In order to compare CalEEMod emissions against the LST thresholds, Project design features or mitigation measures should be established that describe the off-road equipment list and hours of operation assumed with maximum daily emissions; the maximum number of acres disturbed on the peak day using the equipment list; emission control devices added to off-road equipment; and dust suppression techniques used.

Construction LSTs

Emissions generated by construction activities would temporarily increase pollutant concentrations from onsite equipment (primarily mobile emissions) and fugitive dust (PM_{10} and $PM_{2.5}$). **Table AQ-3** shows the localized maximum daily construction emissions. As the childcare and early learning center is located within a residential area, the most conservative receptor distance of 25 meters was used for the LST methodology. As shown in **Table AQ-3**, maximum daily emissions from construction activities would not exceed the SCAQMD LSTs; therefore, construction emissions would not exceed the CAAQS and the Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to construction LSTs will occur.

Operational LSTs

Operational activities would generate air pollutant emissions from mobile and area emissions. **Table AQ-4** shows localized maximum daily operational emissions. As shown in **Table AQ-4**, maximum daily operational emissions would not exceed the SCAQMD LSTs and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to operational LSTs will occur.

Table AQ-3: Localized Significance Threshold Summary – Construction

	Pounds per Day			
Construction	**CO**	**NO2**	**PM10**	**PM2.5**
Peak Construction Emissions	11	11	6	3
Localized Significance Thresholds	1,100	234	7	4
Significant Impact Without Mitigation?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod Version 2020.4.0: Based on SCAQMD LST methodology on a 2-acre site that uses one grader, one dozer, and two tractors for eight hours a day during grading, which is equivalent to a disturbed acreage of 2 acres and compared against the 2-acre LST lookup table within SRA 26 and adjacent sensitive receptors (25m).

Table AQ-4: Localized Significance Threshold Summary – Operation

	Pounds per Day			
Construction	**CO**	**NO2**	**PM10**	**PM2.5**
Peak Operational Emissions	<1	<1	<1	<1
Localized Significance Thresholds	1,100	234	2	1
Significant Impact?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod Version 2020.0.4.0: Based on SCAQMD LST methodology for operational emissions which does not include off-site mobile emissions. The localized emissions were compared against the most stringent LST threshold for SRA 26 with a 25-meter receptor distance.

Carbon Monoxide Hotspots

An air quality impact would be considered significant if the generated CO emission levels exceed the state or federal AAQS, which would expose receptors to substantial pollutant concentrations. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized concentrations.

Vehicle congestion has the potential to create elevated concentrations of CO called "hot spots." Localized CO concentrations hot spots are caused by vehicular emissions, primarily when idling at congested intersections. Due to the implementation of strict vehicle emissions standards over the last 20 years, the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations have steadily declined. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars. A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 ppm or the 8-hour standard of 9 ppm were to occur.

The Bay Area Air Quality Management District has also looked at the effect of cleaner burning vehicles and concluded that under existing and future vehicle emissions rates, a given project would have to increase traffic volumes at a single intersection by 24,000 vehicles per hour where vertical and/or horizontal air does not mix (worst case condition) to generate a significant CO impact.[2] Based on these factors, there is no potential for the Project to generate CO concentrations higher than the state and federal standards. As a result, sensitive receptors in the area would not be substantially affected by CO concentrations generated by operation of the Project. Therefore, a less-than-significant impact related to CO hot spots will occur.

Toxic Air Contaminants

The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a toxic air contaminant (TAC); thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. The Project site is not located within 500 feet of a freeway or major roadway, near any rail yards, stationary diesel engines, or facilities attracting heavy and constant diesel vehicle traffic such as warehouse distribution centers. The surrounding Project area consists primarily of vacant land and residences, and the majority of vacant land surrounding the Project site is zoned for residential, recreation, and commercial uses.

[1]South Coast Air Quality Management District, *Carbon Monoxide Redesignation Request and Maintenance Plan*, Hot Spot Analysis, February 2005.

[2]Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, Section 3.3 Carbon Monoxide Screening Criteria, May 2011.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The childcare and early learning center is located within a residential area, which is presumed to have sensitive receptors. However, the facility would not result in additional diesel equipment or other heavy truck uses, so there would not be any additional long- exposure to TACs. The CARB Air Quality and Land Use Handbook: A Community Health Perspective Handbook includes facilities with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The Project is not anticipated to receive frequent truck deliveries and would not involve a substantial source of TAC emissions. Therefore, the operation of the Project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions.

During construction, diesel particulate emissions associated with heavy-duty equipment operations would occur. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Based on the construction schedule, limited amount of imported/exported material, and equipment mix as described in Appendix B, the construction of the Project is not anticipated to result in more than 20 truck trips per day and would not be a substantial source of TAC emissions. Given the short-term construction schedule of approximately 9 months, the Project would not result in a long-term (i.e., 70 years) source of TACs. No significant emissions and corresponding individual cancer risk are anticipated after construction. Because of the short-term exposure period during construction and low level of truck activity during construction and operation of childcare and early learning center, a less-than-significant impact related to TACs will occur.

The Project involves the construction and operation of a childcare and early learning center, which is considered a sensitive receptor. Land uses located within a one mile of the Project site are limited to vacant and residential land. The Project is not located within one mile of existing substantial point source emitters. The Project will not introduce a new significant source of air pollution into the Project vicinity and will not substantially reduce the existing ambient air quality. Therefore, no significant impact related to the siting of a sensitive receptor in proximity to a substantial point-source emitter will occur.

d) The Project would not emit objectionable odors that would affect a substantial number of people. The threshold for odor is if a Project creates an odor nuisance pursuant to SCAQMD Rule 402, Nuisance, which states:

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

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The Project would be consistent and compatible with existing land uses surrounding the Project site. Government uses, such as that of the Project, are typically interior uses and do not generate substantial odors. The Project will not introduce a new stationary source of air pollution into the Project vicinity that may cause objectionable odors. Odorous emissions anticipated from the Project are primarily from mobile sources (vehicles) coming to and from the Project site, which are existing and common sources of emissions in the area. No increase in the intensity of odors from vehicle emissions would result as there would not be an increase in vehicle trips. Therefore, no significant impact related to the creation of objectionable odors will occur. During construction activities, construction equipment exhaust would temporarily generate odors. Any construction-related odor emissions would be temporary, intermittent in nature, and would not constitute a public nuisance. Therefore, no significant impacts related to objectionable odors during construction will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
IV BIOLOGICAL RESOURCES					
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 Game or U. S. Wildlife Service?	☐	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☒	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☐	☒	☐	☐	☐

Source: RCIT (GIS Database); Project Description; WRCMSHCP, USFWS, On-site Biological Assessment conducted by Dudek & Associates, February 1, 2022.

Findings of Fact:

a-c) The Project-specific habitat assessment and focused survey (Appendix C) performed in conjunction with the Western Riverside Multispecies Habitat Conservation Plan (MSHCP). There are no direct impacts to state- or federal-listed species. The survey identified a small area along the northeast edge of the Project site that includes mule fat (Baccharis salicifolia) and cattail (Typha sp.), which are riparian species. These species are supported by stormwater runoff conveyed beneath Highway 74 and occur strictly in the northern portion of the site where development under the Project will not occur. Additional riparian habitat is located along French Valley Creek and its embankments, which are outside of the Project site boundaries and will be completely avoided by the proposed Project. Species within these habitats are protected under the Migratory Bird Treaty Act and California Fish and Game Code Section 3516, which protects nesting birds. There is potential for indirect impacts to listed avian species outside the Project impact area; however, implementation of Mitigation Measure **BIO-1,** Nesting Bird Survey, would reduce potential impacts associated with habitat modifications, sensitive species, and riparian habitat to less than significant.

The Project site does not contain any jurisdictional water features or wetlands. However, the Project site is near the French Valley Creek, which possesses characteristics of jurisdictional waters. Implementation of the Project would not occur or disturb any portion of the French Valley Creek area. All site improvements would occur west of an existing dirt road which acts as a buffer to the Creek area. The Project would include implementation of a Stormwater Pollution Prevention Plan (SWPPP), as well as a Water Quality Management Plan (WQMP), which would prevent potential soil erosion, siltation, or other on-site contaminants running off site during construction and operation of the Project. BMPs would be included as part of these documents which include scheduling to avoid adverse weather conditions, covering unused stockpiles, retaining existing vegetation, and implementing non vegetative cover, silt fencing, fiber rolls, gravel bag berms, street sweeping, and storm drain inlet protection, as well as low impact development features to treat stormwater on site. The establishment of these BMPs (e.g., fiber rolls, silt fencing, swales and basins), would ensure to capture/treat and direct all water away from the French Valley Creek and associated riparian and sensitive habitats to avoid potential impacts. Implementation of the SWPPP, WQMP, and adherence with these BMPs would ensure that water discharged from the site would not impact jurisdictional waters or sensitive habitats. Therefore, a less-than-significant impact related to jurisdictional waters or sensitive habitats will occur.

d) The Project site is not within any MSHCP Core Area, but the easternmost boundary of the site abutting French Valley Creek is within the Paloma Valley-Bachelor Mountain Proposed Constrained Linkage 18 that connects the Antelope Valley Proposed Core 2 with the Bachelor Mountain Proposed Extension of Existing Core 7. Additionally, the Project site is not within a Cell Group, but it is within MSHCP Criteria Cell 5477 and Sub Unit 5 (French Valley/Lower Sedco Hills) of the Southwest Area Plan. According to the MSHCP Criteria for the Southwest Area Plan, conservation within Criteria Cell 5477 will contribute to assembly of Proposed Constrained Linkage 18 and will focus on riparian scrub, woodland and forest habitat, and adjacent agricultural land. Areas conserved within this Cell will be connected to riparian scrub, woodland and forest habitat, and agricultural land proposed for conservation in Cell #5479 to the west and in Cell #5378 to the north. The Project would not interfere with any existing functioning wildlife corridor area or Linkage Systems or other designated habitat areas. Therefore, no significant impacts to wildlife movement or corridor linkages will occur.

e) No qualifying native trees have been identified on the Project site that would be subject to regulation under the Riverside County Tree Protection Ordinance. Therefore, no significant impacts related to local policies protecting biological resources will occur.

f) The Project site lies within the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP). MSHCP Figures 6-2 (Criteria Area Species Survey Area), 6-3 (Amphibian Species Survey Area), 6-4 (Burrowing Owl Survey Area), and 6-5 (Mammal Species Survey Area) of the MSHCP indicate the Project site is located within the Criteria Area Species Survey Area, Narrow Endemic Plant Species Survey Area, and Burrowing Owl Survey Area. Accordingly, the Project site was subject to a habitat assessment and focused survey in conjunction with MSHCP implementation in order to achieve coverage for these species.

A Habitat Assessment for MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA) and Criteria Area Species Survey Area (CASSA) Species was performed to determine habitat suitability for each of the NEPSSA and CASSA species listed in the MSHCP (see Appendix C). Vegetation on-site was dominated by non-native grassland comprised primarily of shortpod mustard (Hirschfeldia incana), redstem stork's bill (Erodium cicutarium), common fiddleneck (Amsinckia intermedia), and ripgut brome (Bromus diandrus). Stands of cattail (Typha sp.), mule fat (Baccharis salicifolia), black mustard (Brassica nigra), shortpod mustard, Mediterranean tamarisk (Tamarix ramosissima), and tree tobacco (Nicotiana glauca) also were observed. Due to the absence of exposed mapped clay soils, alkali soils, and indicated native plant communities, as well as grading of most of the Project site within the past few years, the site does not provide suitable habitat for any NEPSSA or CASSA species. A focused burrowing owl (Athene cunicularia) survey was performed on the Project site, including accessible portions of a 150-meter buffer area, in accordance with the County of Riverside Guidelines for Burrowing Owl Surveys (revised March 29, 2006) (see Appendix C). No burrowing owls, burrowing owl sign, or burrows or similar features suitable for burrowing owl occupation were found to be present on site. However, portions of the site are suitable for burrowing owl occupation, so there is potential for burrowing owl to occupy the site prior to construction. Mitigation Measure **BIO-2** will require a Burrowing Owl within 30 days of the start of construction. Therefore, no significant impact related to conflicts with habitat conservation plans would occur.

Mitigation

BIO-1 A qualified biologist shall conduct a pre-construction nesting bird survey within three days prior to vegetation- or ground-disturbing activities if such activities are proposed during the nesting season (February 1 through September 15). The survey shall include 100 percent coverage of the Project site. If no active avian nests are found during survey, no further work in this regard is required. If an active avian nest is discovered during survey, vegetation- and/or ground-disturbing activities shall be redirected around the nest(s). As determined by Riverside County, the qualified biologist shall delineate the boundaries of any such buffer area. The buffer shall be established by the biologist, which can range from 50 feet (typically smaller songbirds) to 500 feet (larger raptors) to ensure that nesting behavior is not adversely affected by the vegetation- and/or ground-disturbing activity. If such activities are delayed or suspended for more than seven days after the survey, the site shall be resurveyed. Should eggs or fledglings be discovered in any native nest, these resources cannot be disturbed until the young have hatched and fledged (matured to a stage that they can leave the nest on their own).

BIO-2 A qualified biologist shall conduct a pre-construction burrowing owl/Initial Take and Avoidance Survey within 30 days prior to the beginning of project construction to determine if the Project site contains suitable burrowing owl habitat and to avoid any potential impacts to the species. The survey shall be performed pursuant to the Riverside County Multiple Species Habitat Conservation Plan (MSHCP) 30-day Pre-Construction Burrowing Owl Survey Guidelines (revised August 17, 2006) and include 100 percent coverage of the Project site. If the survey reveals no suitable habitat for burrowing owl is present, no further work in this regard is required. If active burrowing owl burrows are determined to be present, the burrow(s) shall be flagged, and a 160-foot buffer shall be established around the burrow(s) during the non-breeding season (September 1 to January 30) and a 250-foot buffer shall be created during the breeding season (February 1 to August 31). As determined by Riverside County (County), the buffer limits may vary depending on burrow location and burrowing owl sensitivity to human activity. The buffer(s) shall be sufficient to ensure that nesting behavior is not adversely affected by the construction activity. A monitoring report shall be prepared and submitted to the County for review and approval prior to reinitiating construction activities within the buffer area(s), and construction within the designated buffer area(s) shall not proceed until written authorization is received from California Department of Fish and Wildlife (CDFW). The monitoring report shall summarize the results of the owl monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area(s) without jeopardizing the survival of the owl(s). Any relocation efforts must be coordinated with the CDFW. This measure shall be implemented to the satisfaction of Riverside County and, as applicable, the CDFW.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s); Qualified Biologist.

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	SI	LTS	NI	AP	M-DP
V CULTURAL RESOURCES					
Would the Project					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐

Source: RCIT (GIS Database); Project Description; Riverside County General Plan; Riverside County General Plan Final Environmental Impact Report; Public Resource Code §5024.1, Title 14 CCR, Section 4850 et seq. Riverside County General Plan Figure OS-7 "Historical Resources".

Findings of Fact:

a) The Final Program EIR for the Riverside County General Plan identifies 138 historical resources in Riverside County (Table 4.7.A). These historical resources are identified due to their inclusion of one of more of the following: National Register of Historic Places, California Registered Historic Landmarks Architecture, California Points of Historical Interest, and/or Riverside County Historical Landmarks. Public Resource Code section 5024.1(c) defines guidelines to being considered a historic resource within the state of California as stated below:

> *A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:*
>
> *1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*
>
> *2) Is associated with the lives of persons important in our past.*
>
> *3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*
>
> *4) Has yielded, or may be likely to yield, information important in prehistory or history.*

A records search of the Project site revealed 25 cultural resources within one mile of the Project site. No cultural resources have been previously recorded within the Project site, but two prehistoric resources have been recorded within 1,000 feet of the site. The records search also identified 37 previous surveys and/or excavations within one mile of the Project site, two of which encompassed all or part of the site. The site was previously surveyed for cultural resources in 1990, in 2003 and in 2019.

The most recent pedestrian survey did not result in the identification of any cultural resources on site. Additionally, the survey revealed the majority of the site has been previously graded and/or disturbed by construction of flood control facilities. Based on the results of the Cultural Resources Assessment, the Project site does not contain any "historical resources" as defined under CEQA Guidelines §15064.5. Therefore, no significant impact related to Historic Resources would occur.

Findings of Fact:

b) The Project site has been previously disturbed, graded, and developed with buildings and landscaping. Therefore, the potential to alter or destroy an archaeological resource is low. Additionally, according to the County's General Plan, there are no sites in the area that have been identified as having Archaeologically Sensitive sites. As discussed, the records search 25 cultural resources within one mile of the site, but none on the Project site.

In accordance with Assembly Bill 52 (AB 52), Tribes were notified about the Project and invited to consult on October 17, 2022. One requested consultation and the initial consultation took place on October 2, 2023. Formal Consultation with this Tribe concluded on June 17, 2024. No other Tribes requested consultation within the 30-day notification period. No known archaeological sites or resources exist at the Project site which could be adversely affected and a less-than-significant impact would occur. While not required, Mitigation Measures **CR 1** through **CR9** were developed in coordination with the Tribe to address concerns related to the accidental discovery of cultural resources. Compliance with these mitigation measures will provide a redundancy mechanism to ensure that potential impacts from inadvertent discoveries of archeological resources do not occur and remain less than significant. Therefore, a less-than-significant impact to archaeological resources will occur.

c) The Project site is not located on a known formal or informal cemetery. No discovery of human remains, including those interred outside of formal cemeteries is anticipated. Furthermore, there are several established regulations that protect against the disturbance of interred human remains, defined in California Health and Safety (HSC) Sections 7050.5 through and 7054, which mandate that in the event of an accidental discovery of human remains, the County Coroner must be contacted within 24 hours. If the County Coroner determines that the remains are Native American, the County is required to contact the Native American Heritage Commission (NAHC) and any applicable Tribes. Adherence to the regulatory requirements would result in a less-than-significant impact and, while not required, Mitigation Measure **CR-7 and CR-8** will provide a redundancy mechanism to ensure that potential impacts from inadvertent discoveries of human remains do not occur and remain less than significant. Therefore, a less-than-significant impact to human remains will occur.

d) There are no known religious or sacred uses within the Project site that were identified through the cultural records search and consultation with Native American Tribes. Therefore, no significant impact related to the restriction of sacred or religious uses will occur.

Mitigation:

CR-1 Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all grading and trenching activities which may impact native soils on the Project site. The Project Archaeologist shall have the authority to temporarily halt and redirect earthmoving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. The Project archeologist and the Consulting Tribes shall attend a pre-grading meeting with the County, 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 shall make themselves available to provide the training on an as-needed basis.

CR-2 Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Indians (Pechanga) for tribal monitoring. The County is also required to provide a minimum of 30 days advance notice to Pechanga of all grading and trenching activities which may impact native soils. The Pechanga Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. Upon discovery of in-situ archaeological resources, the parties shall promptly meet and confer, limit the closure area to the smallest reasonable area (including the possibility of reducing the stop-work radius to 50 feet after initial evaluation), and engage in good faith collaboration to execute the protocols outlined in the Cultural Resource Monitoring Plan for handling such unearthed resources.

CR-3 Prior to the issuance of the grading permit, a Cultural Resource Monitoring Plan (CRMP) is to be developed and provided to the Consulting Tribe for review. The Project Archaeologist, in consultation with the Consulting Tribe, the contractor, and the County, shall develop a CRMP to address the details, timing and responsibility of all activities on the Project site that may impact archaeological and tribal cultural resources. 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 AB52 consultation process, and has completed AB 52 consultation with the County as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

h. Project description and location;

i. Project grading and development scheduling;

j. Roles and responsibilities of individuals on the Project;

k. The pre-grading meeting and Cultural Resources Worker Sensitivity Training details;

l. The protocols and stipulations that the contractor, County, 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 resource's evaluation;

m. The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items;

n. Contact information of relevant individuals for the Project.

CR-4 The County shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground–disturbing activities and the Project Archaeologist or Pechanga Tribal Representative are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Pechanga Tribal Representative to the site to assess the significance of the find."

CR-5 If during ground disturbance activities, unanticipated unique archaeological resources are inadvertently 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. This mitigation shall apply to inadvertent discoveries of resources, including those with 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 Consulting Tribe.

d. All ground disturbance activities within 100 feet of the discovered resources shall be halted until a meeting is convened between the Developer, the Project Archaeologist, the Pechanga Tribal Representative, and the County of Riverside Facilities Management to discuss the significance of the find.

e. At the meeting, the significance of the discover(ies) shall be discussed and after consultation with the Pechanga Tribal Representative and the Project Archaeologist, a decision shall be made, with the concurrence of the County of Riverside, as to the appropriate process (documentation, recovery, avoidance, etc.) for the resources, including whether the stop-work radius from the discovered resource can be reduced to 50 feet.

f. Further ground disturbance, including but not limited to, grading and trenching, shall not resume within the determined stop-work radius area of the discovery until the protocols for handling the resources has been established by all parties pursuant to the CRMP. Work shall be allowed to continue outside of the stop-work radius area and shall be monitored by Pechanga Tribal Monitors, if needed.

g. Treatment and avoidance protocols for the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with Pechanga. These protocols may include avoidance of the resources through Project design, in-place preservation of resources located in native soils and/or re-burial on the Project site with procedures so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures.

h. If the find is determined to be unique and significant and avoidance of the area cannot be feasibly achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Consulting Tribe, and shall be submitted to the County for their review and approval prior to implementation of the said plan.

i. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Developer, Project Archaeologist and the Consulting Tribe cannot agree on the significance of or the treatment for the archaeological or cultural resources, these issues shall be presented to the County of Riverside for decision. The County of Riverside shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the Project Archeologist and shall consider the cultural and religious principles and practices of the Consulting Tribe. Notwithstanding any other rights available under the law, the decision of the County of Riverside shall be appealable to the County Board of Supervisors. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-6 In the event that Native American tribal cultural resources are discovered during the course of grading (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 Pechanga. Evidence that these procedures have been following shall be provided to the County of Riverside:

j. Preservation-In-Place of the tribal 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.

k. 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 County under a confidential cover and not subject to Public Records Request.

l. 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 County of Riverside. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-7 If human remains are discovered, no further disturbance shall occur within a minimum of 100 feet of the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

CR-8 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).

CR-9 Upon completion of ground-disturbing activities that impact native soils, the Project Archeologist shall submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with County of Riverside 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. Portions of the Phase IV Report may be confidential. The County shall review the reports to determine adequate treatment compliance. Provided the reports are adequate, the County shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s), Qualified Archaeological Monitor

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	SI	LTS	NI	AP	M-DP
VI ENERGY					
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?	☐	☒	☐	☐	☐

Source: GIS Database, Riverside County General Plan Figure S-2 "Earthquake Fault Study Zones", County of Riverside General Plan.

Findings of Fact:

a-b) LED Lights will be used around the building and in areas of pedestrian and vehicular circulation. Lights will be placed on timers/motion sensors for maximum efficiency and illumination levels will be designed and placed in relation to the appropriate use. Invasive plants will not be used and drought tolerant plants and trees that are hardy and require low maintenance will be used to incorporate water conservation and biodiversity. The Project would meet all requirements of Title 24 and any additional provisional requirements in order to assure that operation of the fire station would not conflict with adopted energy conservation plans. The Project would be required to maintain consistency with all Riverside County policies related to energy conservation including Policy H-4, Conservation of Energy and Policy H-29, Sustainable Building Policy. Therefore, a less-than-significant impact related to energy conservation will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
VII GEOLOGY AND SOILS					
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?	☐	☒	☐	☐	☐
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 Section 1802.3.2 of the California Building Code (2007), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐	☐
e) Have soils incapable of adequately supporting use of septic tanks or alternative wastewater 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 geological feature?	☐	☒	☐	☐	☐

Source: GIS Database, Riverside County General Plan Figure S-2 "Earthquake Fault Study Zones", Figure S-4 "Earthquake-Induced Slope Instability Map," and Figures S-13 through S-21 (showing General Ground Shaking Risk); Figure S-7 "Documented Subsidence Areas"; GIS Database (RCIT) County of Riverside General Plan, California Building Code

Findings of Fact:

a) The Alquist-Priolo Earthquake Fault Zoning Act (Act) mitigates fault rupture hazards by prohibiting the development of structures for human occupancy across the trace of an active fault. The Act requires the State Geologist to delineate "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." The boundary of an "Earthquake Fault Zone" is generally 500 feet from major active faults and between 200 and 300 feet from well-defined minor faults. Based on the information published by the Department of Conservation, State of California, the Project site is not within an Alquist-Priolo Special Study Zone/Alquist-Priolo Earthquake Fault Zone. A less-than-significant impact related to fault rupture would result from the implementation of the Project.

The Project site has and will continue to be subject to ground shaking generated from activity on local and regional faults. Based on United States Seismic Design Maps, the proposed childcare and learning facility may be subject to and must accommodate up to a maximum site horizontal acceleration of 0.68g with two percent exceedance probability in 50 years. Accordingly, the Project-specific Geotechnical Evaluation Report (Appendix D) prescribes seismic design parameters pursuant to the latest edition of the CBC and American Society of Civil Engineers (ASCE) 7-10 standards. State law requires the design and construction of new structures to comply with current CBC requirements which address general geologic, seismic (including ground shaking), and soil constraints for new buildings. These design requirements of the CBC are designed to withstand strong seismic shaking and a less-than-significant impacts to seismic ground shaking will occur.

Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires 'mobility' sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. The Geotechnical Evaluation Report determined groundwater beneath the site was encountered at depths between 30 and 45 feet below the surface. The Project is not located within a zone of required liquefaction investigation, and the Riverside County General Plan identifies the risk of liquefaction at the Project site as low. Proper engineering design and construction in conformance with CBC standards and Project-specific geotechnical would ensure potential for earthquake induced liquefaction and lateral spreading on-site would be low due to the recommended compacted fill, relatively low groundwater level, and the dense nature of the on-site earth materials. Therefore, less-than- significant impacts from liquefaction risk will occur.

Seismically-induced landslides and rock falls occur most often on steep or compromised slopes. Factors controlling the stability of slopes include: 1) slope height and steepness; 2) engineering characteristics of the earth materials comprising the slope; and 3) intensity of ground shaking. Landslides may result from heavy rain, erosion, removal of vegetation, seismic activity or combinations of these and other factors. The potential for landslides is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs, or topographic maps of the region and no indications of landslides

were observed during the site investigation.[3] Based on these factors, the risk from landslides, lateral spreading, collapse or rockfall hazards would not be considered substantial. Therefore, less-than- significant impacts from landslide risk will occur.

Mitigation: None

Monitoring: None

b) The Project will not result in a substantial loss of soil due to erosion. Surface soils consist of Carsitas gravelly sand. According to United States Department of Agriculture (USDA), Carsitas Series soils are excessively drained, formed in predominantly coarse textured gravelly or cobbly granitic alluvium, with rapid permeability. The risk of erosion is low due to very high rates of infiltration, permeability, limiting potential runoff. The Project would be subject to Storm Water Pollution Prevention Plan (SWPPP) requirements for erosion control during construction and would require the fugitive dust control measures during construction. Best management practices (BMPs) would be undertaken to control runoff and erosion from earthmoving activities such as excavation, grading, and compaction. All grading and compaction activities would be performed under the observation of a qualified engineer. After completion of construction, the erosion potential will be decreased. All soils used in the Project would be properly compacted in accordance with the Geotechnical Investigation and the County of Riverside specifications. Therefore, less-than-significant impacts to soil erosion will occur.

c) The Project site is not considered susceptible to liquefaction, and the potential for seismic-induced settlement and lateral spreading at the Project site is negligible. Additionally, the majority of the Project site and vicinity are relatively flat areas with less than two percent slope aspect. The embankment to French Valley Creek is engineered to be stabilized with riprap. There are no known landslides at the site, nor is the site in the path of any known or potential landslides. Proposed Project operations do not include oil, gas, or groundwater extraction, which could result in ground subsidence. On-site soils are dense and well drained, and geotechnical field exploration and laboratory tests indicate the potential for subsidence, hydrocompaction, or soil collapse is low. Verification testing will be performed by County Inspection upon completion of ground improvements to confirm that the compressible soils have been sufficiently densified. Therefore, no significant impact from unstable geologic units would occur.

d) Expansive soils are generally considered a threat because of the pressure that may be induced upon structures. In general, expansive soils include characteristics that may result in expansion or contraction when exposed to water. The extent of contraction (shrink) or expansion (swell) may be influenced by the amount and type of clay in the soil. Preliminary laboratory test results indicate on-site earth materials exhibit a low expansion potential, as classified in accordance with 2016 CBC Section 1803.5.3 and American Society for Testing and Materials (ASTM) D4829. As a result, the Project is not located on expansive soil and no substantial risks to life or property would occur; therefore, no significant impacts from expansive soil will occur.

e) The Project is the provision of a childcare and early learning which would not generate substantial amounts of new sewage or wastewater as no additional staff would be needed, which could increase new sewage or wastewater. Nonetheless, upgrades to the sewage and drainage infrastructure are included as part of the Project to avoid substantial effects to sewage and wastewater. Therefore, no significant impact to septic tanks or wastewater disposal systems will occur.

f) The Project site is located within an area of high paleontological sensitivity. As described previously, the site has been previously graded and disturbed. Therefore, the potential to discover and/or disturb any paleontological resource is low, and impacts would be less than significant. In the unlikely event that paleontological resources are discovered during construction, Mitigation Measure **GEO-1** shall be implemented. While not required, Mitigation Measure **GEO-1** will ensure potential impacts to paleontological resources remain less than significant. Therefore, a less-than-significant impact related to paleontological resources will occur.

Mitigation:

[3] *Ibid*.

GEO-1 In the event that any paleontological resources are unintentionally discovered during Project construction, construction activities in the vicinity of the resource shall immediately halt and/or be moved to other parts of the Project site. A Riverside County-qualified paleontologist shall be retained by the County or their designee to determine the significance of the resource, if any. If the find is determined to be significant, avoidance or other appropriate measures including extraction and relocation, as recommended by the paleontologist, shall be implemented.

Monitoring: Riverside County Facilities Management, Project Construction Manager(s); Qualified Paleontologist

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	SI	LTS	NI	AP	M-DP\
VIII GREENHOUSE GAS EMISSIONS					
Would the Project					
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

Source: CalEEMod 2022.1.20 model.

Findings of Fact:

This section analyzes the Project's contribution to global climate change impacts by evaluating the Project's contribution of greenhouse gas (GHG) emissions. The primary GHG of concern is carbon dioxide (CO_2), which represents the majority (greater than 99 percent) of proposed Project-related emissions. According to Section 15064.4, of the State CEQA Guidelines for determining the significance of GHG emissions, a lead agency must consider the following in the assessment of potential significant impacts:

1) *The extent to which the Project may increase (or reduce) GHG emissions as compared to the existing environmental setting;*
2) *Whether the Project emissions exceed a threshold of significance that the lead agency determines applies to the Project;*
3) *The extent to which the Project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.*

To address the State's requirement to reduce GHG emissions, the County prepared the 2015 Climate Action Plan (CAP) with the target of reducing GHG emissions within the unincorporated County by 15 percent below 2008 levels by the year 2020. The County's target is consistent with the AB 32 target and ensures that the County is providing GHG reductions locally that will complement the State and international efforts of stabilizing climate change.The County determined the size of development that is too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or alternate emission analysis method. To do this the County determined the GHG emission amount allowed by a Project such that 90 percent of the emissions on average from all projects would exceed that level and be "captured" by the Screening Table. The 3,000 MT CO2e per year value is the low end value within that range rounded to the nearest hundred tons of emissions and is used in defining small projects that are considered less than significant and do not need to use the Screening Tables or alternative GHG mitigation analysis used in the County CAP.[3]

a) In accordance with the State CEQA Guidelines, GHG emissions were calculated for construction and operation of the Project and will be assessed against the County CAP threshold of 3,000 MTCO2E/yr. GHG emissions resulting from Project construction and operation were calculated using the CalEEMod model, and include emissions resulting from on-road and off-road diesel fuel consumption as well as worker commutes, vehicle travel, energy consumption, water consumption, and waste generation. As presented in **Table GHG-1**, the total operational CO2E emissions generated as a result of the Project is 454 metric tons (MT) per year, including construction-related emissions (123 MT) amortized over a typical Project life of 30 years.

Table GHG-1: Annual Project-Related GHG Emissions

Source	Annual Emissions (MT)			
	CO_2	CH_4	N_2O	CO_2e
Construction Emissions	4	<1	<1	4
Area Emissions	<1	<1	<1	<1
Energy Consumption	37	<1	<1	37
Mobile Emissions	406	<1	<1	406
Solid Waste Generation	5	<1	<1	5
Water Consumption	2	<1	<1	2
Total	**69**	<1	<1	**454**
County of Riverside's GHG Threshold				**3,000**
Significant Impact?				**No**

Source: CalEEMod, Appendix A

As shown in **Table GHG-1**, the proposed Project's operational GHG emissions are below the County CAP GHG threshold, as well as the SCAQMD threshold for most land use types, of 3,000 MT CO2e and do not constitute a substantial contribution to global climate change. Therefore, a less-than-significant impact related to GHG emissions on the environment will occur.

b) The County of Riverside has adopted policies and programs in its General Plan to promote the use of clean and renewable energy sources, facilitate alternative modes of transportation, and for the sustainable use of energy. The County CAP, described above, was adopted by the Board on December 8, 2015. In particular, the CAP elaborates on the County General Plan goals and policies relative to GHG emissions and provides a specific implementation tool to guide future decisions of the County. The 2015 CAP is used as the baseline for the evaluation of consistency with applicable GHG plans, policies, or regulations. The Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The County CAP identifies three main goals which are to: provide a list of specific actions that will reduce GHG emissions, giving the highest priority to actions that provide the greatest reduction in GHG emissions and benefits to the community at the least cost; reduce emissions attributable to the County to levels consistent with the target reductions of AB 32; and establish a qualified reduction plan for which future development within the County can tier and thereby streamline the environmental analysis necessary under CEQA. Because GHG emissions are only important in the context of cumulative emissions, the focus of the analysis is on answering the question of whether incremental contributions of GHGs are a cumulatively considerable contribution to climate change impacts.

The County CAP has incorporated the measures identified in the CARB Scoping Plan as a means for reducing GHG emissions. Table GHG-2 summarizes the CARB Scoping Plan Policies for reducing GHG emissions. As shown in **Table GHG-2**, the Project is consistent with the CARB Scoping Plan Policies and County CAP. Therefore, a less-than-significant impact related to consistency with plans, policies, or regulations for reducing GHG emissions will occur.

Table GHG-2: CARB Scoping Plan

Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Energy Efficiency: Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policies, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** The Project will be designed and constructed using sustainable building practices, and will comply with the County's Sustainable Building Policy (H-29). The Project will be compliant with all current Title 24 standards.
Green Building Strategy: Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The Project will be subject to these mandatory standards. The Project will also incorporate LEED energy efficiency building measures.
Recycling and Waste: Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent.** A regulation to reduce methane emissions from municipal solid waste landfills is currently being developed by the state. The Riverside Countywide Integrated Waste Management Plan (CIWMP) outlines the goals, policies, and programs the County and its cities will implement to create an integrated and effective waste management system that complies with the diversion mandates in AB 939. The Project will be required to participate with County programs for recycling and waste reduction which comply with the 50 percent reduction requirement of AB 939.
Water: Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The Project will comply with all applicable County ordinances, including the County's Low Impact Development (LID) standards.

Source: CARB Scoping Plan.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
IX HAZARDS AND HAZARDOUS MATERIALS					
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 0.25-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 for people residing or working in the Project area?	☐	☒	☐	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☒	☐	☐	☐
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐	☐

Source: Google Earth™; Temecula Valley Unified School District Site Maps; DTSC, Cortese List.

Findings of Fact:

a) No hazardous materials or conditions exist on the Project site and no demolition would occur which could encounter hazards, such as lead-based paint or asbestos-containing materials. Project construction, may involve the limited transport, storage, use, or disposal of hazardous materials from the fueling or servicing of construction equipment on-site. Construction activities could also include general commercial cleaners, solvents, lubricants, paints, industrial coatings and other substances utilized for resurfacing. These types of chemicals are not acutely hazardous and would be used in limited quantities and in adherence to the manufacturers' guidelines. Further, these activities would be minimal, short-term, or one-time in nature. These materials are anticipated to be similar to other substances used on-site for the existing County-owned building. The Project site is not identified on any list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Therefore, a less-than-significant impact related to the creation of a hazard from a list of compiled hazardous sites will occur.

During operation, the childcare and early learning center would incorporate special storage requirements and other safety measures into Project design in order to minimize potential impacts. All facilities would be equipped with adequate fire suppression equipment. Any hazardous materials would be properly locked and made inaccessible to the public and/or untrained personnel in order to prevent unauthorized usage of these materials. Lastly, all hazardous materials would be used, transported, and stored in accordance to the manufacturer's labels and with all accepted BMPs, and the use of hazardous materials and substances would be subject to federal, state, and local health and safety requirements. The closest school in the District is Susan LaVorgna Elementary School, which is located approximately 0.3 miles to the south. The Project would not result in the transport or use of acutely hazardous materials. In addition, there is no direct road access to the school, in which vehicles with hazardous materials would travel in proximity to the school Compliance with the applicable laws and regulations would ensure that less-than significant impacts associated with the transport, use, or disposal of hazardous materials will occur.

The Project site is located within Compatibility Zone E (Other Airport Environs) of the French Valley Riverside County Airport Land Use Compatibility Plan (ALUCP). The ALUCP is developed to promote compatible land uses adjacent to airfields. Appendix D of the ALUCP identifies the Project as an institutional land use (akin to schools, colleges, and universities) is a compatible land use in proximity to the French Valley Airport. Part 77, Subpart B of the Federal Aviation Administration (FAA) requires notification to the FAA of any proposed construction or alteration having a height greater than an imaginary surface extending 100 feet outward and 1 foot upward (slope of 100:1) for a distance of 20,000 feet from nearest point of any runway more than 3,200 feet in actual length, and also requires FAA notification for construction of any object taller than 200 feet.

The Project site is located as close as 10,886 feet northeast of the nearest runway of the French Valley Airport. Therefore, any development on the Project site equal to or greater than 108.86 feet in height (equal to a slope of 100:1 in relation to the distance to the nearest runway) would require notification to the FAA. The proposed facility will be a single-story building constructed between 18 feet and 22 feet tall and, therefore, will not require notice to the FAA pursuant to Part 77, Subpart B. Pursuant to California Public Utilities Code Section 21676, the Project does not require airspace review by the Riverside County Airport Land Use Commission because the Project is a land use compatible with ALUCP Compatibility Zone E (Other Airport Environs), and the proposed facility will be far less than 100 feet in height (refer to Table 3.9.A). Therefore, impacts from safety hazards to people residing or working in the Project area from a project within an airport land use plan would be the less than significant.

b) The Project will be confined within the existing County-owned property and would not create any conditions that would impair the implementation of, or physically interfere with, an emergency response plan and/or emergency evacuation plan. The Project would develop emergency response plans and emergency evacuation plans to be reviewed and approved by emergency personnel. Therefore, a less-than-significant impact related to the disruption of emergency services will occur.

c) The Project site is not located within or adjacent to a Very High Fire Hazard Severity Zone, as designated by the California Department of Forestry and Fire Protection. Project design includes design features such as ignition-resistant materials and incorporation of fire sprinklers, would minimize risk of exposure of persons or property to wildland fires. Therefore, a less-than-significant impact related to the wildfire will occur.

d-f) Construction vehicles and equipment contain substances such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous. Existing Spill Prevention, Control, and Countermeasure requirements would reduce potential impacts by requiring the development and implementation of hazardous substance control and health and safety measures. During operation, the Project could require the use of hazardous materials including, but not limited to, industrial chemicals, oils, flammables, glue, and paint. However, the Project would incorporate all appropriate safety measures to minimize potential impacts, including the use of fire suppression equipment and fire- retardant metal cabinets for storage. All hazardous materials utilized would be properly locked and made inaccessible to the public and/or untrained personnel in order to prevent unauthorized usage of these materials. Compliance with the applicable laws and regulations would ensure that the risks associated with the potential accidental release of hazardous materials were minimized to the greatest extent feasible. The Project site is located within the Temecula Valley Unified School District. The closest school in the District is Susan LaVorgna Elementary School, which is located approximately 0.3 miles to the south. The Project would not result in the use of acutely hazardous materials, and would be limited to paints or cleaning materials, which would not pose a significant emissions risk to surrounding receptors. In addition, there is no direct road access to the school, in which vehicles with hazardous materials would travel in proximity to the school Therefore, a less-than-significant impact related to hazards or hazardous materials within 0.25 miles of a school will occur.

Mitigation: None

Monitor: None

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	SI	LTS	NI	AP	M-DP
X HYDROLOGY AND WATER QUALITY					
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 the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i) Result in substantial erosion or siltation, on- or off-site?	☐	☒	☐	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐	☐
iv) Impede or redirect flood flows	☐	☒	☐	☐	☐
d) Result 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?	☐	☒	☐	☐	☐

Source: Riverside County Flood Control District Flood Hazard Report/Condition; Riverside County General Plan; USDA Soil Conservation Service Soil Surveys; US Geological Survey; CEQA Guidelines Section 15155.

Findings of Fact:

a) The Project site is located within the Temecula Valley Subbasin of the larger Santa Margarita Watershed. Under existing conditions, storm water drains in a southeasterly direction toward French Valley Creek adjacent to the east of the Project site. French Valley Creek joins Warm Springs Creek approximately 2.2 miles southwest of the Project site. Warm Springs Creek connects to Murrieta Creek 7 miles southwest of the Project site. From there, storm water flows southeast approximately 7.2 miles within Murrieta Creek along the eastern foothills of the Santa Ana Mountains to the Santa Margarita River, through the Santa Ana Mountain Range and Camp Pendleton before discharging into the Pacific Ocean.

The County is a Co-permittee under the San Diego Regional Water Quality Control Board Order (SDRWQCB) Order number R9-2013-0001, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0109266, as amended by Order No. R9-2015-0001 and R9-2015-0100, also known as the Municipal Separate Storm Sewer System or MS4 permit. The Clean Water Act (CWA) establishes a framework for regulating municipal and industrial (including construction) storm water discharges under the NPDES permit. Section 402(p) of the CWA requires NPDES permits for storm water discharges from municipal separate storm sewer systems (MS4), as well as other designated storm water discharges that are considered significant contributors of pollutants. All new development is required to comply with provisions of the NPDES program, including Waste Discharge Requirements (WDR), and the County's MS4, as enforced by the SDRWQCB.

Projects resulting in the disturbance of 1.0 acre or more require compliance with the NPDES permit. The purpose of a SWPPP is to identify and implement BMPs to reduce construction-related impacts from erosion and sedimentation as a result of ground and vegetation disturbance, as well as impacts to surface water from contaminated stormwater discharges. BMPs may include the use of gravel bags, silt fences, check dams, hydroseed, and soil binders. The construction contractor would be required to operate and maintain these controls throughout the duration of on-site activities. In addition, the construction contractor would be required to maintain an inspection log and have the log on site to be reviewed by the County and representatives of the SQRWQCB.

According to the Water Quality Control Plan for the San Diego Basin, the United States Environmental Protection Agency (USEPA)-approved 303(d) listed impairments for the Project's receiving waters (Warm Springs Creek, Murrieta Creek, and the Santa Margarita River) include pathogens (bacterial indicators), metals, nutrients, pesticides, toxic organic chemicals, sediments, trash & debris, and oil & grease. These are the Project's pollutants of concern. To address potential water contaminants, the Project is required to comply with applicable federal, State, and local water quality regulations. All priority development Projects (which would include the proposed Project) in the County is required to prepare a Water Quality Management Plan (WQMP) to reduce water pollution impacts from construction and operation of the developments. WQMP's include BMPs for source control, pollution prevention, site design, low impact development implementation, and structural treatment control. BMPs or project design features in the Project specific WQMP would ensure long-term water quality impacts are reduced to less than significant levels. Proper engineering design and construction in conformance with the requirements of the County, the intent of the NPDES Permit for Riverside County and the incorporated cities of Riverside County within the San Diego Region (MS4 permit), and Project-specific recommendations outlined in a SWPPP and WQMP would ensure impacts related to water quality standards or waste discharge requirements remain less than significant.

b) The Project site is located within the Temecula Valley Groundwater Basin, which underlies the Temecula and Pauba Valleys in western Riverside County. Development of the Project would convert pervious surfaces to impervious surfaces, thus reducing the capacity of the site to facilitate infiltration of surface flows into the groundwater table. The on-site runoff will be detained by an on-site detention basin appropriately sized to capture the site's minimum design capture volume, further facilitating infiltration of storm water into the local groundwater aquifer.

Water for the Project will be provided by the EMWD. The EMWD considers current groundwater production to be utilized completely by existing customers, as the majority of EMWD's current and projected water supplies are imported through the Metropolitan Water District (MWD). New developments, including the proposed Project, will be supplied with imported water from one of the following sources: (1) treated imported water from MWD; (2) untreated imported water from MWD, which is subsequently treated by EMWD; or (3) untreated imported water treated by EMWD and recharged into the Temecula Valley Groundwater Basin for later withdrawal.

MWD's 2015 Urban Water Management Plan (UWMP) provides information about MWD's regional supply reliability and projected demands. Based on information provided by EMWD and other member agencies, MWD concludes that it is able to meet projected demands for all member agencies through 2040, even during dry periods. Under extreme conditions, water supplies could be allocated using the MWD Water Supply Allocation Plan (WSAP) to preserve supplies in storage by requiring a reduction in demand by member agencies, including the EMWD, pursuant to SB 1168 and 1319, and AB 1739. Since the Project will not be served via groundwater and will not preclude or obstruct on-site infiltration of storm water into the local groundwater aquifer, the Project will not deplete groundwater supplies or interfere with groundwater recharge. Therefore, a less-than-significant impact related to Project-related depletion of groundwater supply will occur.

c) The Project site is located on relatively level topography and storm water drains in a southeasterly direction toward French Valley Creek adjacent to the east of the Project site. Additionally, a culvert beneath Highway 74 conveys off-site storm water through the northernmost portion of the site prior to draining into French Valley Creek. Development of the Project site will maintain the existing drainage pattern and avoid the northern portion of the site where off-site flows are conveyed through the site into French Valley Creek. T he SWPPP would ensure that runoff is contained during construction of the Project, as measures would be established which control erosion and sediment transport to eliminate potential impacts to water quality. Therefore, a less-than-significant impact related to stormwater drainage and pollution will occur.

On-site conversion of permeable surfaces to impermeable surfaces could increase stormwater runoff rates and/or volume. NPDES regulations require development projects to retain stormwater runoff on-site at levels that generally do not exceed the existing condition. The WQMP shall identify the site's minimum design capture volume of runoff and specify appropriate LID BMPs to ensure post-development storm water runoff volume or time of concentration does not exceed pre-development storm water runoff in accordance with the NPDES MS4 Permit. Periodic maintenance of any required BMPs during Project occupancy and operation will be in accordance with the schedule outlined in the WQMP. Therefore, a less-than-significant impact related to risks from flooding due to increases in stormwater runoff would occur.

The Project is located in an urbanized area for which storm drain features have been previously planned and installed. A culvert beneath Highway 74 that conveys off-site storm water through the northernmost portion of the site prior to draining into French Valley Creek will be maintained, and the flowline will be avoided during site development. Additionally, the Riverside County Flood Control and Water Conservation District concrete ramps and riprap embankments along French Valley Creek will be avoided during site development. Sources of storm water pollution would be addressed through adherence to NPDES permit requirements with the implementation of the SWPPP and WQMP. Therefore, a less-than-significant impact related to the creation or contribution of runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would occur. The Project site is located in Zone D, which is defined as areas where there are possible but undetermined flood hazards, as no analysis of flood hazards has been conducted, and is used also when a community incorporates portions of another community's area where no map has been prepared. Currently, storm water sheet flows generally in a southeast direction across the site toward French Valley Creek and is treated in the basin that was developed for the French Valley Library. Upon development of the Project, on-site storm water will flow toward additional capacity created for water quality detention basins located on the site. The site's design capture volume would be captured to infiltrate into the underlying soils. Flows in excess of the design capture volume would be allowed to continue to sheet flow toward French Valley Creek. A culvert beneath Highway 74 that conveys off-site storm water through the northernmost portion of the site prior to draining into French Valley Creek will be maintained, and the flowline will be avoided during site development.

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The Riverside County Flood Control and Water Conservation District concrete ramps and riprap embankments along French Valley Creek will be avoided during site development, and the overall Project site drainage pattern would be perpetuated. The Project has been conditioned by the County to delineate the flood zone limits on the grading plans and to demonstrate on the plans that any building finished floor elevation shall be a 1-foot minimum above the 100-year base flood elevation. Buildings and structures shall be placed away from the property lines to maintain the French Valley Creek drainage pattern and allow for off-site flows along the northern portion of the site to be accepted on site and conveyed to French Valley Creek without deflecting onto adjacent properties. Through compliance with applicable regulations and policies, the Project would not impede or redirect flood flows. Impacts would be less than significant, and mitigation is not required. Therefore, a less-than-significant impact related to the impedance or redirection of flooding will occur.

The Project would be required to adhere to federal, state and local water quality provisions. The Project would construct on-site drainage capture improvements that have sufficient capacity to handle the activities associated with washing and fueling to prevent impacts to water quality. = Additionally, Project activity could include the transport and transfer of hazardous materials, on the Project site. Should any of these substances enter the stormwater system or the groundwater through accidental upset conditions, it could significantly degrade water quality. However, as described in 22a) and 22b), the transport, handling, and storage of hazardous materials is stringently regulated, and compliance would eliminate or reduce the risk to the greatest extent feasible. Therefore, a less-than-significant impact related to the substantial degradation of water quality will occur.

d) The Project site is within existing inundation areas for dams at Diamond Valley Lake and for Lake Skinner. 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 MWD continuously monitors these dams and their foundations for deformation, which would reduce impacts from damn failure to less than significant. Floodplains follow existing creeks and mostly affect lowland areas. Improvements to the embankment of French Valley Creek initiated by the Riverside County Flood Control and Water Conservation District control the direction and concentration of flood flows from French Valley Creek and establish predictability of floodwaters to prevent widespread flood and debris damage in the Project vicinity. The Project design shall be submitted to the Riverside County Flood Control and Water Conservation District for review in accordance with Southwest Area Plan Policy 24.4. Any additional Project-specific conditions imposed by the Riverside County Flood Control and Water Conservation District must be implemented as applicable during design and construction of the Project pursuant to County Ordinance 458. Inundation of the Project site by a tsunami is highly unlikely, as the Project site is approximately 31 miles northeast of the Pacific Ocean. Lake Skinner is an artificial waterbody located approximately 2.3 miles up gradient from the site and is separated from the site by several tracts of residential development that have incorporated storm drain improvements to convey water downstream to various creeks leading to the Santa Margarita River. Therefore, the risk of inundation from a seiche is low. Therefore, less-than-significant impacts related to flood hazards, tsunami, or seiches, or release of pollutants due to Project inundation will occur.

e) As the Project would not inhibit groundwater recharge potential and would not require groundwater to supply its anticipated demand, the Project would not conflict with any applicable water quality control plan or sustainable groundwater management plan. Therefore, a less-than-significant impact related to conflicting or obstructing implementation of a water quality control plan or sustainable groundwater management plan will occur.

Mitigation: None

Monitoring: None

Source: Riverside County General Plan Figure S-9 "100- and 500-Year Flood Hazard Zones"; Figure S-10 "Dam Failure Inundation Zone"; Riverside County Flood Control District Flood Hazard Report/Condition; RCIT (GIS Database); USDA. Soil Conservation Service Soil Surveys.

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	SI	LTS	NI	AP	M-DP
XI LAND USE AND PLANNING					
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?	☐	☐	☒	☐	☐

Source: Riverside County General Plan Land Use Element; RCIT (GIS Database); City of Riverside Municipal Code, Chapter 19.140.

Findings of Fact:

a-e) The site is located within the Quinta Do Lago Specific Plan. A library is adjacent to the Project and undeveloped open space occurs across Highway 79 to the northwest, multi-family residential uses are located across Skyview Road to the southwest, and single-family residential uses are located across the creek to the southeast and east. The Project will continue the Specific Plan's pattern of development in the community and provide an additional public service to the existing residential uses located adjacent to the south and to the east across French Valley Creek. Since the Project site is already physically bound by Highway 79 to the northwest, Skyview Road to the southwest, French Valley Creek to the southeast, and undeveloped open space to the northeast, development of the site would not physically divide an established community. The continued use of County property as a Public Facility providing childcare and learning public services is compatible with the surrounding residential land uses and would not result in significant effects which could adversely affect surrounding land uses. The Project would not result in any changes in access to the surrounding residential community and would not create a visual separation to the surrounding community or a physical or perceived barrier which could disrupt or divide the physical arrangement of an established community. Therefore, no significant impacts related to the land use of the Project in relation to the surround land uses and land use policies will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
XII MINERAL RESOURCES					
Would the Project					
a) Result in the loss of availability of a known mineral resource that would be of value to the region or 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?	☐	☐	☒	☐	☐

Source: Riverside County General Plan Figure OS-5 "Mineral Resources Area."

Findings of Fact:

a-b) The Project site is classified as Mineral Resource Zone MRZ-3 (an area containing known or inferred mineral occurrences of undetermined mineral resource significance). No mineral resources are known to occur on the Project site, nor has the Project site been previously used for mineral extraction. The Project site has no potential to be mined in the future because it is surrounded by adjacent and proximal residential uses and is not considered a State-designated mineral resource extraction zone. Therefore, development of the Project site would not result in the loss of a known mineral resource that would be of value to the region and residents of the State or that has been delineated on a local land use plan. Therefore, less-than-significant impacts related to mineral resources will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
XIII NOISE AND VIBRATION					
Would the Project					
a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐	☐
b) Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐	☐
c) For a Project located within the vicinity of a private airstrip or 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?	☐	☐	☒	☐	☐

Source: Riverside County General Plan Figure S-19 "Airport Locations"; County of Riverside Airport Facilities Map; US Department of Transportation Federal Aviation Administration.

Findings of Fact:

a) Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by differentiating among frequencies in a manner approximating the sensitivity of the human ear. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and should be approximated by the A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period. The L_{eq} is the foundation of the composite noise descriptor, day/night average (L_{dn}), and shows very good correlation with community response to noise. Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks, and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance.

Ambient noise measurements were taken at sensitive receptors near the Project site to establish a baseline to assess the potential noise effects from construction and operation of the Project. **Table N-1** shows the existing ambient noise levels. As shown in **Table N-1**, daytime existing ambient sound levels ranged between 46.6 and 56.0 dBA L_{eq}.

Table N-1: Ambient Noise Levels at Sensitive Receptors Near the Project site

Receptor	Location	Distance to Project site (feet)	L_{max} dBA(a)	L_{eq}, dBA(a)
Single-Family Residence	Skyview Rd adjacent to Project Site	150	58.0	49.7
Single-Family Residence	Skyview Rd/Marabella St	185	55.1	46.1
Single-Family Residence	Skyview Rd./Winchester SR 79	225	73.5	56.3
French Valley Library	North adjacent to Project Site	250	58.4	51.6

(a)Noise Measurements taken using a Sper Scientific Class I noise meter and wind screen on November 28, 2023. Weather conditions involved partial clouds with a slight breeze.
SOURCE: Riverside County

The Project would result in the construction and operation of a childcare and early childcare learning facility. Construction would result in temporary and periodic increases in noise, which is more likely to result in annoyance and inconveniences, rather than the more serious effects such as hearing loss, sleep deprivation, and stress. While there would be a temporary increase in noise levels within the Project vicinity during construction, the operation of the facility would not create any new substantial noise that would raise ambient noise levels at surrounding sensitive receptors. Childcare centers in the U.S. range between 58 and 68 dBA and the addition of this noise to the existing ambient noise levels would increase interior noise levels by less than 1dBA (0.3 dBA) at the nearest sensitive receptor.[4] This increase would be inaudible and no new permanent noise sources would occur with implementation of the Project. Therefore, during the operation of the Project, no impact related to a substantial permanent increase in ambient noise levels will occur.

The permanent effects from noise have the potential to result in more severe health effects, such as stress, sleep deprivation or hearing loss and use a more stringent threshold to measure the Project noise compared to the existing ambient levels. However, the speech interference level is utilized in the analysis to evaluate the less severe noise effects that would occur on a temporary or periodic basis, which are primarily focused on annoyance. The speech interference level measures the degree to which background noise interferes with speech and is shown in Figure 4. Speech spoken with slightly more vocal effort can be understood well, when the noise level is 65 dBA or lower. Therefore, an interior level of 65 dBA is used as the criterion level for determining significance for construction related activities. If the noise exceeds this level, intelligibility would be lost unless vocal effort is increased or communication distance is decreased. Noise from construction activities is generated by two primary sources: (1) the noise related to active construction equipment; and, (2) the transport of workers and equipment to construction sites. Project construction is expected to require the use of earthmoving and construction equipment for site prep, excavation/grading, construction, paving, and architectural coatings. Typical operating cycles for earthmoving equipment, such as excavators, graders, and bulldozers, may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Based on the intensity of use and equipment mix, noise levels during construction are estimated to have an L_{eq} of 89 dBA at 50 feet.

[4]Based on 2001 study from Manlove, Frank, & Vernon-Feagans and assuming an interior noise level reduction of 20 dBA.

The nearest off-site noise-sensitive receptor is an existing residence located approximately 150 feet south of the Project site. As shown in **Table N-2**, interior noise levels at the nearest sensitive receptors would be less than the 65 dBA speech interference threshold. This would result in a temporary increase to existing ambient noise levels, and would represent an inconvenience to the nearest residential receptors who may have to elevate their voices during the noisiest periods of construction when speakers are at distances of greater than 6 feet.

Table N-2: Project Construction Noise Impacts

Receptor	Distance	Estimated Exterior Construction Noise Level (dBA, L_{eq}) (a)	Estimated Interior Construction Noise Level (dBA, L_{eq}) (b)	Speech Interference Criteria (dBA)	Potentially Significant Impact
Single-Family Residence	150	79	59	65	No
Single-Family Residence	185	78	58	65	No
Single-Family Residence	225	76	56	65	No
French Valley Library	250	75	55	65	No

(a) Construction activity used an L_{eq} of 89 dBA.
(b) A 20-dBA reduction was applied for construction as identified in the Department of Housing and Urban Development Noise Notebook.
Source: Riverside County and Google.

Because construction noise is usually generated in short bursts and the heavy equipment used during site preparation moves around the construction site, this maximum noise level is not likely to occur for sustained periods of time and the temporary inconvenience would not be a substantial increase which could alter human health or safety. Therefore, a less-than-significant impact related to noise from construction activity and equipment will occur. Construction activity, although temporary at any given location, can be substantially disruptive to adjacent uses during the construction period. Construction activity is anticipated to last 6 to 9 months and will not occur during night time hours or on weekends when the majority of people are home. Construction noise impacts will be minimized to the extent feasible by limiting construction hours, staging vehicles and equipment away from sensitive receptors, and using equipment that is maintained and in good operating condition. These measures have been identified as Mitigation Measures **NOI-1** through **NOI-4**. With implementation of mitigation, a less-than-significant impact related to a substantial or periodic increase in noise levels will occur.

b) No significant sources of groundborne vibration or noise would be generated during the operation of the proposed Project. The construction of the Project would have the potential to produce short-term ground-borne vibrations. The closest land uses potentially impacted from groundborne vibration and noise (primarily from the use of heavy construction equipment) is the single-family residence located to the south of the Project site. The Federal Transit Administration has identified a construction vibration damage criterion of 0.2 inches per second peak particle velocity (PPV) for non-engineered timber and masonry buildings. General construction activity typically generates a vibration level of 0.089 inches per second PPV at 25 feet. This reference level would result in a vibration level of 0.009 inches per second PPV at the closest residence. This level would be well below the construction vibration damage criteria of 0.2 inches per second PPV and would not expose people to risk of building failure. In addition, Riverside County Ordinance No. 847 places time restrictions involving heavy equipment in order to protect sensitive receptors from impact. Furthermore, it should be emphasized that demolition and construction activities are anticipated to last 6 to 9 months and would be limited to daytime activities. Mitigation Measures **NOI-1** through **NOI-4** will ensure that groundborne vibration and noise are reduced to the greatest extent feasible. Therefore, a less-than-significant impact related to groundborne vibration and noise will occur.

c) There are no private airstrips located within the vicinity of the Project site. The closest airport to the Project site is the French Valley Airport, which is located approximately 2.1 miles southwest. The Project site is located beyond the existing and future 55 dBA CNEL impact zone from French Valley Airport. Therefore, a less-than-significant impact related to exposing people residing or working in the Project area to excessive noise levels.

Mitigation:

NOI-1 A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate.

NOI-2 During construction, all staging areas and equipment shall be located and directed in the middle of the site as to avoid any disruptions to the surrounding residences.

NOI-3 Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays.

NOI-4 Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices.

Monitoring: Riverside County and Construction Contractor

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	SI	LTS	NI	AP	M-DP
XIV POPULATION AND HOUSING					
Would the Project					
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐	☐

Source: Project Description; RCIT (GIS Database); Riverside County General Plan Housing Element.

Findings of Fact:

a-f) The Project involves the construction and operation of a childcare and early learning facility to enhance the public services within a County owned parcel. The Project will not displace people, necessitating replacement housing and is not located within a redevelopment area. The Project will primarily consist of the enhancement of existing services and would not create a demand that would result in the need for new housing or interfere with the development of planned housing. Therefore, no significant impact related to population and housing will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
XV PUBLIC SERVICES					
Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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	☐	☒	☐	☐	☐

Source: County of Riverside Fire Department, Google Earth.

Findings of Fact:

a) Development of the Project would incrementally increase demand for fire protection services, but not to the degree that existing fire stations could not meet the demand. The nearest fire station is French Valley Fire Station No. 83 located at 37500 Sky Canyon Drive three miles (six minutes) south of the site. Project design features incorporated into the structural design and layout would keep service demand increases to a minimum. Since the proposed development is located adjacent to Highway 79, emergency vehicles will have the ability to park on the east side of Highway 79 adjacent to the Project site in the event that the Project driveway is inaccessible. The Project site layout, including provisions for emergency vehicle access, would be reviewed for adequacy by the County Fire Department. Therefore, the Project would not require new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts and a less-than-significant impact related to the provision of fire services will occur.

b) The Project site is currently vacant and does not preclude or discourage unlawful activity; development of the site with a childcare and early child learning center would not only deter trespassing through the presence of County staff and the public and keep police service demand increases to a minimum. Additionally, the proposed facility would be equipped with formal surveillance through the use of closed-circuit television, electronic monitoring, and potential security patrols, as well as informal surveillance such as architecture, landscaping, and lighting designed to minimize visual obstacles and eliminate places of concealment. Therefore, a less-than-significant impact related to the provision of police protection will occur.

c) The Project does not include a residential component, so no direct increase in the local student population would occur. Operation of the proposed facility would supplement the public educational system by providing pre-school learning activities. Therefore, a less-than-significant impact related to the demand on schools will occur.

d) The Project would enhance childcare and early learning services in the Southwest Area Plan portion of the County. Impacts from construction and operation of the Project are mitigated, as applicable, throughout this Initial Study. The proposed facility is not expected to pose significant health risks to the public, so the Project will not create significant additional demand for libraries, health or hospital services, or other public facilities. Therefore, a less-than-significant impact related to the demand on other public facilities will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
XVI RECREATION					
Would the Project					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated??	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐

Source: RCIT (GIS Database); Ord. No. 460 Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications); Ord. No. 659 (Establishing Development Impact Fees); County of Riverside General Plan.

Findings of Fact:

a-b) The Project does not include the construction or expansion of a recreational facility and does not propose to include the use of an existing park or other recreational facility. The Project would be constructed on a vacant County-owned site and would not displace or create additional demand for recreational area. Therefore, no significant impact related to parks and recreation will occur.

c) According to Riverside County GIS, the Project site is not within a County Service Area (CSA) or recreation and park district with a Community Park and Recreation Plan. Parks and recreational services would not be affected as a result. In addition, the Project site is not subject to Quimby fees. Therefore, no significant impact related to designated recreational districts will occur.

Mitigation: None

Monitoring: None

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	SI	LTS	NI	AP	M-DP
XVII TRANSPORTATION					
Would the Project					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☒	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?	☐	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment?	☐	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐	☐

Findings of Fact:

a-b) The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document and includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances. The RTP is prepared every three years by SCAG and reflects the current future horizon based on a 20-year projection of needs. Urbanized areas such as Riverside County are required by State law to adopt a Congestion Management Plan (CMP). The goals of the CMP are to reduce traffic congestion and to provide a mechanism for coordinating land use development and transportation improvement decisions. The Riverside County Congestion Management Program (CMP) is updated every two years in accordance with Proposition 111. The purpose of a CMP is to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Local agencies are required to establish minimum level of service (LOS) thresholds in their general plans and conduct traffic impact assessments on individual development projects. Deficiency plans must be prepared when a development project would cause LOS F on non-exempt CMP roadway segments. The deficiency plans outline specific mitigation measures and a schedule for mitigating the deficiency.

The construction schedule for this Project is estimated to be 200 working days. Construction traffic includes a mix of light and heavy vehicles corresponding to workers and construction trucks. Construction of the Project would occur in five phases: site preparation, grading, building construction, paving, and architectural coating. The summary of construction activity is presented in **Table T-1**. Construction trip generation estimates are based on the anticipated construction schedule and phasing. Typical construction work schedules are expected to be during daylight hours only, with the arrival of construction workers occurring before the morning peak commute period and departures before the evening peak period. Truck and delivery activity to and from the site would also occur predominantly outside the peak commute periods. **Table T-2** estimates that the daily construction traffic would range from about 5 vehicles per day to about 18 vehicles per day assuming traffic is evenly spread over the working days of each phase. These are conservative assumptions assuming no carpooling of construction workers (that is all workers arrive in their individual vehicles). If only half of the workers arrive and depart pre-commute periods in the morning and evening then the site generated traffic occurring in the peak period is about 9 trips. Construction activity is not anticipated to generate more than 18 trips during the AM or PM peak hour.

Table T-1: Summary of Construction Activity

Phase	Duration (days)	Crew	Equipment
Site Prep	10	10	Grader, Tractor/Loader/Backhoe
Grading	30	15	Excavator, Grader, Dozer, Backhoe (2)
Building Construction	350	40	Crane, Forklifts (2), Generator Sets (3), Backhoe, Welder
Paving	20	15	Cement Mixer, Paver, Paving Equipment, Roller, Backhoe
Architectural Coating	20	10	Air Compressor

Source: Construction Contractor, CalEEMod.

Table T-2: Estimated Construction Daily Trip Generation

Phase	Duration (days)	Number of Workers	Maximum Truck Trips	Total Trips
Site Prep	10	5	4	14
Grading	10	8	20	36
Building Construction	160	20	10	50
Paving	10	18	14	50
Architectural Coating	5	5	2	12

Source: CalEEMod, Construction Contractor Assumptions.

The Project contains uses (pre-school/daycare) that are essential local services which shorten non-discretionary trips by placing services closer to residences resulting in an overall reduction in vehicle trips and VMT. Based on these uses, the Project passes the screening methodology which does not require a Traffic Impact Assessment or more detailed VMT analysis. Therefore, a less-than-significant impact related to the performance of the circulation system will occur.

c) The Project would not alter existing roadways and would use the existing access point along Skyview Road as well as two additional driveways east of the existing access point for drop off and staff.. The interior access of the Project site would be modified/paved to facilitate circulation, but these improvements would not have an effect on the surrounding roadway network. As a result, the Project would not create any hazardous conditions to local roadways. Therefore, a less-than-significant impact related to the creation of hazardous roadway conditions will occur.

d) Fire and emergency access is provided in compliance with the Uniform Fire Code. The Project does not propose any action that would negatively affect emergency access to and from the site beyond the existing condition. Therefore, a less-than-significant impact related to emergency access will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
XVIII TRIBAL CULTURAL RESOURCES					
a) *Would the Project Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*					
(i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.100? or	☐	☐	☒	☐	☐
(ii) A resource determined by the lead agency in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	☐	☐	☒	☐	☐

Findings of Fact:

a) Chapter 532, Statutes of 2014 (i.e., AB 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource." Also per AB 52 (specifically PRC 21080.3.1), Native American consultation is required upon request by a California Native American tribe that has previously requested that the County provide it with notice of such projects. Pursuant to AB 52, the County notified the relevant tribes of the Project on October 2, 2023:
One tribe, the Pechanga Band of Luiseno Indians provided a response requesting consultation. Government-to-government consultation pursuant to AB 52 was initiated on October 2, 2023. County staff met to discuss Project components, impacts, and mitigation requirements. During consultation meetings, it was requested that the consulting Tribes provide County staff with any issues or concerns regarding potential tribal cultural resources that may be present on the Project site and vicinity. Pechanga indicated that the area was culturally sensitive, and Mitigation Measures to protect against impacting tribal cultural resources were identified: Therefore, a less-than-significant impact related to an adverse change in the significance of a tribal resources will occur.

Mitigation: See Cultural Resources Mitigation Measures **CR-1** through **CR-9**

Monitoring: Tribal Monitor and Riverside County

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AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
XIX UTILIITIES AND SERVICE SYSTEMS					
Would the Project					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐	☐
b) Have sufficient water supplies available 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 the 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?	☐	☒	☐	☐	☐

Source: County of Riverside General Plan EIR, Water Resources.

Findings of Fact:

a) The Project site will connect to existing utilities, including water, drainage, and electric power located beneath Highway 79 and Skyview Road. All proposed improvements and utilities connections to drainage, electric power, water, and wastewater facilities would be installed during grading activities and required roadway frontage improvements for the Project site. The Riverside County Flood Control and Water Conservation District concrete ramps and riprap embankments will be completely avoided. As a result, interconnection to the existing utilities surrounding the site would not result in substantial disturbance of native habitat or soils, or existing roadways or utilities. Therefore, a less-than-significant impact related to the relocation or construction of utilities will occur.

b) The Project site is located within the Temecula Valley Groundwater Basin, which underlies the Temecula and Pauba Valleys in western Riverside County. Water for the Project will be provided by the EMWD. The EMWD considers current groundwater production to be utilized completely by existing customers, as the majority of EMWD's current and projected water supplies are imported through the MWD. The proposed Project, will be supplied with imported water from one treated imported water from MWD; untreated imported water from MWD, or untreated imported water treated by EMWD and recharged into the San Jacinto River Groundwater Basin for later withdrawal. The Project to employ approximately 17 staff and 120 children. EMWD's 2015 average daily per capita water demand for institutional uses is 17.6 gallons per day. Therefore, the Project is expected to demand is expected to be up to 2,411 gallons per day.

Based on information provided by EMWD and other member agencies, MWD concludes that it is able to meet projected demands for all member agencies through 2040, even during dry periods. Under extreme conditions, water supplies could be allocated using MWD's WSAP to preserve supplies in storage by requiring a reduction in demand by member agencies, including the EMWD, pursuant to SB 1168 and 1319, and AB 1739. Since the EMWD and MWD have the ability to meet all of their existing entitlements and projected supplemental demand through 2040, even under a repeat of historic multiple-year drought scenarios, sufficient water supplies are available to serve the proposed Project. The Project would be required to comply with the mandatory measures

for non- residential buildings under Division 5.3, Part 11 of Title 24 (CALGreen) for both indoor and outdoor water use. Indoor water conservation measures include, but are not limited to, 1.28 gallons per flush for toilets, 0.125 gallons per flush for wall-mounted urinals, 0.5 gallons per flush for floor mounted urinals, 2 gallons per minute at 80 pounds per square inch (psi) for single showerheads, and 0.5 gallons per minute at 60 psi for lavatory faucets. Outdoor conservation measures address the amount of water use based on the amount of aggregate landscaping to comply with the County water-efficient landscape ordinance and the California Department of Water Resources Model Efficient Landscape Ordinance. Adherence to all applicable rules and regulations related to the conservation of water would ensure that no mitigation is required for the construction and operation of the Project. Therefore, a less-than-significant impact related to water consumption for the Project will occur.

c) Wastewater from the Project will be collected at the Temecula Valley Regional Water Reclamation Facility (RWRF) for treatment. The Temecula Valley RWRF has a daily treatment capacity of 18 million gallons (mgd) and typically treats approximately 14 mgd. The Project would generate approximately 960 gallons of wastewater per day.[5] Since the Temecula Valley RWRF treats approximately 14 mgd of wastewater and maintains approximately 4 mgd of surplus capacity, the Project would represent 0.007 percent of the surplus capacity and would not exceed the capacity of the Temecula Valley RWRF. Therefore, a less-than-significant impact related to wastewater treatment will occur.

d) The majority of solid waste from French Valley is disposed at the El Sobrante Landfill in unincorporated Riverside County south of the City of Corona, and Badlands Sanitary Landfill near the City of Moreno Valley. According to CalRecycle, the El Sobrante Landfill maintains a permitted throughput of 16,054 tons per day of solid waste and a remaining capacity of 144 million cubic yards, while Badlands Sanitary Landfill maintains a permitted throughput of 4,800 tons per day of solid waste and a remaining capacity of 15.7 million cubic yards. According to CalRecycle, solid waste generation from public/institutional uses can be approximately 0.007 pounds per square foot per day (lb/sq ft/day). Therefore, the proposed 13,000 square-foot facility would generate approximately 91 pounds of solid waste per day and is not expected to generate solid waste in excess of the remaining capacity of landfills serving the Project site. Therefore, a less-than-significant impact related to solid waste treatment and capacity will occur.

e) The California Integrated Waste Management Act of 1989, also known as Assembly Bill 939 (AB939), revised the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. AB939 identified a 50 percent diversion rate goal by 2000. In 2008, Senate Bill 1016 (SB1016) was passed, which changed the way compliance is measured beginning in 2007. Compliance is the same under SB1016 as it was under AB939, except that the emphasis on program implementation is more focused. The most important aspect of compliance is program implementation. Compliance is evaluated by looking at a jurisdiction's per capita disposal rate as an indicator of how well its programs are doing to keep disposal at or below a jurisdiction's unique 50 percent equivalent per capita disposal target. The disposal rate targets for unincorporated Riverside County areas are 7.3 ppd per resident and 30.9 ppd per employee. The unincorporated County areas have 45 diversion programs implemented and the Project's solid waste would be disposed of at an approved site in compliance with federal, state and county regulations and would not conflict with the applicable County Integrated Waste Management Plan. Therefore, a less-than-significant impact related to consistency with solid waste statutes and regulations will occur.

Mitigation: None

Monitoring: None

[5]City of Los Angeles, *CEQA Thresholds Guide, Wastewater generation rates*, 2006

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	SI	LTS	NI	AP	M-DP
XX WILDFIRE					
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 instability, or drainage changes?	☐	☐	☒	☐	☐

Source: Sustainable Building Policy H-29.

Findings of Fact:

a) The Project site is not located within or adjacent to a Very High Fire Hazard Severity Zone (VHFHSZ), as designated by the California Department of Forestry and Fire Protection (CalFire). The nearest VHFHSZ is located approximately 4,400 feet to the east and is separated from the Project site by several tracts of residential structures. Design and construction of the Project in accordance with the CBC and California Fire Code, which include design features such as ignition-resistant materials and incorporation of fire sprinklers, would minimize risk of exposure of persons or property to wildland fires.

Construction activities that could temporarily restrict vehicular traffic would incorporate appropriate measures to facilitate the passage of persons and vehicles through/around any temporary road closures in accordance with the California Fire Code. During construction, standard traffic control devices such as warning signs, warning lights, and flaggers will be utilized as applicable to minimize obstructions and ensure the safe passage of emergency vehicles as necessary for the purposes of coordinating efforts during local, State, and/or federal emergency events, including response to hazardous materials incidents. Implementation of these traffic control measures will include guidance and navigational tools throughout the Project area in order to maintain traffic flow and safety during construction. The Project is proposed with two additional access driveways off of Skyview Road in addition to the existing access driveway to the library that would provide entry and exit points for emergency access. Since the proposed development is located adjacent to Highway 79, emergency vehicles will have the ability to park on the east side of Highway 79 adjacent to the Project site in the event that the Project driveway is inaccessible. Therefore, a less-than-significant impact related to the impairment of an emergency response plan will occur.

b) The Project site is relatively flat and is surrounded by developed land uses, roadways, and French Valley Creek. On-site vegetation is routinely disked to reduce wildfire risks. Development of the site in accordance with the CBC and California Fire Code, which include design features such as ignition-resistant materials and incorporation of fire sprinklers, as well as hardscaping and irrigated landscaping, would reduce the risk of wildfire compared to the existing condition by removing sources of ignition currently on the site. Therefore, a less-than-significant impact related to the exacerbation of wildfire risk will occur.

c) The Project would not require infrastructure to address wildfire risks and could potentially result in temporary or ongoing impacts to the environment. Therefore, a less-than-significant impact related to the installation of infrastructure for wildfire risks will occur.

d) The Project site is relatively flat and not located within or adjacent to a VHFHSZ, as designated by CalFire, and land immediately upstream of the Project site is generally developed. These factors would make the risk of flooding or landslides from wildfires minimal. Therefore, a less-than-significant impact related to the flooding and landslides from post wildfire instability will occur.

Mitigation: None

Monitoring: None

SI=Significant Impact; LTS=Less Than Significant or Less Than Significant With Mitigation Incorporated; NI=No Impact; AP=Analyzed in Prior EIR; M-DP=Substantially Mitigated by Uniformly Applicable Development Policies

	SI	LTS	NI	AP	M-DP
XXI MANDATORY FINDINGS OF SIGNIFICANCE					
Would the Project					
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 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?	☐	☒	☐	☐	☐

Source: Project Description; RCIT (GIS Database); Analyses contained herein.

Findings of Fact:

a) **Potential to Degrade Quality of Environment.** Implementation of the Project will not degrade the quality of the environment. The greatest concern regarding degradation to the environment will occur during construction when non-renewable resources will be expended to construct the Project. However, as indicated in the preceding analysis, construction effects would be abated to the greatest extent feasible with the implementation of mitigation measures. Therefore, a less-than-significant impact related to the degradation in quality of environment will occur.

Potential to Impact Biological Resources: Implementation of the Project will not 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; or reduce the number, or restrict the range of an endangered, threatened, or rare species. The Project is within WRMSHCP plan area and criteria cell; however, the MSHCP consistency analysis demonstrated that the Project would be consistent with the provisions of the relevant habitat conservation plan. Although the site is devoid of native habitat, the Project site contains some trees in the landscaped areas that could provide suitable roosting and nesting habitat for a number of common and sensitive avian species protected under the federal MBTA. Implementation of Mitigation Measures **BIO-1** and **BIO-2** would require preconstruction surveys for burrowing owls and prior to the removal of any trees on the Project site during the nesting season, to identify and avoid impacts to any burrowing owls or nesting birds. Therefore, less-than-significant impacts related to biological resources would occur.

Potential to Eliminate Important Periods of California History or Prehistory: As discussed in the Cultural Resources section, there would be less-than-significant impacts to resources of historical, cultural or paleontological significance. However, during construction of the proposed Project, the potential accidental discovery of an unknown cultural resource could occur. Implementation of Mitigation Measures **CR1** through **CR8** will ensure that in the event of an accidental discovery, the proper procedures and process is in place to avoid any potential impact on a significant resource. Therefore, less-than-significant impacts related to cultural resources will occur.

b) The cumulative analysis considers the impacts of the Childcare and Early Childhood Learning Facility in combination with potential environmental effects of related Projects in the Project area. Related projects, also referred to as cumulative projects, include recently completed projects, projects currently under construction, and future projects currently in development that have the potential to have a cumulative impact based on both geographic location and schedule of implementation. The geographic area affected by cumulative projects varies depending on the environmental topic. For example, construction noise impacts would be limited to areas directly affected by construction noise, while aesthetic impacts include the affected viewshed, which is location dependent, and the area affected by a project's traffic generally includes a larger street network and is dependent on the number of trips. Based on the narrow scope for the facility, this chapter considers the potential cumulative effects of the Project in combination with projects within a one mile radius of the Project site, where any potential effects of the Project could be cumulatively considerable.

Related projects considered in this analysis include those that have recently been completed, are near the start of construction, or are in planning. Schedule is particularly relevant to the consideration of cumulative construction-related impacts, since construction impacts tend to be relatively short-term. However, for planned projects, construction schedules are often conceptually estimated and can often change. Based on what is reasonably foreseeable, this analysis assumes these projects would be implemented concurrently with construction of the proposed Project, for 2024. A search of the County planning and permitting database indicated that there are no substantial projects with the potential to have a cumulative effect when taken in combination with the Project within the Project vicinity other than individual single- family residences. Therefore, the cumulative effects of the Project would be defined as the Project effects as described previously. As described above, impacts from the Project would not be significant or cumulatively considerable. Furthermore, mitigation identified in this Initial Study would result in the Project having no significant impact related to cumulative effects.

c) The Project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Construction of the Project would result in a one-time consumption of non-renewable resources needed to construct the Project and would not expose people to hazardous conditions or hazardous materials, which could have a substantial adverse direct or indirect effect. Operation of the Childcare and Early Childhood Learning Facility would not create conditions that would adversely affect the health of humans, increase risk to human safety, or affect the surrounding environment. The operation of the facility would provide increased quality of day care and pre-school services, which would be betterment for surrounding citizens of the County. Therefore, a less-than-significant impact related to direct and indirect effects on human beings will occur.

Mitigation: None

Monitoring: None

Source: Staff Review: Project Description

V. AUTHORITIES CITED

Anza Electric Cooperative; Assembly Bill 32 Global Warming Solutions Act; Assembly Bill 52 Native American Consultation; Bay Area Air Quality Management Plan CEQA Air Quality Guidelines; Building Standards Code (Title 24 California Code of Regulations); CalEEMod Air Quality Modeling; California Air Resources Board Land Use Handbook, California Air Resources Board Scoping Plan; California Alquist-Priolo Earthquake Fault Zoning Act; California Ambient Air Quality Standards; California Building Code; California Department of Conservation Farmland Mapping and Monitoring Program; California Department of Conservation Mineral Land Classification; California Department of Resources Recycling and Recovery; California Department of Toxic Substances Control Cortese List; California Department of Transportation CO Protocol; California Department of Transportation Scenic Highway Guidelines; California Department of Transportation Concept Report Highway 371; California Department of Water Resources Groundwater Levels; California Environmental Quality Act Statute and Guidelines, California Health and Safety Code Section 7050.5-7054; California Integrated Waste Management Plan; California Public Resources Code 5097.98; California Uniform Fire Code; Dudek & Associates Biological Assessment; Eastern Information Center Cultural Records Database; Federal Ambient Air Quality Standards; Federal Emergency Management Act Flood Insurance Rate Maps; Google Earth™; Harris Handbook of Acoustical Measurements and Noise Control, Speech Interference Thresholds; Hemet Unified School District; Inland Foundation Engineering Geotechnical Investigation; ITE Manual; On-site Inspection; RCIT GIS Database; Riverside County Board Policy H-29 Sustainable Building Policy; Riverside County Climate Action Plan; Riverside County Congestion Management Program; Riverside County General Plan; Riverside County General Plan Circulation Element; Riverside County General Plan Circulation Element, Trails, and Bike System; Riverside County Final Environmental Impact Report; Riverside County Fire Department; Riverside County Flood Control District Flood Hazard Report/Condition; Riverside County General Plan Figure C-1 "Circulation Plan"; Riverside County General Plan Figure C-5 "Airport Influence Areas"; Riverside County General Plan Figure C-6 "Trails and Bikeways System; Riverside County General Plan Figure C-8 "Scenic Highways"; Riverside County General Plan Figure OS-2 "Agricultural Resources"; Riverside County General Plan Figure OS-3a "Forestry Resources Western Riverside County"; Riverside County General Plan Figure OS-4a "Western Riverside County Natural Communities Vegetation"; Riverside County General Plan Figure OS-6 "Mineral Resources Area"; Riverside County General Plan Figure OS-8 "Paleontological Sensitivity"; Riverside County General Plan Figure S-1 "Mapped Faulting in Riverside County"; Riverside County General Plan Figure S-4 "Earthquake-Induced Slope Instability Map"; Riverside County General Plan Figure S-5 "Regions Underlain by Steep Slopes"; Riverside County General Plan Figure S-8 "Wind Erosion Susceptibility Map"; Riverside County General Plan Figure S-9 "Special Flood Hazard Zones"; Riverside County General Plan Figure S-10 "Dam Failure Inundation Zone"; Riverside County General Plan Figure S-11 "Wildfire Susceptibility"; Riverside County General Plan Figure S-14 "Inventory of Emergency Response Facilities"; Riverside County General Plan Housing Element; Riverside County General Plan Land Use Element; Riverside County Library System; Riverside County General Plan Noise Element; Riverside County General Plan, Riverside Extended Mountain Area Plan; Riverside County General Plan Table N-1 "Land Use Compatibility for Community Noise Exposure"; Riverside County General Plan Safety Element; Riverside County Ordinance No. 559 (Tree Protection Ordinance); Riverside County Ordinance No. 655 (Regulating Light Pollution); Riverside County Ordinance No. 847 (Regulating Noise in Riverside County); Riverside County Public and Private Airports, California; Riverside County Regional Transportation Plan; Riverside County Sheriff's Department; Riverside County Traffic Impact Study Thresholds; Riverside County Waste Management Department; SB1016 Solid Waste Per Capita Disposal Measurement Act; SCAQMD 2016 Air Quality Management Plan; SCAQMD Attainment Status; SCAQMD Carbon Monoxide Re-designation Request and Maintenance Plan; SCAQMD CEQA Air Quality Handbook Table 6-2; SCAQMD Localized Significance Thresholds; SCAQMD Rule 403 Fugitive Dust; SCAQMD Rule 402 Nuisance; Pechanga Band of Luiseno Indians; Southern California Association of Governments, Regional Transportation Plan; US Department of Agriculture, Soil Conservation Service Soil Surveys; US Department of Agriculture Soil Conservation Service Shrink Swell Potentials; US Department of Transportation; US Fish and Wildlife Migratory Bird Treaty Act; US Geological Survey Preliminary Geologic Map of the Bachelor Mountain 7.5' Quadrangle; Western Riverside County Multi-Species Habitat Conservation Plan; and Williamson Act Land Map.

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APPENDIX A

MITIGATION MONITORING AND REPORTING PROGRAM

RIVERSIDE COUNTY FRENCH VALLEY CHILDCARE AND EARLY CHILDHOOD LEARNING EXPERIENCE PROJECT

French Valley, Riverside County, California

July 2024

MITIGATION MONITORING AND REPORTING PROGRAM

FRENCH VALLEY CHILDCARE AND EARLY

CHILDHOOD LEARNING EXPERIENCE PROJECT

French Valley, Riverside County, California

The Project will design and construct an approximately 13,000 square-foot building on the same property as the French Valley Library, 31526 Skyview Road, Winchester, California 92596. The Project will include approximately 9,000 square feet of childcare programming and 4,000 square feet for an interactive hands-on learning experience. Developing these services adjacent to the French Valley Library creates a learning hub for future generations. The Project site area, including parking, playground and building footprint is on Assessor's Parcel Numbers (APN) 480-160-021 which comprises 11.33 acres of County-owned property. The Project would be located on approximately 2.1 acres in the southeast portion of the property.

The site was routinely disked for weed abatement since at least the 1990s and was cleared of vegetation and graded between November 2009 and March 2011. The library was constructed in the middle of the site and completed in 2021 A riprap embankment and concrete ramps have been installed along a slope between the gravel road and the creek within a Riverside County Flood Control and Water Conservation District easement to direct drainage flows and protect the road. The surrounding properties are primarily low-density residential and vacant land.

The Project would also involve some utility alterations to provide service to the new building. Construction is anticipated to start in late 2024 and would be completed by the end of 2025. The implementation of the Project would not require approximately 17 additional and would meet the goal of establishing childcare and early learning in close proximity to surrounding residents. Mitigation measures were identified in the Project's Initial Study and incorporated into the Project to reduce potential environmental impacts to a level determined to be less than significant.

Section 21081.6 of the California Public Resources Code requires a Lead Agency to adopt a *reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.* Section 15097 of the *State CEQA Guidelines* summarizes the criteria required for mitigation monitoring and/or reporting. This Mitigation Monitoring and Reporting Program (MMRP) has been compiled to verify implementation of adopted mitigation measures.

The County of Riverside Office of Economic Development (EOD) will have the responsibility for implementing the measures and various public agencies will have the primary responsibility for enforcing, monitoring, and reporting the implementation of the mitigation measures. This MMRP is set up as a Documentation of Compliance Report, with space for confirming that mitigation measures have been implemented. The required mitigation measures are listed and categorized by impact area, with an accompanying identification of the following:

- **Mitigation Measure**
- **Monitoring Phase** – the phase of the Project during which the mitigation measure shall be implemented and monitored:
- **Enforcement Agency** – the agency with the authority to enforce the mitigation measure
- **Monitoring Agency** – the agency to which reports involving feasibility, compliance, and implementation are made
- **Action Indicating Compliance**
- **Verification of Compliance**, which will be used during the reporting/monitoring

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
BIOLOGICAL RESOURCES						
BIO 1: A qualified biologist shall conduct a pre-construction nesting bird survey within three days prior to vegetation- or ground-disturbing activities if such activities are proposed during the nesting season (February 1 through September 15). The survey shall include 100 percent coverage of the Project site. If no active avian nests are found during survey, no further work in this regard is required. If an active avian nest is discovered during survey, vegetation- and/or ground-disturbing activities shall be redirected around the nest(s). As determined by Riverside County, the qualified biologist shall delineate the boundaries of any such buffer area. The buffer shall be sufficient to ensure that nesting behavior is not adversely affected by the vegetation- and/or ground-disturbing activity. If such activities are delayed or suspended for more than seven days after the survey, the site shall be resurveyed. Should eggs or fledglings be discovered in any native nest, these resources cannot be disturbed until the young have hatched and fledged (matured to a stage that they can leave the nest on their own).	Pre-Construction:	California Department of Fish and Wildlife	Qualified Biologist	Completion of burrowing owl survey; establishment of buffer zone if active nest identified on-site. In the event of an active nest, the biologist will periodically monitor until the nest is inactive		

BIO 2: A qualified biologist shall conduct a pre-construction burrowing owl/Initial Take and Avoidance Survey within 30 days prior to the beginning of project construction to determine if the Project site contains suitable burrowing owl habitat and to avoid any potential impacts to the species. The survey shall be performed pursuant to the Riverside County Multiple Species Habitat Conservation Plan (MSHCP) 30-day Pre-Construction Burrowing Owl Survey Guidelines (revised August 17, 2006) and include 100 percent coverage of the Project site. If the survey reveals no suitable habitat for burrowing owl is present, no further work in this regard is required. If active burrowing owl burrows are determined to be present, the burrow(s) shall be flagged, and a 160-foot buffer shall be established around the burrow(s) during the non-breeding season (September 1 to January 30) and a 250-foot buffer shall be created during the breeding season (February 1 to August 31). As determined by Riverside County (County), the buffer limits may vary depending on burrow location and burrowing owl sensitivity to human activity. The buffer(s) shall be sufficient to ensure that nesting behavior is not adversely affected by the construction activity. A monitoring report shall be prepared and submitted to the County for review and approval prior to reinitiating construction activities within the buffer area(s), and construction within the designated buffer area(s) shall not proceed until written authorization is received from California Department of Fish and Wildlife (CDFW). The monitoring report shall summarize the results of the owl monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area(s) without jeopardizing the survival of the owl(s). Any relocation efforts must be coordinated with the CDFW. This measure shall be implemented to the satisfaction of Riverside County and, as applicable, the CDFW.	Pre-Construction: 30 days prior to construction work or vegetation removal between February 1 and August 31.	California Department of Fish and Wildlife	Qualified Biologist	Completion of nesting bird survey; establishment of buffer zone if birds identified on-site		

- Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
CR-1: Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all grading and trenching activities which may impact native soils on the Project site. The Project Archaeologist shall have the authority to temporarily halt and redirect earthmoving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. The Project archeologist and the Consulting Tribes shall attend a pre-grading meeting with the County, 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 shall make themselves available to provide the training on an as-needed basis.	Pre-construction	County EOD	County EOD, Qualified Archaeologist	Contract with Archaeologist for Monitoring		
CR-2: Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Indians (Pechanga) for tribal monitoring. The County is also required to provide a minimum of 30 days advance notice to Pechanga of all grading and trenching activities which may impact native soils. The Pechanga Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities within a minimum of 100 feet of the affected area in the event that suspected archaeological resources are unearthed during Project construction. Upon discovery of in-situ archaeological resources, the parties shall promptly meet and confer, limit the closure area to the smallest reasonable area (including the possibility of reducing the stop-work radius to 50 feet after initial evaluation), and engage in good faith collaboration to execute the protocols outlined in the Cultural Resource Monitoring Plan for handling such unearthed resources.	Pre-construction	County EOD	County EOD, Project Archaeologist Tribal Monitor	Tribal Monitoring Agreement		

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
CR-3: Prior to the issuance of the grading permit, a Cultural Resource Monitoring Plan (CRMP) is to be developed and provided to the Consulting Tribe for review. The Project Archaeologist, in consultation with the Consulting Tribe, the contractor, and the County, shall develop a CRMP to address the details, timing and responsibility of all activities on the Project site that may impact archaeological and tribal cultural resources. 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 AB52 consultation process, and has completed AB 52 consultation with the County as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include: a. Project description and location; b. Project grading and development scheduling; c. Roles and responsibilities of individuals on the Project; d. The pre-grading meeting and Cultural Resources Worker Sensitivity Training details; e. The protocols and stipulations that the contractor, County, 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 resource's evaluation; f. The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items; g. Contact information of relevant individuals for the Project.	Pre-construction	County EOD	County EOD, Qualified Archaeologist	Contract with Archaeologist for Monitoring		
CR-4: The County shall verify that the following note is included on the Grading Plan: "If any suspected archaeological resources are discovered during ground–disturbing activities and the Project Archaeologist or Pechanga Tribal Representative are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Pechanga Tribal Representative to the site to assess the significance of the find."	Pre-construction	County EOD	County EOD,	Approval of grading permit		

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
CR-5: If during ground disturbance activities, unanticipated unique archaeological resources are inadvertently 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. This mitigation shall apply to inadvertent discoveries of resources, including those with 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 Consulting Tribe. a. All ground disturbance activities within 100 feet of the discovered resources shall be halted until a meeting is convened between the Developer, the Project Archaeologist, the Pechanga Tribal Representative, and the County of Riverside Facilities Management to discuss the significance of the find. b. At the meeting, the significance of the discover(ies) shall be discussed and after consultation with the Pechanga Tribal Representative and the Project Archaeologist, a decision shall be made, with the concurrence of the County of Riverside, as to the appropriate process (documentation, recovery, avoidance, etc.) for the resources, including whether the stop-work radius from the discovered resource can be reduced to 50 feet. c. Further ground disturbance, including but not limited to, grading and trenching, shall not resume within the determined stop-work radius area of the discovery until the protocols for handling the resources has been established by all parties pursuant to the CRMP. Work shall be allowed to continue outside of the stop-work radius area and shall be monitored by Pechanga Tribal Monitors, if needed. d. Treatment and avoidance protocols for the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with Pechanga. These protocols may include avoidance of the resources through project design, in-place preservation of resources located in native soils and/or re-burial on the Project site with procedures so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures. e. If the find is determined to be unique and significant and avoidance of the area cannot be feasibly achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Consulting Tribe, and shall be submitted to the County for their review and approval prior to implementation of the said plan.	Grading/ Excavation	County EOD	County EOD, Qualified Archaeologist	CRMP		

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
f. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Developer, Project Archaeologist and the Consulting Tribe cannot agree on the significance of or the treatment for the archaeological or cultural resources, these issues shall be presented to the County of Riverside for decision. The County of Riverside shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the Project Archeologist and shall consider the cultural and religious principles and practices of the Consulting Tribe. Notwithstanding any other rights available under the law, the decision of the County of Riverside shall be appealable to the County Board of Supervisors. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.						
CR-6: In the event that Native American tribal cultural resources are discovered during the course of grading (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 Pechanga. Evidence that these procedures have been following shall be provided to the County of Riverside: a. Preservation-In-Place of the tribal 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. b. 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 County under a confidential cover and not subject to Public Records Request.	Grading/ Excavation n	County EOD	County EOD, Project Archaeologist Tribal Monitor	CRMP		

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
c. 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 County of Riverside. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to County of Riverside upon the completion of a treatment plan and final report detailing the significance and treatment finding.						
CR-7: If human remains are discovered, no further disturbance shall occur within a minimum of 100 feet of the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).	Grading/ Excavation	County EOD	County EOD, Project Archaeologist	Sacred and burial sites preserved in place, as feasible		
CR-8 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).						

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Compliance Verification	
					Initials	Date
CULTURAL RESOURCES						
CR-9 Upon completion of ground-disturbing activities that impact native soils, the Project Archeologist shall submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with County of Riverside 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. Portions of the Phase IV Report may be confidential. The County shall review the reports to determine adequate treatment compliance. Provided the reports are adequate, the County shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department.	Post construction	County EOD	County EOD, Qualified Archaeologist	CRMP		
NOISE						
NOI-1: A construction noise coordinator shall be established prior to construction and signage will be provided on site that will identify the designated person and contact number. The coordinator shall be responsible for receiving calls from residents regarding specific construction noise-related complaints. The coordinator would then be responsible for taking appropriate measures to reduce or eliminate noise levels as appropriate.	Pre-construction	County EOD, Construction Contractor	County EOD, Construction Contractor	Documentation of Coordinator and evidence of signage		
NOI-2: Construction activity shall be prohibited during the hours of 6:00 p.m. and 7:00 a.m. and on weekends and County-designated holidays.	Grading and Construction	County EOD, Construction Contractor	EOD, Construction Contractor	Periodic inspections and monitoring during construction		
NOI-3: Construction equipment shall be properly maintained and equipped with mufflers and other State-required noise-attenuation devices.	Grading and Construction	County EOD, Construction Contractor	EOD, Construction Contractor	Periodic inspections and monitoring during construction		

APPENDIX B

AIR QUALITY AND GREENHOUSE GASES REPORT

French Valley

Childcare and Early Learning Center Experience Project

Riverside County, California

July 2024

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July 2024

SUMMARY

The following air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the expected criteria air pollutant emissions and/or criteria GHG emissions generated as a result of construction and operation of French Valley Childcare and Early Learning Center Experience Project (Project) would exceed the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality and draft screening significance thresholds, respectively, in the Project area. The analysis was conducted within the context of the California Environmental Quality Act (CEQA), as set forth in California Public Resources Code Sections 21000 et seq. The methodology follows the CEQA Air Quality Handbook prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. The California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to quantify Project-related emissions.

The Project consists of the construction of a new 13,000 square-foot building adjacent to the existing French Valley Library, 31526 Skyview Road, Winchester, California 92596. The Project will include approximately 9,000 square feet of childcare programming and 4,000 square feet for an interactive hands-on learning experience. Developing these services adjacent to the French Valley Library creates a learning hub for future generations. The Project site area, including parking, playground and building footprint is on Assessor's Parcel Numbers (APN) 480-160-021 which comprises 11.33 acres of County-owned property. The Project would be located on approximately 2.1 acres in the southeast portion of the property.

The site was routinely disked for weed abatement since at least the 1990s and was cleared of vegetation and graded between November 2009 and March 2011. The Library was constructed in the middle of the site and completed in 2022 A riprap embankment and concrete ramps have been installed along a slope between the gravel road and the creek within a Riverside County Flood Control and Water Conservation District easement to direct drainage flows and protect the road. The surrounding properties are primarily low-density residential and vacant land The topography of the site is flat, but gradually slopes in a southwestern direction. The Project site is at an elevation of approximately 215 feet below mean sea level. Construction is anticipated to start in 2024 and would be completed by the end of 2024/beginning of 2025. The Office of Economic Development will be the Lead Agency under the proposed Project.

During construction, the proposed Project will produce fugitive dust and diesel particulate matter, reactive organic gases (ROG), oxides of nitrogen (NOx), carbon monoxide (CO) and sulfur dioxide (SO2); however, the Project would not be expected to exceed thresholds established by the South Coast Air Quality Management District (SCAQMD). No mitigation measures will be required. Cumulative impacts are not expected due to the fact that there are no known construction projects in the surrounding area that have been identified. Also, given the fact that the proposed project is expected to reduce ozone precursors because it is a renewable non combustive energy project, the project would be expected to comply with regional and local air quality and climate change policies. The Project would add staff but would not substantially increase the capacity of the County-owned site as the facility would serve local uses having the effect of reducing vehicle travel. There would be no substantial increase in vehicle trips associated with the Project Based on computer modeling, no impacts were found. The proposed Project may generate construction odors from diesel equipment but those odors would be considered temporary and would not result in a significant impact. Objectionable odors from operational activity would be limited to trash and are not anticipated to result in a significant impact. GHG emissions from construction and operation would be expected to be 454 Metric Tons (MT) CO2 equivalent (CO2e)/year but would be less that the County CAP screening threshold of 3,000 Metric Tons MT CO2e/year.

INTRODUCTION

Purpose of the Project

The following air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the expected criteria air pollutant emissions and/or criteria GHG emissions generated as a result of construction and operation of the Project would exceed the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality and draft screening significance thresholds, respectively, in the Project area. The analysis was conducted within the context of the California Environmental Quality Act (CEQA), as set forth in California Public Resources Code Sections 21000 et seq.

Project Location

The Project site area, including parking and building footprint is on Assessor's Parcel Number (APN) 480-160-021 which comprises 11.33 acres of County-owned property. The Project site is located within Township 6 South, Range 2 West, Section 32 NE, San Bernardino Baseline and Meridian, and is identified on the Bachelor Mountain 7.5-minute series USGS Topographic Quadrangle map. The Project site is currently vacant with a library immediately adjacent to the northwest. The areas adjacent to the Project site consist of low-density residential and vacant land. The land use designation and zoning for the site is Recreation (OS-R) under the Quinto Del Lago Specific Plan. The topography of the subject property consists of relatively flat land that slopes gradually in a southwestern direction. The Project site is at an elevation of approximately 215 feet below sea level.

Project Description

The County of Riverside (County) is the Lead Agency for the proposed Project. The Project consists of the construction of a new 13,000 square-foot building adjacent to the existing French Valley Library, 31526 Skyview Road, Winchester, California 92596. The Project will include approximately 9,000 square feet of childcare programming and 4,000 square feet for an interactive hands-on learning experience. Developing these services adjacent to the French Valley Library creates a learning hub for future generations. as conventionally built facilities. The modular design allows for energy efficiency, lower costs due to shortened timelines.

The proposed Project would entail the construction of a childcare facility to improve local infrastructure and help ensure the welfare of the community by providing adequate day care services to the community of French Valley, and surrounding vicinity. Additional staffing would occur from the childcare facility. The additional staffing and infrastructure would enhance the level of day care services to the surrounding community. The Project would also involve utility alterations, including stormwater drainage improvements, electrical and septic upgrades to provide service to the new building. Construction is anticipated to start in 2024 and would be completed by the end of 2024/beginning of 2025.

REGULATORY ENVIRONMENT

Criteria Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards to protect public health. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from health effects. Criteria air pollutants include: ozone (O_3), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), nitrogen dioxide (NO_2), lead (Pb), CO, and SO_2.

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuel. CO is emitted primarily from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust from motor vehicles accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations follow the spatial and temporal distributions of vehicular traffic. The highest levels of CO emissions occur during the colder months of the year when inversion conditions are more frequent. CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs and can result in potential health effects. The results of excess CO exposure can be dizziness, fatigue, and impairment to the central nervous system.

Ozone. O_3 is a colorless gas formed in the atmosphere when ROGs, which include volatile organic compounds (VOCs), and nitrogen oxides (NO_X), react in the presence of ultraviolet sunlight. O_3 is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of O_3, are automobile exhaust and industrial sources. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposure to O_3 at typical levels in Southern California can result in breathing pattern changes and reduction of capacity, increased susceptibility to infections, inflammation of the lung tissue, and immunological changes.

Nitrogen Dioxide. NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red tint to the atmosphere, reducing visibility. There is indication of a relationship between NO_2 and chronic pulmonary fibrosis. An increase of bronchitis in children has also been observed at concentrations below 0.3 parts per million (ppm).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuel. The main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. SO_2 concentrations have been reduced by stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms, especially to children. SO_2 can also yellow vegetation and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles suspended in the air which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions. $PM_{2.5}$ and PM_{10} represent different sizes of particulate matter. $PM_{2.5}$ is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion, residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOCs. PM_{10} is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and burning of brush or waste; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. $PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these smaller particles can penetrate the human

respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce visibility.

Lead. Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, battery manufacturing, paint, ink, ceramics, ammunition, and secondary lead smelters. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. Now, lead smelters, battery recycling, and manufacturing facilities are the lead emission sources of greatest concern. Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Low-level lead exposures during infancy and childhood are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Toxic Air Contaminants

Toxic substances have the potential to cause adverse health effects in humans. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified through a two-step process of risk identification and risk management designed to protect residents from the health effects of toxic substances in the air. The SCAQMD has effectively reduced air toxics and criteria emissions in South Coast Air Basin (Basin) through an extensive control program including traditional and innovative rules and policies. The most comprehensive study on air toxics in SCAB is the Multiple Air Toxics Exposure Study (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates, and used modeling to estimate the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the average cancer risk in the region from carcinogenic air pollutants ranges from about 870 in a million persons to 1,400 in a million persons, with an average regional risk of about 1,200 in a million.

Greenhouse Gases

GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere to a greenhouse with glass panes. The atmosphere, similar to glass panes, lets heat from sunlight in and reduces the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be frozen with an average surface temperature of about 5°F. GHGs also include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. CO_2 is the most abundant GHG that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant than CO_2 but have higher global warming potential. The other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO2e to account for this higher potential. The CO2e of CH_4 and N_2O represents about 6 percent of the California GHG emissions. Other high global warming potential gases represented 3.5 percent of these emissions. There are also a number of man-made pollutants, such as CO, NO_X, non-methane VOC, and SO_2 that have indirect effects on solar radiation absorption by influencing the formation or destruction of other climate change emissions.

Federal

The Federal Clean Air Act (CAA) regulates air quality in the United States and is administered by the United States Environmental Protection Agency (EPA). The EPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS), which are required under the federal CAA. The EPA establishes various emission standards, including those for vehicles sold in states other than California. Vehicles sold in California must meet stricter emission standards which have been established by the California Air Resources Board (CARB).

State Implementation Plans Federal clean air laws require areas with unhealthy levels of O3, CO, NO2, and SO2, and PM10, to develop State Implementation Plans which describe how they will attain the NAAQS. The federal CAA set new deadlines for attainment based on the severity of the pollution and launched a comprehensive planning process for attaining the NAAQS. State Implementation Plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's State Implementation Plans rely on the same core set of control strategies including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the State Implementation Plans.

State

California is also governed by more stringent regulations under the California CAA. In California, the California CAA is administered by CARB at the state level and by the air quality management districts at the regional and local levels. CARB is responsible for meeting the State requirements of the federal CAA, administering the California CAA, and establishing the California Ambient Air Quality Standards (CAAQS). The California CAA requires all air districts in California to endeavor to achieve and maintain the CAAQS, which incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. CARB 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 oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality management functions at the regional and county levels.

South Coast Air Quality Management District SCAQMD monitors air quality within the study area. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The South Coast Air Bain is a subregion of the SCAQMD and covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards within the district.

Air Quality Management Plan All areas designated as nonattainment under the California CAA are required to prepare plans showing how the area would meet the state air quality standards by its attainment dates. The Air Quality Management Plan (AQMP) is the region's plan for improving air quality in the region. It addresses CAA and California CAA requirements and demonstrates attainment with state and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both state and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the SCAB must analyze whether the proposed project's daily construction and operational emissions would exceed thresholds established by SCAQMD.

Global Climate Change. There is general scientific agreement that the Earth's average surface temperature has increased by 0.3 to 0.6 degrees Celsius over the past century. Historical records also indicate that atmospheric

concentrations of a number of GHG have increased significantly since the beginning of the industrial revolution. As such, significant attention is being given to anthropogenic (human) GHG emissions. According to the California Energy Commission, emissions from fossil fuel consumption represent approximately 81 percent of GHG emissions and transportation creates 41 percent of GHG emissions in California. California has traditionally been a pioneer in efforts to reduce air pollution, dating back to 1963 when the California New Motor Vehicle Pollution Control Board adopted the nation's first motor vehicle emission standards. Assembly Bill (AB) 1493 was enacted based on recognition that passenger cars are significant contributors to GHG emissions. Subsequently, CARB established limits to reduce GHG emissions from new vehicles by 22 percent in 2012 and 30 percent in 2016. AB 32, the California Global Warming Solutions Act of 2006, was enacted in 2006 to cap California's GHG emissions at 1990 levels by 2020. AB 32 charges CARB with the responsibility to monitor and regulate the sources of GHG emissions in order to reduce those emissions. California Senate Bill (SB) 375 provided a means for achieving AB 32 goals from cars and light trucks. The bill aligns three critical policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve greenhouse gas emissions reductions targets for the transportation sector. The new law establishes a process for CARB to develop the GHG emissions reductions targets for each region and relies upon regional planning processes in the 17 Metropolitan Planning Organizations to accomplish its objectives.

Attainment Status

Table AQ-1 summarizes the attainment status for the criteria pollutants according to the NAAQS and CAAQS. Areas are designated as non-attainment for a pollutant if air quality data shows that a standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations. The Riverside County portion of the Basin is designated as a non-attainment area for O_3 and PM_{10} under the CAAQs and NAAQS.

TABLE AQ-1: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

		California		Federal	
Pollutant	**Period**	**Standard**	**Attainment**	**Standard**	**Attainment**
	1 Hour	0.09 ppm	Nonattainment		
O3	8 Hour	0.07 ppm	Nonattainment	0.070 ppm	Nonattainment
	24 Hour	--	--	35 ug/m3	Nonattainment
PM2.5	Annual Arithmetic Mean (AAM)	12 ug/m3	Nonattainment	12 ug/m3	Nonattainment
	24 Hour	50 ug/m3	Nonattainment	150 ug/m3	Maintenance
PM10	AAM	20 ug/m3	Nonattainment	50 ug/m3	Maintenance
	1 Hour	0.18 ppm		0.1 ppm	
NO2	Annual	0.030	Attainment	0.0534 ppm	Unclassified/Attainment
	1 Hour	9.0 ppm	Attainment	9.0 ppm	Maintenance
CO	8 Hour	20 ppm	Attainment	35 ppm	Maintnenace
	30 Day Average	1.5 ug/m3	Attainment	--	--
Pb	3 month rolling average	--	--	0.15 ug/m3	Unclassified/Attainment
	1 Hour	0.25 ppm			
SO2	24 Hour	0.04 ppm	Attainment	0.75 ppm	Attainment

Note: CAAQs for Visibility Reducing Particles, Sulfates, Hydrogen Sulfide, and Vinyl Chloride in the Basin are unclassified or in Attainment.
Source: California Air Resources Board

EXISTING CONDITIONS

The proposed Project is located within the Riverside County portion of the South Coast Air Basin (Basin). The Basin is an area of high air pollution potential due to its climate and topography. The Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. In addition, the mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region. The region experiences frequent temperature inversions where temperatures increase as altitude increases and prevents air near to the ground from mixing with the air above it. As a result, air pollutants become trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and lower layer of the atmosphere, which creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. In addition, hydrocarbons and Nitrogen Dioxide (NO_2) react under strong sunlight creating pollution, commonly referred to as smog. Light, daytime winds predominantly from the west further aggravate the condition by driving the air pollutants inland toward the mountains. During the fall and winter, air quality problems are created due to CO and NO_2 emissions. High NO_2 levels usually occur during autumn or winter on days with summer-like conditions. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the Basin are associated with heavy traffic.

The SCAQMD monitors air quality conditions at 38 locations throughout the Basin. The Project Site is within the Temecula Valley Receptor Area, which is served by the Temecula Monitoring Station located at 33700 Borel Road in the unincorporated community of Winchester. Historical data from the Temecula Monitoring Station were used to characterize existing conditions. Criteria pollutants monitored at the Temecula Monitoring Station include Ozone (O_3). Particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}). CO, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) are not monitored at the Temecula Monitoring Station. The nearest monitoring station to monitor these pollutants is the Metro I Riverside Monitoring Station. A summary of the data recorded at these stations is presented in **Table A-2**. The standards for O_3, $PM_{2.5}$, and PM_{10} were all exceeded multiple times from 2019 to 2021.

TABLE AQ-2: CRITERIA POLLUTANT VIOLATIONS – 2019 TO 2021

Pollutant	Standard	Number of Days Above Standard		
		2019	2020	2021
O_3	0.09 ppm (1 Hour)	0	5	1
O_3	0.070 ppm (8 Hour)	6	37	11
$PM_{2.5}$	35 ug/m3 (AAM)	4	4	10
PM_{10}	50 ug/m3 (24 Hour)	21	110	16
NO_2	0.25 ppm (1 Hour)	0	0	
CO	9.0 ppm (8 Hour)	0	0	0
SO_2	0.04 ppm (24 Hour)	0	0	0

Source: SCAQMD

IMPACTS

Regional Emissions

Air quality impacts are assessed in both the short and long term. Short-term impacts occur during construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by equipment and construction-related vehicles. During the finishing phase, architectural coatings (i.e., paints) and other building materials would release reactive organic gases (ROGs). Long-term air quality impacts occur once the Project is in operation and would occur primarily from mobile source emissions. The proposed Project would have a significant impact from air quality emissions if the following thresholds established by the SCAQMD identified in **Table AQ-3** would be exceeded.

TABLE AQ-3: SCAQMD DAILY EMISSIONS THRESHOLDS

	Construction	Operation
Criteria Pollutant	**Pounds Per Day**	
ROG	75	75
NO_x	100	100
CO	550	550
So_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

Source: SCAQMD

Construction. The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 miles per hour, and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (approximately two acres) a Fugitive Dust Control Plan or Large Operation Notification is not required.

Construction emissions associated with the Project were evaluated using the CalEEMod version 2022.1.1.20 program. The total construction period for the proposed Project is approximately 9 months, beginning no earlier than March 1, 2024. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. No fill import/export is anticipated. It is anticipated that a maximum of 4 daily haul truck trips would be required to bring equipment and materials to and from the site. Additional assumptions regarding construction activity are shown in **Tables AQ-4** and **AQ-5**.

Table AQ-4 SUMMARY OF CONSTRUCTION ACTIVITY

Phase	Duration (days)	Crew	Equipment
Site Prep	5	10	Grader, Tractor/Loader/Backhoe
Grading	25	10	Excavator, Grader, Dozer, Backhoe (2)
Building Construction	180	30	Crane, Forklifts (2), Generator Sets (3), Backhoe, Welder
Paving	5	10	Cement Mixer, Paver, Paving Equipment, Roller, Backhoe
Architectural Coating	5	10	Air Compressor

Source: Construction Contractor, CalEEMod.

Table AQ-5 ESTIMATED CONSTRUCTION DAILY TRIP GENERATION

Phase	Duration (days)	Number of Workers	Maximum Haul Truck Trips	Total Trips
Site Prep	5	10	2	5
Grading	25	10	3	8
Building Construction	180	30	4	8
Paving	5	10	4	17
Architectural Coating	5	10	2	12

Source: CalEEMod, Construction Contractor Assumptions.

Project-related construction emissions are shown in **Table AQ-6**. As shown, construction emissions would not exceed the SCAQMD thresholds. Therefore, a less-than-significant impact related to regional construction emissions will occur.

TABLE AQ-6: SUMMARY OF PEAK CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Activity	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2022						
Site Preparation	1	5	6	<1	1	<1
Grading	1	11	12	<1	6	3
Construction	1	6	7	<1	<1	<1
Paving	1	5	5	<1	<1	<1
Architectural Coating	13	1	1	<1	<1	<1
Maximum Daily Emissions	**24**	**11**	**11**	**<1**	**6**	**3**
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: 2022.1.1.20.

Localized Significance Thresholds. Localized air pollution is evaluated against the localized significance thresholds (LSTs) which are based on the ambient concentrations of a pollutant within the project Source Receptor Area, the size of the project site and distance to the nearest sensitive receptor. The LSTs represent the maximum emissions from a project site that are not expected to cause or contribute to an exceedance of the most stringent national or state AAQS. The LSTs are based on the California AAQS, which are the most stringent AAQS established to provide a margin of safety in the protection of the public health and welfare and are designed to protect those most susceptible to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise.

Emissions generated by construction activities would temporarily increase pollutant concentrations from onsite equipment (primarily mobile emissions) and fugitive dust (PM_{10} and $PM_{2.5}$). **Table AQ-7** shows the localized maximum daily construction emissions. As a childcare facility is considered a sensitive receptor, a receptor distance of 25 meters was used for the LST methodology. As shown in **Table AQ-7**, maximum daily emissions from construction activities would not exceed the SCAQMD LSTs; therefore, construction emissions would not exceed the CAAQS and the Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to construction LSTs will occur.

TABLE AQ-7 LOCALIZED SIGNIFICANCE THRESHOLD SUMMARY - CONSTRUCTION

Construction	Pounds per Day			
	CO	NO_2	PM_{10}	$PM_{2.5}$
Peak Construction Emissions	11	11	6	3
Localized Significance Thresholds	1,100	234	7	4
Significant Impact?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod Version 2022.1.1.20: Based on SCAQMD LST methodology on a 2-acre site that uses one grader, one dozer, and two tractors for eight hours a day during grading, which is equivalent to a disturbed acreage of 1 acre and compared against the 1-acre LST lookup table within SRA 26 and adjacent sensitive receptors (25m).

Operations

Long-term air quality impacts associated with the proposed Project would be generated from mobile emissions, stationary, and area sources. Emissions produced from mobile sources are from Project-generated vehicle trips. Operation of the park would not result in significant stationary source emissions from on-site equipment. Area sources of emissions are those associated with landscaping maintenance and energy use. The Project is a local serving land use and would not result in substantial new trips or staff. Emissions generated by Project-related trips are based on the CalEEMod computer model. The Project's emissions were evaluated against the SCAQMD significance thresholds as shown in **Table AQ-8**. The Project's emissions were found to be below the SCAQMD operational phase emissions thresholds. Therefore, a less-than-significant impact related to long term air quality impacts will occur.

TABLE AQ-8 SUMMARY OF PEAK REGIONAL OPERATIONAL EMISSIONS

Operational Activity	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Vehicles	<1	<1	2	<1	<1	<1
Operational Emissions	**<1**	**<1**	**2**	**<1**	**<1**	**<1**
SCAQMD Significance Threshold	55	55	550	150	150	55
Exceeds Significance Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.20

Localized Significance Thresholds. Operational activities would generate air pollutant emissions from on-site mobile and area emissions. **Table AQ-9** shows localized maximum daily operational emissions. As shown in **Table AQ-9**, maximum daily operational emissions would not exceed the SCAQMD LSTs and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, a less-than-significant impact related to operational LSTs will occur.

TABLE AQ-9 LOCALIZED SIGNIFICANCE THRESHOLD SUMMARY - OPERATION

Construction	Pounds per Day			
	CO	NO_2	PM_{10}	$PM_{2.5}$
Peak Operational Emissions	<1	<1	<1	<1
Localized Significance Thresholds	1,100	234	2	1
Significant Impact?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod Version 2022.1.1.20: Based on SCAQMD LST methodology for operational emissions which does not include off-site mobile emissions. The localized emissions were compared against the most stringent LST threshold for SRA 26 with a 25 meter receptor distance.

Carbon Monoxide Hotspots. An air quality impact would be considered significant if the generated CO emission levels exceed the state or federal AAQS, which would expose receptors to substantial pollutant concentrations. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized concentrations.

Vehicle congestion has the potential to create elevated concentrations of CO called "hot spots." Localized CO concentrations hot spots are caused by vehicular emissions, primarily when idling at congested intersections. Due to the implementation of strict vehicle emissions standards over the last 20 years, the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations have steadily declined. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars. A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 ppm or the 8-hour standard of 9 ppm were to occur.

A CO hot spot analysis was conducted in 2003 for four high volume intersections in the City of Los Angeles in the peak-hour periods to establish a better threshold for the volume of vehicles necessary to generate a violation of CO standards to better reflect the effect of the increasing proportion of cleaner burning vehicles. The hot spot analysis for the 2003 analysis did not predict any violation of CO standards. The busiest intersection (Wilshire Boulevard/Veteran Avenue) had a daily traffic volume of 100,000 vehicles today and the estimated one-hour concentration was 4.6 ppm. The 20 ppm standard would not have been exceeded until the intersection exceeded more than 400,000 vehicles per day.[1]

The Bay Area Air Quality Management District has also looked at the effect of cleaner burning vehicles and concluded that under existing and future vehicle emissions rates, a given project would have to increase traffic volumes at a single intersection by 24,000 vehicles per hour where vertical and/or horizontal air does not mix (worst case condition) to generate a significant CO impact.[2] Based on these factors, that the Project's peak-hour trips would be less than 50, and that the future baseline peak-hour intersection volumes are anticipated to be 3,500, there is no potential for the Project to generate CO concentrations higher than the state and federal standards. As a result, sensitive receptors in the area would not be substantially affected by CO concentrations generated by operation of the Project. Therefore, a less-than-significant impact related to CO hot spots will occur.

Toxic Air Contaminants. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. The proposed Project site is not located within 500 feet of a freeway or major roadway, near any rail yards, stationary diesel engines, or facilities attracting heavy and constant diesel vehicle traffic such as warehouse distribution centers. The surrounding Project area consists primarily of vacant land agricultural land, and residences.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The fire station is located within a residential area, which is presumed to have sensitive receptors. However, the Fire Station would not result in additional diesel equipment or other heavy truck uses, so there would not be any additional long- exposure to TACs. The Project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. The CARB Air Quality and Land Use Handbook: A Community Health Perspective Handbook includes facilities with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The Project is not anticipated to receive

[1]South Coast Air Quality Management District, *Carbon Monoxide Redesignation Request and Maintenance Plan*, Hot Spot Analysis, February 2005.

[2]Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, Section 3.3 Carbon Monoxide Screening Criteria, May 2011.

more than 2 deliveries a day and would not involve a substantial source of TAC emissions. Therefore, the operation of the Project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions.

During construction, diesel particulate emissions associated with heavy-duty equipment operations would occur. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Based on the construction schedule, limited amount of imported/exported material and equipment mix as described in Appendix A CalEEMod assumptions, construction of the Project is not anticipated to result in more than 20 truck trips per day and would not be a substantial source of TAC emissions. Given the short-term construction schedule of approximately 9 months, the proposed Project would not result in a long-term (i.e., 70 years) source of TACs. No significant emissions and corresponding individual cancer risk are anticipated after construction. Because of the short-term exposure period (9 out of 840 months) during construction and low level of truck activity during construction and operation of the park, a less-than-significant impact related to TACs will occur.

Odors. The proposed Project would not emit objectionable odors that would affect a substantial number of people. The threshold for odor is if a Project creates an odor nuisance pursuant to SCAQMD Rule 402, Nuisance, which states:

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

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The proposed Project would be consistent and compatible with existing land uses surrounding the Project site. The proposed Project will not introduce a new stationary source of air pollution into the proposed Project vicinity that may cause objectionable odors. Therefore, no significant impact related to the creation of objectionable odors will occur.

During construction activities, construction equipment exhaust would temporarily generate odors. Any construction-related odor emissions would be temporary, intermittent in nature, and would not constitute a public nuisance. Therefore, no significant impacts related to objectionable odors during construction will occur.

Cumulative. The SCAQMD approach for assessing cumulative impacts is based on whether the proposed Project would, by itself, result in a significant impact. More specifically, if construction or operation of the proposed project would not exceed the SCAQMD's thresholds, those emissions are not expected to be cumulatively considerable. Emissions may increase for certain air pollutants due to nearby past, present and/or foreseeable projects (either overlapping construction periods or on-going operation) that are expected to exceed the SCAQMD mass daily emission thresholds. Per CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. Based on SCAQMD methodology for cumulatively impacts and the fact that both construction and operational air emissions would not exceed SCAQMD's thresholds, the emissions resulting from construction and operation of the proposed project would not be cumulatively considerable. Therefore, a less-than-significant impact related to cumulative air quality emissions will occur.

Greenhouse Gas Emissions. GHGs are typically evaluated on an annual basis using the metric system. To address the State's requirement to reduce GHG emissions, the County prepared the 2015 Climate Action Plan (CAP) with the target of reducing GHG emissions within the unincorporated County by 15 percent below 2008 levels by the

year 2020. The County's target is consistent with the AB 32 target and ensures that the County is providing GHG reductions locally that will complement the State and international efforts of stabilizing climate change.

The County determined the size of development that is too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or alternate emission analysis method. To do this the County determined the GHG emission amount allowed by a project such that 90 percent of the emissions on average from all projects would exceed that level and be "captured" by the Screening Table or alternate emission analysis method. The 3,000 MT CO2e per year value is the low end value within that range rounded to the nearest hundred tons of emissions and is used in defining small projects that are considered less than significant and do not need to use the Screening Tables or alternative GHG mitigation analysis used in the County CAP.

In accordance with the State CEQA Guidelines, GHG emissions were calculated for construction and operation of the proposed Project and will be assessed against the conservative threshold of 3,000 MTCO2E/yr. GHG emissions resulting from Project construction and operation were calculated using the CalEEMod model, and include emissions resulting from on-road and off-road diesel fuel consumption as well as worker commutes, vehicle travel, energy consumption, water consumption, and waste generation. The quantification of the project's GHG inventory also evaluates construction emissions by amortizing them over an expected project life of 30 years. GHG emissions were estimated for construction and operational activity. Construction activity would generate 202 metric tons of GHG emissions over a 9-month period. The Project's construction GHG emissions were spread even over 30 years to yield an average of 4 MTCO2E/yr.

CalEEMod estimates the GHG emissions associated with area sources which include landscape equipment emissions, architectural coating, consumer products, and hearths. Hearth emissions do not apply to the Project because no dwelling units are proposed. The CalEEMod output contained in the attached output shows that the GHG emissions from area sources are negligible and are reported at zero forarchitectural coatings, consumer products and for landscaping.

CalEEMod estimates the GHG emissions associated with building electricity and natural gasusage (non-hearth) for each land use type. However, recreational land uses are not included so a separate analysis for lighting and water was used to calculate electricity usage and the associated GHGs. CalEEMod estimates the annual GHG emissions from Project-related vehicle usage based on trip generation data and the disposal of solid waste. The following table summarizes the GHG emissions estimates for the Project. As shown in **Table GHG-1**, the Project would annually generate 454 MTCO2E of GHG emissions. The total GHG emissions from the Project are below the County CAP screening level of 3,000 MTCO2E/yr for commercial projects. Therefore, a less-than-significant impact related to GHG emissions will occur.

TABLE GHG-1: SUMMARY OF GREENHOUSE GAS EMISSIONS

Source	CO_2	CH_4	N_2O	Total CO2E
	Metric Tons per Year			
Amortized Construction	4	<1	<1	4
Area	<	<1	<1	<1
Energy	37	<1	<1	37
Mobile	406	<1	<1	406
Solid Waste	5	1	<1	5
Water	2	<1	<1	2
Total	17	<1	<1	454
County of Riverside CAP Threshold				3,000
Significant Impact?				**No**

Source: CalEEMod 2022.1.1.20.

Consistency with GHG Plans and Policies. The County of Riverside has adopted policies and programs in its General Plan to promote the use of clean and renewable energy sources, facilitate alternative modes of transportation, and for the sustainable use of energy.

The County CAP, described above, was adopted by the Board on December 8, 2015. In particular, the CAP elaborates on the County General Plan goals and policies relative to GHG emissions and provides a specific implementation tool to guide future decisions of the County. The 2015 CAP is used as the baseline for the evaluation of consistency with applicable GHG plans, policies, or regulations. The Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The County CAP identifies three main goals which are to: provide a list of specific actions that will reduce GHG emissions, giving the highest priority to actions that provide the greatest reduction in GHG emissions and benefits to the community at the least cost; reduce emissions attributable to the County to levels consistent with the target reductions of AB 32; and establish a qualified reduction plan for which future development within the County can tier and thereby streamline the environmental analysis necessary under CEQA. Because GHG emissions are only important in the context of cumulative emissions, the focus of the analysis is on answering the question of whether incremental contributions of GHGs are a cumulatively considerable contribution to climate change impacts.

The County CAP has incorporated the measures identified in the CARB Scoping Plan as a means for reducing GHG emissions. **Table GHG-2** summarizes the CARB Scoping Plan Policies for reducing GHG emissions. As shown in **Table GHG-2**, the Project is consistent with CARB's Scoping Plan measures. Therefore, a less-than-significant impact related to consistency with plans, policies, or regulations for reducing GHG emissions will occur.

TABLE GHG-2: CARB SCOPING PLAN

Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Energy Efficiency: Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policies, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** The project will be designed and constructed using sustainable building practices, and will comply with the County's Sustainable Building Policy (H-29). The Project will be compliant with all current Title 24 standards.
Green Building Strategy: Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The Project will be subject to these mandatory standards. The Project will also incorporate LEED energy efficiency building measures.
Recycling and Waste: Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent.** A regulation to reduce methane emissions from municipal solid waste landfills is currently being developed by the state. The Riverside Countywide Integrated Waste Management Plan (CIWMP) outlines the goals, policies, and programs the County and its cities will implement to create an integrated and effective waste management system that complies with the diversion mandates in AB 939. The Project will be required to participate with County programs for recycling and waste reduction which comply with the 50 percent reduction requirement of AB 939.
Water: Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The Project will comply with all applicable County ordinances, including the County's Low Impact Development (LID) standards.

Source: CARB Scoping Plan.

2019 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2019

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide a)			Ozone b)										Nitrogen Dioxide c)				Sulfur Dioxide d)		
										No. Days Standard Exceeded												
			No. Days of Data	Max Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	Old Federal > 0.124 ppm 1-hour	Current Federal > 0.070 ppm 8-hour	2008 Federal > 0.075 ppm 8-hour	1997 Federal > 0.084 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	No. Days of Data	Max Conc. in ppb 1-hour	98th Percentile Conc. ppb 1-hour	Annual Average AAM Conc. ppb	No. Days of Data	Max. Conc. in ppb 1-hour	99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																						
1	Central LA	87	364	2.0	1.6	364	0.085	0.080	0.065	0	2	1	0	0	2	365	69.7	55.5	17.7	365	10.0	2.3
2	Northwest Coastal LA County	91	364	1.9	1.2	360	0.086	0.075	0.064	0	1	0	0	0	1	365	48.8	43.0	9.7	--	--	--
3	Southwest Coastal LA County	820	364	1.8	1.3	365	0.082	0.067	0.060	0	0	0	0	0	0	363	56.6	48.9	9.5	365	8.2	3.7
4	South Coastal LA County 1	72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	33	340	3.0	2.1	343	0.074	0.064	0.055	0	0	0	0	0	0	255	71.8	56.3	16.2	344	8.9	7.7
4	I-710 Near Road##	32	--	--	--	--	--	--	--	--	--	--	--	--	--	365	97.7	78.3	22.8	--	--	--
6	West San Fernando Valley	74	363	2.6	2.2	267	0.101	0.087	0.076	0	6	4	1	1	6	365	64.4	43.8	10.7	--	--	--
8	West San Gabriel Valley	88	361	1.5	1.2	302	0.120	0.098	0.086	0	12	8	4	4	12	361	59.1	50.6	13.2	--	--	--
9	East San Gabriel Valley 1	60	361	1.6	1.1	362	0.123	0.094	0.090	0	39	21	10	34	39	365	59.7	49.8	13.7	--	--	--
9	East San Gabriel Valley 2	591	360	1.2	0.8	356	0.130	0.102	0.097	1	58	38	17	46	58	360	52.9	36.5	8.6	--	--	--
10	Pomona/Walnut Valley	75	364	1.7	1.3	365	0.096	0.083	0.077	0	12	4	0	1	12	365	64.4	57.8	17.9	--	--	--
11	South San Gabriel Valley	85	364	1.9	1.5	364	0.108	0.091	0.073	0	7	3	1	5	7	364	61.8	55.1	17.6	--	--	--
12	South Central LA County	112	363	3.8	3.2	363	0.100	0.079	0.064	0	1	1	0	1	1	363	70.0	52.8	14.1	--	--	--
13	Santa Clarita Valley	90	359	1.5	1.2	359	0.128	0.106	0.101	1	56	42	17	34	56	357	46.3	35.3	9.1	--	--	--
ORANGE COUNTY																						
16	North Orange County	3177	364	2.6	1.2	364	0.107	0.094	0.074	0	6	3	1	2	6	362	59.4	44.5	12.1	--	--	--
17	Central Orange County	3176	363	2.4	1.3	365	0.096	0.082	0.064	0	1	1	0	1	1	365	59.4	49.2	12.7	--	--	--
17	I-5 Near Road##	3131	350	2.6	1.6	--	--	--	--	--	--	--	--	--	--	365	59.4	50.4	19.2	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	363	1.0	0.8	365	0.106	0.087	0.082	0	11	7	1	3	11	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	364	1.5	1.2	360	0.123	0.096	0.092	0	59	37	15	24	59	365	56.0	52.8	13.5	365	1.8	1.4
23	Metropolitan Riverside County 3	4165	364	2.0	1.3	365	0.131	0.099	0.096	2	64	42	19	26	64	346	56.0	49.4	12.2	--	--	--
24	Perris Valley	4149	--	--	--	365	0.118	0.095	0.090	0	64	38	13	26	64	--	--	--	--	--	--	--
25	Lake Elsinore	4158	364	1.6	0.7	365	0.108	0.089	0.079	0	28	11	1	4	28	365	38.0	33.3	6.8	--	--	--
26	Temecula Valley	4031	--	--	--	365	0.091	0.079	0.074	0	6	2	0	0	6	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	--	--	--	365	0.119	0.096	0.093	0	59	37	11	24	59	364	56.0	43.3	7.5	--	--	--
30	Coachella Valley 1**	4137	360	1.3	0.7	364	0.100	0.084	0.083	0	34	17	0	5	34	361	41.4	32.2	7.3	--	--	--
30	Coachella Valley 2**	4157	--	--	--	365	0.103	0.087	0.083	0	43	15	2	4	43	--	--	--	--	--	--	--
30	Coachella Valley 3**	4032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	5175	337	1.5	1.1	338	0.131	0.107	0.097	1	52	34	13	31	52	328	57.9	46.4	14.0	--	--	--
33	I-10 Near Road##	5035	364	1.5	1.1	--	--	--	--	--	--	--	--	--	--	346	86.3	70.5	27.6	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	--	--	--	--	--	--	--	--	364	87.7	73.9	29.0	--	--	--
34	Central San Bernardino Valley 1	5197	359	2.7	1.0	364	0.124	0.109	0.097	0	67	46	20	41	67	365	76.1	57.7	17.2	358	2.4	1.9
34	Central San Bernardino Valley 2	5203	352	1.3	1.1	354	0.127	0.114	0.103	2	96	73	37	63	96	352	59.3	46.3	14.3	--	--	--
35	East San Bernardino Valley	5204	--	--	--	364	0.137	0.117	0.106	8	109	88	63	73	109	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	365	0.129	0.112	0.106	2	99	79	44	53	99	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM e)			3.8	3.2		0.137	0.117	0.106	8	109	88	63	73	109		97.7	78.3	29.0		10.0	7.7
	SOUTH COAST AIR BASIN f)			3.8	3.2		0.137	0.117	0.106	10	126	101	71	82	126		97.7	78.3	29.0		10.0	7.7

*Incomplete Data ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume

AAM = Annual Arithmetic Mean ## Four near-road sites measuring one or more of the pollutants $PM_{2.5}$, CO and/or NO_2 are operating near freeways: I-5, I-10, I-710 and CA-60.

a) - The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.

b) - The current (2015) O_3 federal standard was revised effective December 28, 2015.

c) - The NO_2 federal 1-hour standard is100 ppb and the federal annual standard is 53.4 ppb. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.

d) - The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state 1-hour SO standard is 0.25 ppm (250 ppb) and the state 24-hour SO_2 standard is 0.04 ppm (40 ppb).

e) - District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

f) - Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "2016 AQMP" which can be accessed at https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp . Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Current Hourly Air Quality Map, at https://www.aqmd.gov/aqimap. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

2019 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2019

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e)+					Fine Particulates PM2.5 g)#					Lead i)++		PM10 Sulfate j)	
			No. Days of Data	Max. Conc. in µg/m3 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m3 24-hour	No. (%) Samples Exceeding Standards State > 50 µg/m3 24-hour	Annual. Average Conc. f) (AAM) µg/m3	No. Days of Data	Max. Conc. in µg/m3 24-hour	98th Percentile Conc. in µg/m3 24-hour	No (%) Samples Exceeding Federal Std. > 35 µg/m3 24-hour	Annual. Average Conc. h) (AAM) µg/m3	Max. Monthly Average Conc. µg/m3	Max. 3-Months Rolling Averages µg/m3	No. Days of Data	Max. Conc. in µg/m3 24-hour
LOS ANGELES COUNTY																
1	Central LA	087	9	62	0	3 (6%)	25.5	360	43.50	28.30	1 (0.3%)	10.85	0.012	0.010	55	5.1
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest Coastal LA County	820	59	62	0	2 (3%)	19.2	--	--	--	--	--	0.004	0.004	--	--
4	South Coastal LA County 1	072	--	--	--	--	--	159	28.00	20.70	0	9.23	--	--	--	--
4	South Coastal LA County 2	077	60	72	0	2 (3%)	21.0	354	30.60	23.20	0	9.22	0.006	0.005	--	--
4	South Coastal LA County 3	033	58	74	0	3 (5%)	26.9	--	--	--	--	--	--	--	59	5.8
4	I-710 Near Road##	032	--	--	--	--	--	365	36.70	26.40	1 (0.3%)	10.99	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	118	30.00	26.30	0	9.16	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	118	30.90	24.60	0	8.90	--	--	--	--
9	East San Gabriel Valley 1	060	61	82	0	4 (7%)	28.1	120	28.30	21.20	0	9.18	--	--	61	6.2
9	East San Gabriel Valley 2	591	308	97	0	3 (1%)	20.8	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	119	29.60	24.40	0	10.34	0.009	0.007	--	--
12	South Central LA County	112	--	--	--	--	--	303	39.50	26.60	1 (0.3%)	10.87	0.009	0.007	--	--
13	Santa Clarita Valley	090	60	62	0	1 (2%)	18.4	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	364	127	0	13 (4%)	21.9	346	36.10	23.30	3 (0.9%)	9.32	--	--	60	5.1
17	I-5 Near Road##	3131	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	60	45	0	0	16.6	111	20.80	14.70	0	7.11	--	--	--	--
RIVERSIDE COUNTY																
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	120	99	0	21 (18%)	34.4	352	46.70	31.80	4 (1.1%)	11.13	0.008	0.007	121	14.6
23	Metropolitan Riverside County 3	4165	362	143	0	130 (36%)	43.1	356	46.70	36.20	9 (2.5%)	12.53	--	--	--	--
24	Perris Valley	4149	61	97	0	4 (7%)	25.3	--	--	--	--	--	--	--	--	--
25	Elsinore Valley	4158	301	93	0	5 (2%)	18.7	--	--	--	--	--	--	--	--	--
26	Temecula Valley	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	56	63	0	2 (4%)	17.9	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	346	75	0	5 (1%)	19.5	119	15.50	12.40	0	6.05	--	--	--	--
30	Coachella Valley 2**	4157	361	141	0	27 (7%)	27.8	118	15.00	13.50	0	7.37	--	--	119	3.2
30	Coachella Valley 3**	4032	324	154	0	44 (14%)	33.3	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	306	125	0	7 (2%)	28.1	--	--	--	--	--	--	--	--	--
33	I-10 Near Road##	5035	--	--	--	--	--	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	364	41.30	30.70	5 (1.4%)	12.70	--	--	--	--
34	Central San Bernardino Valley 1	5197	61	88	0	12 (20%)	34.8	114	46.50	29.70	2 (1.8%)	10.84	--	--	62	5.2
34	Central San Bernardino Valley 2	5203	269	112	0	36 (13%)	29.9	97	34.80	33.00	0	10.06	0.013	0.011	--	--
35	East San Bernardino Valley	5204	59	44	0	0	21.2	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	54	38	0	0	16.1	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	46	31.00	31.00	0	5.94	--	--	--	--
	DISTRICT MAXIMUM k)			154	0	130	43.1		46.7	36.2	9	12.70	0.013	0.011		14.6
	SOUTH COAST AIR BASIN m)			143	0	137	43.1		46.7	36.2	10	12.70	0.013	0.011		14.6

* Incomplete data due to the site improvement. ** Salton Sea Air Basin µg/m3 – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

\+ High PM10 (≥ 155 µg/m3) data recorded in the Coachella Valley and the Basin (due to high winds) are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

\# PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is > 20 µg/m3. Federal annual PM10 standard (AAM > 50 µg/m3) was revoked in 2006.

g) PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations for real-time alerts and forecasting only.

h) Both Federal and State standards are annual average (AAM) > 12.0 µg/m3.

i) Federal lead standard is 3-months rolling average > 0.15 µg/m3; state standard is monthly average ³ 1.5 µg/m3. Lead standards were not exceeded.

j) State sulfate standard is 24-hour ³ 25 µg/m3. There is no federal standard for sulfate.

k) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0. 021 µg/m3 and 0.017 µg/m3, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

2020 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2020

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide [a]			Ozone [b]				Number of Days Standard Exceeded						Nitrogen Dioxide [c]				Sulfur Dioxide [d]		
			No. Days of Data	Max Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	Old Federal > 0.124 ppm 1-hour	Current Federal > 0.070 ppm 8-hour	2008 Federal > 0.075 ppm 8-hour	1997 Federal > 0.084 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	No. Days of Data	Max Conc. in ppb 1-hour	98th Percentile Conc. ppb 1-hour	Annual Average AAM Conc. ppb	No. Days of Data	Max. Conc. in ppb 1-hour	99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																						
1	Central LA	087	359	1.9	1.5	332	0.185	0.118	0.093	1	22	16	6	14	22	364	61.8	54.7	16.9	333	3.8	3.3
2	Northwest Coastal LA County	091	365	2.0	1.2	357	0.134	0.092	0.078	1	8	5	1	6	8	360	76.6	43.9	10.6	--	--	--
3	Southwest Coastal LA County	820	364	1.6	1.3	350	0.117	0.074	0.066	0	2	0	0	1	2	364	59.7	50.9	9.5	361	6.0	3.3
4	South Coastal LA County 1	072	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.4
4	South Coastal LA County 4	039	--	--	--	332	0.105	0.083	0.071	0	4	2	0	4	4	357	75.3	56.3	12.8	--	--	--
4	I-710 Near Road##	032	--	--	--	--	--	--	--	--	--	--	--	--	--	355	90.3	79.1	22.3	--	--	--
6	West San Fernando Valley	074	349	2.0	1.7	345	0.142	0.115	0.097	0	49	23	12	14	49	365	57.2	50.1	12.1	--	--	--
7	East San Fernando Valley	200	--	--	--	359	0.133	0.108	0.102	5	49	33	20	31	49	357	60.4	52.4	14.5	--	--	--
8	West San Gabriel Valley	088	361	2.6	2.2	354	0.163	0.115	0.108	9	60	44	21	41	60	354	61.2	49.7	13.6	--	--	--
9	East San Gabriel Valley 1	060	349	2.4	2.0	347	0.168	0.125	0.105	11	61	43	19	53	61	347	64.8	54.1	13.6	--	--	--
9	East San Gabriel Valley 2	591	310	2.3	1.9	348	0.173	0.138	0.124	17	97	71	32	76	97	366	50.4	41.9	8.5	--	--	--
10	Pomona/Walnut Valley	075	363	1.5	1.1	353	0.180	0.124	0.106	10	84	53	29	51	84	355	67.9	59.8	18.3	--	--	--
11	South San Gabriel Valley	085	362	3.1	1.7	356	0.169	0.114	0.089	3	23	15	7	20	23	365	69.2	57.8	17.8	--	--	--
12	South Central LA County	112	364	4.5	3.1	354	0.152	0.115	0.072	1	4	3	2	3	4	362	72.3	60.5	14.5	--	--	--
13	Santa Clarita Valley	090	363	1.2	0.8	348	0.148	0.122	0.106	10	73	56	29	44	73	361	46.3	35.9	9.4	--	--	--
ORANGE COUNTY																						
16	North Orange County	3177	347	2.1	1.2	340	0.171	0.113	0.088	3	23	19	6	15	23	347	57.2	50.1	12.7	--	--	--
17	Central Orange County	3176	361	2.3	1.7	356	0.142	0.097	0.079	2	15	4	3	6	15	364	70.9	52.1	13.3	--	--	--
17	I-5 Near Road##	3131	359	2.4	2.0	--	--	--	--	--	--	--	--	--	--	365	69.9	52.6	18.8	--	--	--
19	Saddleback Valley	3812	366	1.7	0.8	364	0.171	0.122	0.090	1	32	25	10	20	32	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	361	1.9	1.4	348	0.143	0.115	0.102	6	81	59	27	46	81	359	66.4	54.1	13.6	356	2.2	1.7
23	Metropolitan Riverside County 3	4165	359	1.8	1.5	350	0.140	0.117	0.103	7	89	62	32	51	89	352	58.1	49.9	12.3	--	--	--
24	Perris Valley	4149	--	--	--	358	0.125	0.106	0.097	1	74	48	14	34	74	--	--	--	--	--	--	--
25	Elsinore Valley	4158	358	0.9	0.7	355	0.130	0.100	0.093	1	52	30	10	18	52	345	43.6	37.9	7.4	--	--	--
26	Temecula Valley	4031	--	--	--	364	0.108	0.091	0.084	0	37	20	2	5	37	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	--	--	--	358	0.150	0.115	0.104	3	68	48	21	29	68	363	51.1	47.1	8.5	--	--	--
30	Coachella Valley 1**	4137	365	0.8	0.5	360	0.119	0.094	0.089	0	49	28	5	9	49	365	47.4	34.3	6.6	--	--	--
30	Coachella Valley 2**	4157	--	--	--	358	0.097	0.084	0.081	0	42	17	0	2	42	--	--	--	--	--	--	--
30	Coachella Valley 3**	4032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	5175	364	1.5	1.1	360	0.158	0.123	0.116	15	114	87	43	82	114	364	55.4	44.8	13.9	--	--	--
33	I-10 Near Road##	5035	363	1.5	1.2	--	--	--	--	--	--	--	--	--	--	345	94.2	75.1	28.7	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	--	--	--	--	--	--	--	--	346	101.6	78.0	29.1	--	--	--
34	Central San Bernardino Valley 1	5197	358	1.7	1.2	348	0.151	0.111	0.105	8	89	65	27	56	89	360	66.4	57.9	18.7	363	2.5	1.7
34	Central San Bernardino Valley 2	5203	360	1.9	1.4	359	0.162	0.128	0.122	15	128	110	60	89	128	365	54.0	45.6	14.9	--	--	--
35	East San Bernardino Valley	5204	--	--	--	361	0.173	0.136	0.125	16	141	127	78	104	141	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	364	0.159	0.139	0.117	7	118	97	55	69	118	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM [e]			4.5	3.1		0.185	0.139	0.125	17	141	127	78	104	141		101.6	86.3	29.1		6.0	3.3
	SOUTH COAST AIR BASIN [f]			4.5	3.1		0.185	0.139	0.125	27	157	142	97	132	157		101.6	86.3	29.1		6.0	3.3

* Incomplete data. ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean

a) The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.
b) The current (2015) O_3 federal standard was revised effective December 28, 2015.
c) The NO_2 federal 1-hour standard is100 ppb annual standard is annual arithmetic mean NO2 > 0.0534 ppm (53.4 ppb). The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.
d) The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO2 > 0.25 ppm (250 ppb) and 24-hour average SO2 > 0.04 ppm (40 ppb).
e) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction
f) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin
Four near-road sites measuring one or more of the pollutants $PM_{2.5}$, CO and/or NO_2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "2016 AQMP" which can be accessed at http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-ii.pdf?sfvrsn=4. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Air Quality Forecast Map at www.aqmd.gov/forecast. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

2020 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2020

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e) k) +					Fine Particulates PM2.5 g) #					Lead i) ++		PM10 Sulfate j)	
			No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards: Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standards: State > 50 µg/m³ 24-hour	Annual. Average Conc. f) (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No (%) Samples Exceeding Federal Std. > 35 µg/m³ 24-hour	Annual. Average Conc. h) (AAM) µg/m³	Max. Monthly Average Conc. µg/m³	Max. 3-Months Rolling Averages µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour
LOS ANGELES COUNTY																
1	Central LA	087	337	77	0	24 (7%)	23.0	353	47.30	28.00	2 (1%)	12.31	0.013	0.011	45	3.3
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest Coastal LA County	820	37	43	0	0	22.5	--	--	--	--	--	0.008	0.005	--	--
4	South Coastal LA County 1	072	--	--	--	--	--	117	28.10	26.10	0	11.26	--	--	--	--
4	South Coastal LA County 2	077	42	59	0	2 (5%)	24.9	357	39.00	28.00	1 (0%)	11.38	0.008	0.006	--	--
4	South Coastal LA County 3	033	12	54	0	2 (17%)	27.8	--	--	--	--	--	--	--	14	2.3
4	South Coastal LA County 4	039	--	--	--	--	--	--	--	--	--	--				
4	I-710 Near Road##	032	--	--	--	--	--	356	44.00	31.50	2 (1%)	12.93	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	116	27.60	26.40	0	10.13	--	--	--	--
7	East San Fernando Valley	200	--	--	--	--	--	--	--	--	--	--				
8	West San Gabriel Valley	088	--	--	--	--	--	117	34.90	31.20	0	11.06	--	--	--	--
9	East San Gabriel Valley 1	060	43	95	0	8 (19%)	37.7	116	33.00	25.80	0	11.13	0.010	0.007	45	3.1
9	East San Gabriel Valley 2	591	333	105	0	9 (3%)	25.2	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	116	35.40	30.50	0	13.22	0.012	0.011	--	--
12	South Central LA County	112	--	--	--	--	--	352	43.20	34.10	7 (2%)	13.57	0.010	0.009	--	--
13	Santa Clarita Valley	090	36	48	0	0	22.5	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	329	120	0	13 (4%)	23.9	355	41.40	27.10	1 (0%)	11.27	--	--	44	3.3
17	I-5 Near Road##	3131	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	42	53	0	1 (2%)	16.8	120	35.00	32.70	0	8.81	--	--	--	--
RIVERSIDE COUNTY																
22	Corona/Norco Area	4155	44	100	0	10 (23%)	39.1	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	320	104	0	110 (34%)	30.0	357	41.00	29.60	4 (1%)	12.63	0.016	0.010	84	5.2
23	Metropolitan Riverside County 3	4165	304	124	0	154 (51%)	52.2	358	38.70	34.70	5 (1.%)	14.03	--	--	--	--
24	Perris Valley	4149	37	77	0	6 (16%)	35.9	--	--	--	--	--	--	--	--	--
25	Elsinore Valley	4158	334	84	0	7 (2%)	22.0	--	--	--	--	--	--	--	--	--
26	Temecula Valley	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	42	46	0	0	19.2	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	251	48	0	0	20.4	122	23.90	16.90	0	6.42	--	--	--	--
30	Coachella Valley 2**	4157	317	77	0	8 (3%)	29.1	121	25.60	20.20	0	8.41	--	--	89	2.7
30	Coachella Valley 3**	4032	320	259	1 (0%)	69 (22%)	38.0	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	305	63	0	12 (4%)	30.5	--	--	--	--	--	--	--	--	--
33	I-10 Near Road##	5035	--	--	--	--	--	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	356	53.10	33.70	4 (1%)	14.36	--	--	--	--
34	Central San Bernardino Valley 1	5197	40	61	0	6 (15%)	35.8	117	46.10	27.40	1 (1%)	11.95	--	--	44	3.0
34	Central San Bernardino Valley 2	5203	320	80	0	81 (25%)	38.7	115	25.70	24.70	0	11.66	0.010	0.009	--	--
35	East San Bernardino Valley	5204	40	57	0	1 (3%)	23.4	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	40	51	0	1 (3%)	18.1	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	58	24.30	20.40	0	7.62	--	--	--	--
	DISTRICT MAXIMUM l)			259	1	154	52.2		53.1	34.1	7	14.36	0.016	0.011		5.2
	SOUTH COAST AIR BASIN m)			124	0	173	52.2		53.1	34.1	13	14.36	0.016	0.011		5.2

* Incomplete data due to the site improvement. ** Salton Sea Air Basin µg/m³ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

\+ High PM10 (≥ 155 µg/m³) data recorded in the Coachella Valley and the Basin attributed to high winds are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

\# PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is 20 µg/m³. Federal annual PM10 standard (50 µg/m³) was revoked in 2006.

g) PM2.5 statistics listed above represent FRM data only with the exception of Central Orange County, I-710 Near Road, Metropolitan Riverside County 1 and 3, CA-60 Near Road, and South Coastal LA County 2 where FEM PM2.5 measurements are used to supplement missing FRM measurements because they pass the screening criteria in the South Coast AQMD Continuous Monitor Comparability Assessment and Request for Waiver dated July 1, 2021.

h) The Federal and State annual standards are 12.0 µg/m³.

i) Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ³ 1.5 µg/m³. Lead standards were not exceeded.

j) State sulfate standard is 24-hour ³ 25 µg/m³. There is no federal standard for sulfate.

k) Filter-based measurements for PM10 from March 28, 2020 to June 26, 2020 are not available due the COVID-19 Pandemic

l) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0. 096 µg/m³ and 0.059 µg/m³, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

2021 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2021

Source/Receptor Area No.	Location	AQS Station ID	Carbon Monoxide[a]			Ozone[b]										Nitrogen Dioxide[c]				Sulfur Dioxide[d]		
										Number of Days Standard Exceeded												
			No. Days of Data	Max 1-Hour Conc., ppm	Max 8-Hour Conc., ppm	No. Days of Data	Max 1-Hour Conc., ppm	Max 8-Hour Conc., ppm	Fourth High 8-Hour Conc., ppm	Old Federal 1-Hour 0.12 ppm	Current Federal 8-Hour 0.070 ppm	2008 Federal 8-Hour 0.075 ppm	1997 Federal 8-Hour 0.08 ppm	Current State 1-Hour 0.09 ppm	Current State 8-Hour 0.070 ppm	No. Days of Data	Max 1-Hour Conc., ppb	98th Percentile 1-Hour Conc., ppb	Annual Average (AAM) Conc., ppb	No. Days of Data	Max 1-Hour Conc., ppb	99th Percentile 1-Hour Conc., ppb
LOS ANGELES COUNTY																						
1	Central LA	060371103	364	2.0	1.6	351	0.099	0.085	0.068	0	2	1	1	1	2	356	77.8	57.3	17.7	365	2.2	2.0
2	Northwest Coastal LA County	060370113	174	1.5	1.0	356	0.095	0.082	0.059	0	1	1	0	1	1	360	60.6	41.6	10.0	--	--	--
3	Southwest LA County*	060375005	251	1.7	1.3	245	0.059	0.049	0.047	0	0	0	0	0	0	256	62.8	47.5	7.2	254	7.7	4.3
4	South Coastal LA County 1	060374002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	060374004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 4	060374009	--	--	--	356	0.086	0.064	0.060	0	0	0	0	0	0	361	59.0	55.3	12.8	360	5.9	4.2
4	I-710 Near Road	060374008	--	--	--	--	--	--	--	--	--	--	--	--	--	351	91.5	76.0	25.2	--	--	--
6	West San Fernando Valley	060371201	363	2.6	1.9	357	0.110	0.083	0.080	0	31	16	0	4	33	361	54.2	42.6	10.4	--	--	--
7	East San Fernando Valley	060374010	--	--	--	349	0.110	0.089	0.079	0	17	7	1	6	17	359	65.4	49.4	13.9	--	--	--
8	West San Gabriel Valley	060372005	364	1.9	1.6	362	0.104	0.087	0.081	0	25	13	1	12	32	364	77.3	52.0	13.6	--	--	--
9	East San Gabriel Valley 1	060370002	355	1.5	1.4	355	0.108	0.086	0.077	0	21	13	1	20	22	357	78.1	51.0	14.8	--	--	--
9	East San Gabriel Valley 2	060370016	353	1.4	0.9	356	0.125	0.096	0.090	1	54	31	11	39	58	352	68.6	47.6	10.3	--	--	--
10	Pomona/Walnut Valley	060371701	353	1.7	1.3	352	0.120	0.092	0.089	0	41	21	11	27	43	364	71.4	56.0	17.9	--	--	--
11	South San Gabriel Valley	060371602	362	1.8	1.5	357	0.104	0.074	0.068	0	3	0	0	2	3	361	72.2	54.7	17.5	--	--	--
12	South Central LA County	060371302	364	4.3	3.7	345	0.085	0.076	0.062	0	1	1	0	0	1	364	68.2	55.9	14.0	--	--	--
13	Santa Clarita Valley	060376012	365	1.0	0.7	360	0.125	0.103	0.097	1	61	47	21	30	63	365	56.9	35.2	9.9	--	--	--
ORANGE COUNTY																						
16	North Orange County	060595001	365	2.3	1.3	352	0.103	0.075	0.070	0	2	0	0	2	3	346	63.8	50.8	12.7	--	--	--
17	Central Orange County	060590007	363	2.1	1.5	355	0.089	0.068	0.063	0	0	0	0	0	0	356	67.1	53.2	12.4	--	--	--
17	I-5 Near Road	060590008	340	2.3	1.7	--	--	--	--	--	--	--	--	--	--	343	72.3	55.8	18.9	--	--	--
19	Saddleback Valley	060592022	365	1.0	0.8	363	0.105	0.081	0.078	0	8	4	0	2	8	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
23	Metropolitan Riverside County 1	060658001	365	2.1	1.8	340	0.117	0.097	0.091	0	55	32	12	20	57	341	52.0	50.7	14.3	363	2.1	1.8
23	Metropolitan Riverside County 3	060658005	365	2.0	1.6	357	0.116	0.094	0.093	0	53	33	14	20	59	365	53.3	45.1	11.7	--	--	--
24	Perris Valley	060656001	--	--	--	309	0.117	0.094	0.091	0	55	38	14	25	60	--	--	--	--	--	--	--
25	Lake Elsinore Area	060659001	364	0.9	0.8	354	0.118	0.097	0.090	0	44	22	8	18	46	357	43.7	36.4	7.0	--	--	--
26	Temecula Valley	060650016	--	--	--	364	0.095	0.083	0.078	0	10	6	0	1	11	--	--	--	--	--	--	--
29	Banning/San Gorgonio Pass	060650012	--	--	--	354	0.139	0.116	0.102	4	80	56	24	41	82	365	56.8	47.4	8.7	--	--	--
30	Coachella Valley 1**	060655001	365	0.8	0.4	357	0.110	0.092	0.088	0	35	15	7	10	38	360	35.6	32.9	6.8	--	--	--
30	Coachella Valley 2**	060652002	--	--	--	352	0.099	0.078	0.076	0	18	6	0	2	24	--	--	--	--	--	--	--
30	Coachella Valley 3**	060652005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	060711004	348	1.3	1.1	359	0.124	0.100	0.097	0	78	50	22	42	81	354	64.6	49.4	14.8	--	--	--
33	CA-60 Near Road	060710027	--	--	--	--	--	--	--	--	--	--	--	--	--	350	80.2	72.9	30.0	--	--	--
33	I-10 Near Road	060710026	365	2.8	1.4	--	--	--	--	--	--	--	--	--	--	365	80.8	68.3	28.6	--	--	--
34	Central San Bernardino Valley 1	060712002	362	1.9	1.4	356	0.125	0.103	0.099	1	81	56	26	44	83	364	67.2	60.7	19.0	364	5.0	1.9
34	Central San Bernardino Valley 2	060719004	359	2.0	1.6	355	0.142	0.112	0.105	6	98	74	40	66	101	362	56.3	48.9	15.1	--	--	--
35	East San Bernardino Valley	060714003	--	--	--	361	0.145	0.119	0.112	7	114	93	50	74	118	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	060710005	--	--	--	345	0.148	0.120	0.107	7	110	91	55	65	111	--	--	--	--	--	--	--
38	East San Bernardino Mountains	060718001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM[e]			4.3	3.7		0.148	0.120	0.112	7	114	93	55	74	118		91.5	76.0	30.0		7.7	4.3
	SOUTH COAST AIR BASIN[f]			4.3	3.7		0.148	0.120	0.112	12	130	113	68	91	133		91.5	76.0	30.0		7.7	4.3

*Incomplete data due to site closure in September 2021. **Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million in air, by volume ppb - Parts Per Billion in air, by volume AAM - Annual Arithmetic Mean

a) The federal and state 8-hour CO standards (9 ppm and 9.0 ppm, respectively) along with the federal and state 1-hour CO standards (35 ppm and 20 ppm, respectively) were not exceeded.

b) The current (2015) O_3 federal standard became effective December 28, 2015.

c) The NO_2 federal 1-hour standard is 100 ppb and the annual standard is 53.4 ppb. The state 1-hour and annual standards are 180 ppb and 30 ppb, respectively.

d) The federal SO_2 1-hour standard is 75 ppb. The state 1-hour and annual standards are 250 ppb and 40 ppb, respectively.

e) District Maximum is the maximum value calculated at any one station in the South Coast AQMD jurisdiction.

f) Statistics are calculated with a dataset that aggregates the highest concentration at any station in the South Coast Air Basin for each day and pollutant. Therefore, concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

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For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the 2022 Air Quality Management Plan, which can be accessed at www.aqmd.gov/2022aqmp. A map showing the source/receptor area boundaries and station locations is available at www.aqmd.gov/aqcard2021map.

2021 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2021

Source/Receptor Area No.	Location	AQS Station ID	Suspended Particulates PM10[g] No. Days of Data	Max 24-Hour Conc., µg/m³	No. (%) Samples Exceeding Federal 24-Hour 150 µg/m³	No. (%) Samples Exceeding State 24-Hour 50 µg/m³	Annual Average Conc.[h] (AAM), µg/m³	Fine Particulates PM2.5[i] No. Days of Data	Max 24-Hour Conc., µg/m³	98th Percentile 24-Hour Conc., µg/m³	No. (%) Samples Exceeding Federal 24-Hour Standard 35 µg/m³	Annual Average Conc.[j] (AAM), µg/m³	Lead[k] Max Monthly Average Conc., µg/m³	Max 3-Month Rolling Average Conc., µg/m³	PM10 Sulfate[l] No. Days of Data	Max 24-Hour Conc., µg/m³
LOS ANGELES COUNTY																
1	Central LA	060371103	60	64	0 (0%)	3 (5%)	25.5	363	61	44.8	12 (3%)	12.77	0.012	0.012	61	4.4
2	Northwest Coastal LA County	060370113	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest LA County*	060375005	31	33	0 (0%)	0 (0%)	17.7	--	--	--	--	--	0.003	0.004	--	--
4	South Coastal LA County 1	060374002	--	--	--	--	--	119	41.2	31.2	1 (1%)	10.93	--	--	--	--
4	South Coastal LA County 2	060374004	60	48	0 (0%)	0 (0%)	22.7	364	42.9	32.8	4 (1%)	11.47	0.006	0.007	--	--
4	South Coastal LA County 4	060374009	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	I-710 Near Road	060374008	--	--	--	--	--	365	84.6	34.8	7 (2%)	13.01	--	--	--	--
6	West San Fernando Valley	060371201	--	--	--	--	--	120	55.5	36.1	3 (3%)	10.06	--	--	--	--
7	East San Fernando Valley	060374010	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8	West San Gabriel Valley	060372005	--	--	--	--	--	119	63.6	29.9	2 (2%)	10.74	--	--	--	--
9	East San Gabriel Valley 1	060370002	61	79	0 (0%)	11 (18%)	32.8	120	61.9	36.1	3 (3%)	11.43	--	--	61	4.8
9	East San Gabriel Valley 2	060370016	358	121	0 (0%)	9 (3%)	26.8	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	060371701	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	060371602	--	--	--	--	--	122	66	47.9	3 (2%)	13.07	0.011	0.010	--	--
12	South Central LA County	060371302	--	--	--	--	--	349	102.1	42.5	12 (3%)	13.41	0.007	0.009	--	--
13	Santa Clarita Valley	060376012	60	47	0 (0%)	0 (0%)	19.9	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																
16	North Orange County	060595001	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	060590007	361	115	0 (0%)	12 (3%)	22.9	364	54.4	36.7	9 (2%)	11.44	--	--	61	3.8
17	I-5 Near Road	060590008	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	060592022	60	35	0 (0%)	0 (0%)	15.6	122	28.7	24.5	0 (0%)	8.27	--	--	--	--
RIVERSIDE COUNTY																
23	Metropolitan Riverside County 1	060658001	121	76	0 (0%)	16 (13%)	34.2	364	82.1	36.7	10 (3%)	12.58	0.008	0.010	122	3.4
23	Metropolitan Riverside County 3	060658005	362	132	0 (0%)	170 (47%)	49.6	364	77.6	39.7	13 (4%)	14.28	--	--	--	--
24	Perris Valley	060656001	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore Area	060659001	360	89	0 (0%)	4 (1%)	21.4	--	--	--	--	--	--	--	--	--
26	Temecula Valley	060650016	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning/San Gorgonio Pass	060650012	61	48	0 (0%)	0 (0%)	20.7	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	060655001	361	100	0 (0%)	9 (2%)	21.4	122	13.5	12.6	0 (0%)	6.2	--	--	--	--
30	Coachella Valley 2**	060652002	345	123	0 (0%)	30 (9%)	32.3	120	18	14.2	0 (0%)	8.15	--	--	121	3.3
30	Coachella Valley 3**	060652005	359	147	0 (0%)	69 (19%)	39.1	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	060711004	358	123	0 (0%)	16 (4%)	31.7	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road	060710027	--	--	--	--	--	362	65.4	43.6	13 (4%)	14.48	--	--	--	--
33	I-10 Near Road	060710026	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	060712002	53	73	0 (0%)	4 (8%)	32.1	120	55.1	33.4	2 (2%)	12.07	--	--	54	3.6
34	Central San Bernardino Valley 2	060719004	364	111	0 (0%)	79 (22%)	39.3	120	57.9	34.2	1 (1%)	11.9	0.013	0.008	--	--
35	East San Bernardino Valley	060714003	59	44	0 (0%)	0 (0%)	23.2	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	060710005	59	33	0 (0%)	0 (0%)	15.8	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	060718001	--	--	--	--	--	59	24.5	21.5	0 (0%)	7.04	--	--	--	--
	DISTRICT MAXIMUM[m]			147	0	170	49.6		102.1	47.9	13	14.48	0.013	0.012		4.8
	SOUTH COAST AIR BASIN[n]			132	0	179	49.6		102.1	47.9	20	14.48	0.013	0.012		4.8

*Incomplete data due to site closure in September 2021. ** Salton Sea Air Basin µg/m³ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

g) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data. High PM10 (≥ 155 µg/m³) data recorded in the Coachella Valley and the Basin (due to high winds) are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

h) State annual average PM10 standard is 20 µg/m³. Federal annual PM10 standard (50 µg/m³) was revoked in 2006.

i) PM2.5 statistics listed above represent FRM data only with the exception of Central Orange County, Metropolitan Riverside County 1, Metropolitan Riverside County 2, South Coastal LA County 2, I-710 Near Road, and CA-60 Near Road, where FEM PM2.5 measurements are used to supplement missing FRM measurements as outlined in the U.S. EPA Response Letter (dated October 31, 2022) to the South Coast AQMD PM2.5 Continuous Monitor Comparability Assessment and Request for Waiver (available with a Public Records Request). PM2.5 concentrations above the 24-hour standard attributed to fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

j) Both Federal and State standards are 12.0 µg/m³.

k) Lead is measured in Total Suspended Particulate (TSP) samples. Federal lead standard is 3-months rolling average (0.15 µg/m³); state standard is monthly average (1.5 µg/m³). Note 3-month averages include data from November and December 2020. Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded at near-source sites were 0.083 µg/m³ and 0.057 µg/m³, respectively. Lead standards were not exceeded at any site.

l) State 24-hour sulfate standard is 25 µg/m³. There is no federal standard for sulfate.

m) District Maximum is the maximum value calculated at any one station in the South Coast AQMD jurisdiction.

n) Statistics are calculated with a dataset that aggregates the highest concentration at any station in the South Coast Air Basin for each day and pollutant. Therefore, concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

Table C-1. 2006 – 2008 Thresholds for Construction and Operation with Gradual Conversion of NOx to NO_2

SRA No.	Source Receptor Area	Allowable emissions (lbs/day) as a function of receptor distance (meters) from site boundary									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	74	74	82	106	168	108	106	110	126	179
2	Northwest Coastal LA County	103	104	121	156	245	147	143	156	186	262
3	Southwest Coastal LA County	91	93	107	139	218	131	128	139	165	233
4	South Coastal LA County	57	58	68	90	142	82	80	87	106	151
5	Southeast LA County	80	81	94	123	192	114	111	121	145	205
6	West San Fernando Valley	103	104	121	157	245	147	143	156	187	263
7	East San Fernando Valley	80	81	94	122	191	114	111	121	144	204
8	West San Gabriel Valley	69	69	81	104	164	98	95	104	124	175
9	East San Gabriel Valley	89	112	159	251	489	128	151	200	284	513
10	Pomona/Walnut Valley	103	129	185	292	570	149	175	230	330	598
11	South San Gabriel Valley	83	84	96	123	193	121	118	126	147	206
12	South Central LA County	46	46	54	70	109	65	64	69	82	117
13	Santa Clarita Valley	114	115	133	173	273	163	159	172	204	291
15	San Gabriel Mountains	114	115	133	173	273	163	159	172	204	291
16	North Orange County	103	104	121	159	252	147	143	156	186	269
17	Central Orange County	81	83	98	123	192	115	114	125	148	205
18	North Coastal Orange County	92	93	108	140	219	131	128	139	165	235
19	Saddleback Valley	91	93	108	140	218	131	127	139	165	233
20	Central Orange County Coastal	92	93	108	140	219	131	128	139	165	235
21	Capistrano Valley	91	93	108	140	218	131	127	139	165	233
22	Norco/Corona	118	148	211	334	652	170	200	263	378	684
23	Metropolitan Riverside County	118	148	212	335	652	170	200	264	379	684
24	Perris Valley	118	148	212	335	652	170	200	264	379	684
25	Lake Elsinore	162	203	292	460	896	234	275	363	521	941
26	Temecula Valley	162	203	292	460	896	234	275	363	521	941
27	Anza Area	162	203	292	460	896	234	275	363	521	941
28	Hemet/San Jacinto Valley	162	203	292	460	896	234	275	363	521	941
29	Banning Airport	103	131	189	299	585	149	176	234	340	614
30	Coachella Valley	132	166	238	376	733	191	225	296	425	769
31	East Riverside County	132	166	238	376	733	191	225	296	425	769
32	Northwest San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
33	Southwest San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
34	Central San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
35	East San Bernardino Valley	118	148	211	334	651	170	200	263	377	683
36	West San Bernardino Mountains	118	148	211	334	652	170	200	263	378	684
37	Central San Bernardino Mountains	118	148	211	334	652	170	200	263	378	684
38	East San Bernardino Mountains	118	148	211	334	651	170	200	263	377	683

Table C-1. 2006 – 2008 Thresholds for Construction and Operation with Gradual Conversion of NOx to NO_2 (Continued)

SRA No.	Source Receptor Area	Allowable emissions (lbs/day) as a function of receptor distance (meters) from site boundary				
		5 Acre				
		25	50	100	200	500
1	Central LA	161	157	165	173	212
2	Northwest Coastal LA County	221	212	226	250	312
3	Southwest Coastal LA County	197	189	202	222	277
4	South Coastal LA County	123	118	126	141	179
5	Southeast LA County	172	165	176	194	244
6	West San Fernando Valley	221	212	226	250	313
7	East San Fernando Valley	172	165	176	194	242
8	West San Gabriel Valley	148	141	151	166	208
9	East San Gabriel Valley	203	227	286	368	584
10	Pomona/Walnut Valley	236	265	330	426	681
11	South San Gabriel Valley	183	176	184	202	245
12	South Central LA County	98	94	101	111	139
13	Santa Clarita Valley	246	236	251	275	345
15	San Gabriel Mountains	246	236	251	275	345
16	North Orange County	221	212	226	249	317
17	Central Orange County	183	167	180	202	245
18	North Coastal Orange County	197	190	202	223	278
19	Saddleback Valley	197	189	201	222	278
20	Central Orange County Coastal	197	190	202	223	278
21	Capistrano Valley	197	189	201	222	278
22	Norco/Corona	270	302	378	486	778
23	Metropolitan Riverside County	270	302	378	488	780
24	Perris Valley	270	302	378	488	780
25	Lake Elsinore	371	416	520	672	1,072
26	Temecula Valley	371	416	520	672	1,072
27	Anza Area	371	416	520	672	1,072
28	Hemet/San Jacinto Valley	371	416	520	672	1,072
29	Banning Airport	236	265	333	434	698
30	Coachella Valley	304	340	425	547	875
31	East Riverside County	304	340	425	547	875
32	Northwest San Bernardino Valley	270	303	378	486	778
33	Southwest San Bernardino Valley	270	303	378	486	778
34	Central San Bernardino Valley	270	302	378	486	778
35	East San Bernardino Valley	270	302	378	486	778
36	West San Bernardino Mountains	270	303	378	486	778
37	Central San Bernardino Mountains	270	302	378	486	778
38	East San Bernardino Mountains	270	302	378	486	778

Table C-2. 2006 – 2008 CO Emission Thresholds for Construction and Operation

SRA No.	Source Receptor Area	Allowable emissions (lbs/day) as a function of receptor distance (meters) from site boundary									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	680	882	1,259	2,406	7,911	1,048	1,368	1,799	3,016	8,637
2	Northwest Coastal LA County	562	833	1,233	2,367	7,724	827	1,213	1,695	2,961	8,446
3	Southwest Coastal LA County	664	785	1,156	2,228	7,269	967	1,158	1,597	2,783	7,950
4	South Coastal LA County	585	789	1,180	2,296	7,558	842	1,158	1,611	2,869	8,253
5	Southeast LA County	571	735	1,088	2,104	6,854	861	1,082	1,496	2,625	7,500
6	West San Fernando Valley	426	652	1,089	2,096	6,815	644	903	1,497	2,629	7,460
7	East San Fernando Valley	498	732	1,158	2,227	7,267	786	1,068	1,594	2,786	7,947
8	West San Gabriel Valley	535	783	1,158	2,229	7,270	812	1,125	1,594	2,785	7,957
9	East San Gabriel Valley	623	945	1,914	4,803	20,721	953	1,344	2,445	5,658	22,093
10	Pomona/Walnut Valley	612	911	1,741	4,345	18,991	885	1,358	2,298	5,097	20,256
11	South San Gabriel Valley	673	760	1,113	2,110	6,884	1,031	1,143	1,554	2,660	7,530
12	South Central LA County	231	342	632	1,545	5,452	346	515	841	1,817	5,962
13	Santa Clarita Valley	590	879	1,294	2,500	8,174	877	1,256	1,787	3,108	8,933
15	San Gabriel Mountains	590	879	1,294	2,500	8,174	877	1,256	1,787	3,108	8,933
16	North Orange County	522	685	1,014	1,975	6,531	762	1,010	1,395	2,444	7,121
17	Central Orange County	485	753	1,128	2,109	6,841	715	1,041	1,547	2,685	7,493
18	North Coastal Orange County	647	738	1,090	2,096	6,841	962	1,089	1,506	2,615	7,493
19	Saddleback Valley	696	833	1,234	2,376	7,724	993	1,227	1,696	2,965	8,454
20	Central Orange County Coastal	647	738	1,090	2,096	6,841	962	1,089	1,506	2,615	7,493
21	Capistrano Valley	696	833	1,234	2,376	7,724	993	1,227	1,696	2,965	8,454
22	Norco/Corona	674	999	1,853	4,352	17,637	1,007	1,474	2,461	5,183	18,934
23	Metropolitan Riverside County	602	887	1,746	4,359	17,640	883	1,262	2,232	5,136	18,947
24	Perris Valley	602	887	1,746	4,359	17,640	883	1,262	2,232	5,136	18,947
25	Lake Elsinore	750	1,105	2,176	5,501	23,866	1,100	1,572	2,781	6,399	25,412
26	Temecula Valley	750	1,105	2,176	5,501	23,866	1,100	1,572	2,781	6,399	25,412
27	Anza Area	750	1,105	2,176	5,501	23,866	1,100	1,572	2,781	6,399	25,412
28	Hemet/San Jacinto Valley	750	1,105	2,176	5,501	23,866	1,100	1,572	2,781	6,399	25,412
29	Banning Airport	1,000	1,420	2,623	6,154	25,057	1,541	2,049	3,458	7,395	26,890
30	Coachella Valley	878	1,387	2,565	6,021	24,417	1,299	1,931	3,409	7,174	26,212
31	East Riverside County	878	1,387	2,565	6,021	24,417	1,299	1,931	3,409	7,174	26,212
32	Northwest San Bernardino Valley	863	1,328	2,423	5,691	23,065	1,232	1,877	3,218	6,778	24,768
33	Southwest San Bernardino Valley	863	1,328	2,423	5,691	23,065	1,232	1,877	3,218	6,778	24,768
34	Central San Bernardino Valley	667	1,059	2,141	5,356	21,708	972	1,463	2,738	6,346	23,304
35	East San Bernardino Valley	775	1,205	2,279	5,351	21,703	1,174	1,712	3,029	6,375	23,294
36	West San Bernardino Mountains	863	1,328	2,423	5,691	23,065	1,232	1,877	3,218	6,778	24,768
37	Central San Bernardino Mountains	667	1,059	2,141	5,356	21,708	972	1,463	2,738	6,346	23,304
38	East San Bernardino Mountains	775	1,205	2,279	5,351	21,703	1,174	1,712	3,029	6,375	23,294

Table C-2. 2006 – 2008 CO Emission Thresholds for Construction and Operation (Continued)

SRA No.	Source Receptor Area	Allowable emissions (lbs/day) as a function of receptor distance (meters) from site boundary				
		5 Acre				
		25	50	100	200	500
1	Central LA	1,861	2,331	3,030	4,547	10,666
2	Northwest Coastal LA County	1,531	1,985	2,762	4,383	10,467
3	Southwest Coastal LA County	1,796	1,984	2,608	4,119	9,852
4	South Coastal LA County	1,530	1,982	2,613	4,184	10,198
5	Southeast LA County	1,480	1,855	2,437	3,867	9,312
6	West San Fernando Valley	1,158	1,537	2,438	3,871	9,271
7	East San Fernando Valley	1,434	1,872	2,599	4,119	9,848
8	West San Gabriel Valley	1,540	1,921	2,599	4,119	9,857
9	East San Gabriel Valley	1,733	2,299	3,680	7,600	25,558
10	Pomona/Walnut Valley	1,566	2,158	3,691	7,011	23,450
11	South San Gabriel Valley	1,814	1,984	2,549	4,024	9,342
12	South Central LA County	630	879	1,368	2,514	7,389
13	Santa Clarita Valley	1,644	2,095	2,922	4,608	11,049
15	San Gabriel Mountains	1,644	2,095	2,922	4,608	11,049
16	North Orange County	1,311	1,731	2,274	3,605	8,754
17	Central Orange County	1,253	1,734	2,498	4,018	9,336
18	North Coastal Orange County	1,711	1,864	2,455	3,888	9,272
19	Saddleback Valley	1,804	2,102	2,763	4,387	10,507
20	Central Orange County Coastal	1,711	1,864	2,455	3,888	9,272
21	Capistrano Valley	1,804	2,102	2,763	4,387	10,507
22	Norco/Corona	1,700	2,470	3,964	7,350	22,490
23	Metropolitan Riverside County	1,577	2,178	3,437	6,860	22,530
24	Perris Valley	1,577	2,178	3,437	6,860	22,530
25	Lake Elsinore	1,965	2,714	4,282	8,547	29,256
26	Temecula Valley	1,965	2,714	4,282	8,547	29,256
27	Anza Area	1,965	2,714	4,282	8,547	29,256
28	Hemet/San Jacinto Valley	1,965	2,714	4,282	8,547	29,256
29	Banning Airport	2,817	3,575	5,534	10,383	31,903
30	Coachella Valley	2,292	3,237	5,331	10,178	31,115
31	East Riverside County	2,292	3,237	5,331	10,178	31,115
32	Northwest San Bernardino Valley	2,193	2,978	5,188	9,611	29,410
33	Southwest San Bernardino Valley	2,193	2,978	5,188	9,611	29,410
34	Central San Bernardino Valley	1,746	2,396	4,142	8,532	27,680
35	East San Bernardino Valley	2,075	2,890	4,765	9,044	27,650
36	West San Bernardino Mountains	2,193	2,978	5,188	9,611	29,410
37	Central San Bernardino Mountains	1,746	2,396	4,142	8,532	27,680
38	East San Bernardino Mountains	2,075	2,890	4,765	9,044	27,650

Table C-3. PM10 Emission Thresholds for Operation

SRA No.	Source Receptor Area	Significance Threshold of 2.5 mg/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	2	4	8	17	43	2	6	11	20	46
2	Northwest Coastal LA County	1	3	7	14	36	2	5	9	16	37
3	Southwest Coastal LA County	1	4	7	14	34	2	6	9	16	36
4	South Coastal LA County	1	3	7	15	38	2	5	9	17	40
5	Southeast LA County	1	3	8	16	42	2	5	10	18	44
6	West San Fernando Valley	1	3	7	15	38	2	5	8	16	39
7	East San Fernando Valley	1	3	7	13	33	2	5	9	15	35
8	West San Gabriel Valley	1	3	7	14	37	2	5	9	16	39
9	East San Gabriel Valley	2	4	9	19	48	2	6	11	20	50
10	Pomona/Walnut Valley	1	3	7	14	36	2	5	8	16	38
11	South San Gabriel Valley	1	4	7	15	37	2	6	9	17	39
12	South Central LA County	1	3	7	13	34	2	5	9	15	36
13	Santa Clarita Valley	1	3	6	13	32	2	5	8	15	34
15	San Gabriel Mountains	1	3	6	13	32	2	5	8	15	34
16	North Orange County	1	3	6	13	33	2	4	8	15	35
17	Central Orange County	1	3	7	15	38	2	5	9	17	40
18	North Coastal Orange County	1	4	7	13	33	2	6	9	15	35
19	Saddleback Valley	1	3	6	12	29	2	5	8	14	31
20	Central Orange County Coastal	1	4	7	13	33	2	6	9	15	35
21	Capistrano Valley	1	3	6	12	29	2	5	8	14	31
22	Norco/Corona	1	3	8	18	48	2	5	10	20	50
23	Metropolitan Riverside County	1	3	8	17	43	2	5	10	18	45
24	Perris Valley	1	3	8	17	43	2	5	10	18	45
25	Lake Elsinore	1	3	8	17	43	2	5	10	18	45
26	Temecula Valley	1	3	8	17	43	2	5	10	18	45
27	Anza Area	1	3	8	17	43	2	5	10	18	45
28	Hemet/San Jacinto Valley	1	3	8	17	43	2	5	10	18	45
29	Banning Airport	2	5	14	31	84	3	8	18	38	98
30	Coachella Valley	1	3	9	20	52	2	6	16	36	97
31	East Riverside County	1	3	9	20	52	2	6	16	36	97
32	Northwest San Bernardino Valley	2	4	11	25	68	2	5	9	16	39
33	Southwest San Bernardino Valley	2	4	11	25	68	2	5	9	16	39
34	Central San Bernardino Valley	1	3	8	18	47	2	6	10	20	50
35	East San Bernardino Valley	1	3	9	20	53	2	5	11	22	56
36	West San Bernardino Mountains	2	4	11	25	68	2	5	9	16	39
37	Central San Bernardino Mountains	1	3	8	18	47	2	6	10	20	50
38	East San Bernardino Mountains	1	3	9	20	53	2	5	11	22	56

Table C-3. PM10 Emission Thresholds for Operation (Continued)

SRA No.	Source Receptor Area	Significance Threshold of 2.5 mg/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site				
		5 acres				
		25	50	100	200	500
1	Central LA	4	12	17	26	53
2	Northwest Coastal LA County	3	10	13	21	42
3	Southwest Coastal LA County	4	12	15	21	41
4	South Coastal LA County	4	10	14	22	46
5	Southeast LA County	4	10	15	23	49
6	West San Fernando Valley	3	9	13	21	44
7	East San Fernando Valley	4	11	14	21	41
8	West San Gabriel Valley	3	9	13	21	44
9	East San Gabriel Valley	4	11	16	26	55
10	Pomona/Walnut Valley	3	9	13	20	42
11	South San Gabriel Valley	4	11	15	22	45
12	South Central LA County	4	10	14	20	40
13	Santa Clarita Valley	3	10	13	19	39
15	San Gabriel Mountains	3	10	13	19	39
16	North Orange County	3	9	12	19	40
17	Central Orange County	3	10	14	22	45
18	North Coastal Orange County	4	11	14	21	41
19	Saddleback Valley	3	9	12	18	36
20	Central Orange County Coastal	4	11	14	21	41
21	Capistrano Valley	3	9	12	18	36
22	Norco/Corona	3	9	14	25	55
23	Metropolitan Riverside County	4	10	14	23	50
24	Perris Valley	4	10	14	23	50
25	Lake Elsinore	4	10	14	23	50
26	Temecula Valley	4	10	14	23	50
27	Anza Area	4	10	14	23	50
28	Hemet/San Jacinto Valley	4	10	14	23	50
29	Banning Airport	6	16	25	44	98
30	Coachella Valley	4	11	16	27	60
31	East Riverside County	4	11	16	27	60
32	Northwest San Bernardino Valley	4	12	20	34	78
33	Southwest San Bernardino Valley	4	12	20	34	78
34	Central San Bernardino Valley	4	11	16	26	55
35	East San Bernardino Valley	4	11	16	28	62
36	West San Bernardino Mountains	4	12	20	34	78
37	Central San Bernardino Mountains	4	11	16	26	55
38	East San Bernardino Mountains	4	11	16	28	62

Table C-4. PM10 Emission Thresholds for Construction

SRA No.	Source Receptor Area	Significance Threshold of 10.4 mg/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	5	15	33	70	179	8	25	43	80	190
2	Northwest Coastal LA County	4	12	27	57	146	6	19	34	64	154
3	Southwest Coastal LA County	5	14	28	56	140	8	23	37	65	148
4	South Coastal LA County	4	13	29	61	158	7	21	37	70	167
5	Southeast LA County	4	13	30	66	173	7	21	39	74	182
6	West San Fernando Valley	4	11	27	59	155	6	17	33	66	162
7	East San Fernando Valley	4	13	26	54	136	7	21	34	62	144
8	West San Gabriel Valley	4	11	27	58	152	6	19	34	66	160
9	East San Gabriel Valley	5	14	34	75	199	7	22	42	84	207
10	Pomona/Walnut Valley	4	11	26	57	148	6	18	33	64	156
11	South San Gabriel Valley	5	13	29	60	153	7	22	37	68	162
12	South Central LA County	4	12	26	54	139	7	20	34	62	146
13	Santa Clarita Valley	4	12	25	51	131	6	19	32	59	139
15	San Gabriel Mountains	4	12	25	51	131	6	19	32	59	139
16	North Orange County	4	10	24	53	137	6	17	31	60	145
17	Central Orange County	4	12	28	60	158	6	19	35	68	166
18	North Coastal Orange County	4	13	27	54	135	7	21	35	62	144
19	Saddleback Valley	4	11	24	48	121	6	18	30	55	129
20	Central Orange County Coastal	4	13	27	54	135	7	21	35	62	144
21	Capistrano Valley	4	11	24	48	121	6	18	30	55	129
22	Norco/Corona	4	11	32	73	198	6	18	39	81	206
23	Metropolitan Riverside County	4	12	30	67	178	7	20	38	75	186
24	Perris Valley	4	12	30	67	178	7	20	38	75	186
25	Lake Elsinore	4	12	30	67	178	7	20	38	75	186
26	Temecula Valley	4	12	30	67	178	7	20	38	75	186
27	Anza Area	4	12	30	67	178	7	20	38	75	186
28	Hemet/San Jacinto Valley	4	12	30	67	178	7	20	38	75	186
29	Banning Airport	6	19	55	129	348	10	32	73	157	407
30	Coachella Valley	4	13	35	80	214	7	22	44	89	223
31	East Riverside County	4	13	35	80	214	7	22	44	89	223
32	Northwest San Bernardino Valley	5	14	44	103	280	6	19	34	66	160
33	Southwest San Bernardino Valley	5	14	44	103	280	6	19	34	66	160
34	Central San Bernardino Valley	4	13	33	74	196	7	22	42	83	205
35	East San Bernardino Valley	4	12	36	82	220	7	21	44	90	230
36	West San Bernardino Mountains	5	14	44	103	280	6	19	34	66	160
37	Central San Bernardino Mountains	4	13	33	74	196	7	22	42	83	205
38	East San Bernardino Mountains	4	12	36	82	220	7	21	44	90	230

Table C-4. PM10 Emission Thresholds for Construction (Continued)

SRA No.	Source Receptor Area	Significance Threshold of 10.4 mg/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site				
		5 acres				
		25	50	100	200	500
1	Central LA	16	50	69	107	219
2	Northwest Coastal LA County	13	40	55	84	174
3	Southwest Coastal LA County	15	46	60	88	171
4	South Coastal LA County	14	42	58	92	191
5	Southeast LA County	14	42	60	95	203
6	West San Fernando Valley	11	35	51	84	181
7	East San Fernando Valley	14	42	56	84	167
8	West San Gabriel Valley	12	37	53	85	180
9	East San Gabriel Valley	14	43	63	105	229
10	Pomona/Walnut Valley	12	36	51	82	175
11	South San Gabriel Valley	14	43	59	91	186
12	South Central LA County	13	41	55	83	166
13	Santa Clarita Valley	12	38	52	79	161
15	San Gabriel Mountains	12	38	52	79	161
16	North Orange County	11	34	49	78	165
17	Central Orange County	13	39	55	88	188
18	North Coastal Orange County	14	44	57	85	167
19	Saddleback Valley	12	37	49	74	148
20	Central Orange County Coastal	14	44	57	85	167
21	Capistrano Valley	12	37	49	74	148
22	Norco/Corona	12	37	58	101	228
23	Metropolitan Riverside County	13	40	59	96	207
24	Perris Valley	13	40	59	96	207
25	Lake Elsinore	13	40	59	96	207
26	Temecula Valley	13	40	59	96	207
27	Anza Area	13	40	59	96	207
28	Hemet/San Jacinto Valley	13	40	59	96	207
29	Banning Airport	21	67	104	180	405
30	Coachella Valley	14	44	67	112	248
31	East Riverside County	14	44	67	112	248
32	Northwest San Bernardino Valley	16	50	80	140	322
33	Southwest San Bernardino Valley	16	50	80	140	322
34	Central San Bernardino Valley	14	44	65	106	229
35	East San Bernardino Valley	14	42	66	113	255
36	West San Bernardino Mountains	16	50	80	140	322
37	Central San Bernardino Mountains	14	44	65	106	229
38	East San Bernardino Mountains	14	42	66	113	255

Table C-5. PM2.5 Emission Thresholds for Operation

SRA No.	Source Receptor Area	Significance Threshold of 2.5 ug/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	1	2	3	6	25	2	2	3	7	27
2	Northwest Coastal LA County	1	1	2	5	19	1	2	3	6	20
3	Southwest Coastal LA County	1	2	3	5	18	1	2	3	6	20
4	South Coastal LA County	1	2	3	7	23	1	2	4	8	25
5	Southeast LA County	1	1	2	5	21	1	2	3	6	22
6	West San Fernando Valley	1	1	2	5	19	1	2	2	5	21
7	East San Fernando Valley	1	1	2	5	17	1	2	3	5	18
8	West San Gabriel Valley	1	1	2	5	19	1	2	3	5	20
9	East San Gabriel Valley	1	2	3	6	23	2	2	3	7	25
10	Pomona/Walnut Valley	1	1	2	5	18	1	2	3	5	20
11	South San Gabriel Valley	1	2	3	5	20	2	2	3	6	22
12	South Central LA County	1	1	2	4	17	1	2	3	5	18
13	Santa Clarita Valley	1	1	2	5	18	1	2	2	5	20
15	San Gabriel Mountains	1	1	2	5	18	1	2	2	5	20
16	North Orange County	1	1	3	5	18	1	2	3	6	19
17	Central Orange County	1	1	2	6	21	1	2	3	6	22
18	North Coastal Orange County	1	2	3	6	19	2	2	3	7	20
19	Saddleback Valley	1	1	2	5	17	1	2	3	6	18
20	Central Orange County Coastal	1	2	3	6	19	2	2	3	7	20
21	Capistrano Valley	1	1	2	5	17	1	2	3	6	18
22	Norco/Corona	1	2	3	6	23	2	2	3	6	24
23	Metropolitan Riverside County	1	1	2	5	21	1	2	3	6	22
24	Perris Valley	1	1	2	5	21	1	2	3	6	22
25	Lake Elsinore	1	1	2	5	21	1	2	3	6	22
26	Temecula Valley	1	1	2	5	21	1	2	3	6	22
27	Anza Area	1	1	2	5	21	1	2	3	6	22
28	Hemet/San Jacinto Valley	1	1	2	5	21	1	2	3	6	22
29	Banning Airport	1	2	4	9	38	2	3	5	10	40
30	Coachella Valley	1	2	3	6	26	2	2	3	7	27
31	East Riverside County	1	2	3	6	26	2	2	3	7	27
32	Northwest San Bernardino Valley	1	2	3	8	34	2	2	4	9	36
33	Southwest San Bernardino Valley	1	2	3	8	34	2	2	4	9	36
34	Central San Bernardino Valley	1	2	3	6	24	1	2	3	7	25
35	East San Bernardino Valley	1	2	3	7	27	2	2	4	8	29
36	West San Bernardino Mountains	1	2	3	8	34	2	2	4	9	36
37	Central San Bernardino Mountains	1	2	3	6	24	1	2	3	7	25
38	East San Bernardino Mountains	1	2	3	7	27	2	2	4	8	29

Table C-5. PM2.5 Emission Thresholds for Operation (Continued)

SRA No.	Source Receptor Area	Significance Threshold of 2.5 ug/m3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site				
		5 Acre				
		25	50	100	200	500
1	Central LA	2	3	5	9	31
2	Northwest Coastal LA County	2	2	4	7	23
3	Southwest Coastal LA County	2	3	5	9	24
4	South Coastal LA County	2	3	5	10	29
5	Southeast LA County	2	3	4	8	25
6	West San Fernando Valley	2	2	3	7	23
7	East San Fernando Valley	2	3	4	7	21
8	West San Gabriel Valley	2	3	4	7	23
9	East San Gabriel Valley	2	3	5	9	28
10	Pomona/Walnut Valley	2	3	4	7	23
11	South San Gabriel Valley	2	3	5	9	25
12	South Central LA County	2	3	4	7	21
13	Santa Clarita Valley	2	2	3	7	23
15	San Gabriel Mountains	2	2	3	7	23
16	North Orange County	2	3	4	8	23
17	Central Orange County	2	3	4	8	27
18	North Coastal Orange County	2	3	5	9	25
19	Saddleback Valley	2	3	4	8	22
20	Central Orange County Coastal	2	3	5	9	25
21	Capistrano Valley	2	3	4	8	22
22	Norco/Corona	2	3	5	9	28
23	Metropolitan Riverside County	2	3	4	8	26
24	Perris Valley	2	3	4	8	26
25	Lake Elsinore	2	3	4	8	26
26	Temecula Valley	2	3	4	8	26
27	Anza Area	2	3	4	8	26
28	Hemet/San Jacinto Valley	2	3	4	8	26
29	Banning Airport	3	4	6	14	46
30	Coachella Valley	2	3	5	9	31
31	East Riverside County	2	3	5	9	31
32	Northwest San Bernardino Valley	2	3	5	11	41
33	Southwest San Bernardino Valley	2	3	5	11	41
34	Central San Bernardino Valley	2	3	5	9	29
35	East San Bernardino Valley	3	3	5	10	34
36	West San Bernardino Mountains	2	3	5	11	41
37	Central San Bernardino Mountains	2	3	5	9	29
38	East San Bernardino Mountains	3	3	5	10	34

Table C-6. PM2.5 Emission Thresholds for Construction

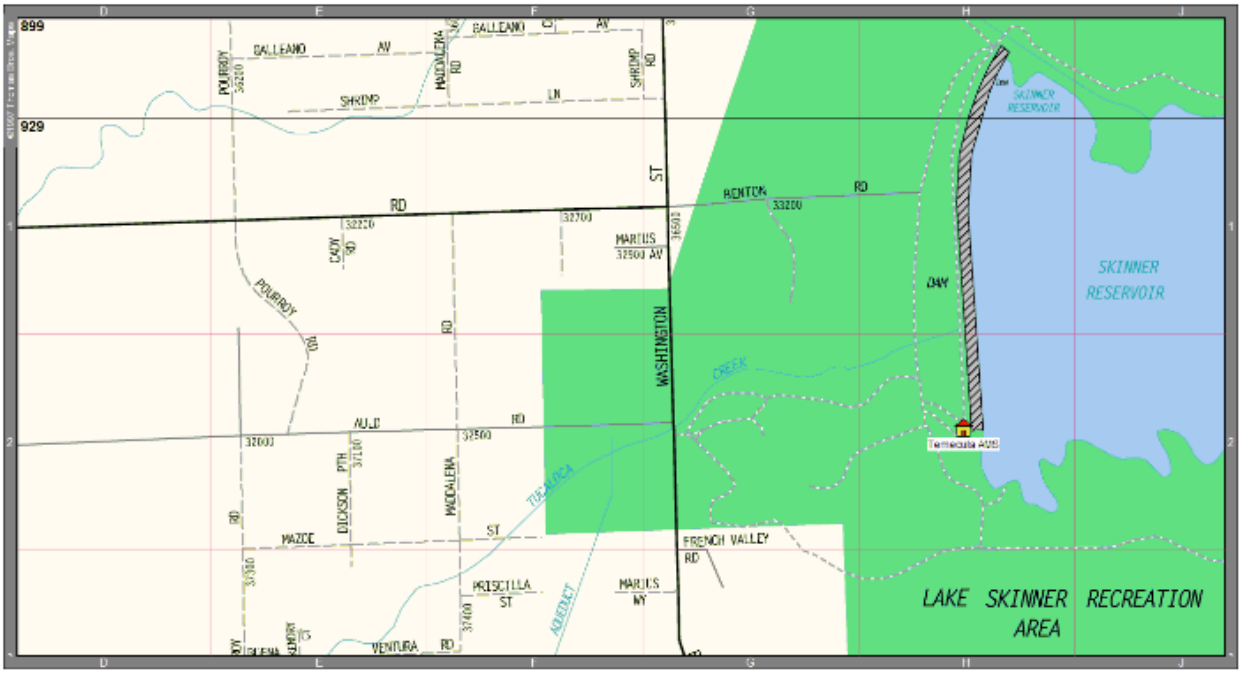
SRA No.	Source Receptor Area	Significance Threshold of 10.4 ug/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	3	5	10	24	102	5	7	12	28	110
2	Northwest Coastal LA County	3	4	8	18	77	4	5	10	21	82
3	Southwest Coastal LA County	3	5	9	21	75	5	7	12	25	81
4	South Coastal LA County	3	5	10	26	93	5	7	13	30	101
5	Southeast LA County	3	4	8	19	86	4	6	10	22	92
6	West San Fernando Valley	3	4	7	18	79	4	5	9	21	84
7	East San Fernando Valley	3	4	8	18	68	4	6	10	21	73
8	West San Gabriel Valley	3	4	7	18	77	4	5	9	21	82
9	East San Gabriel Valley	3	5	9	22	94	5	7	12	26	100
10	Pomona/Walnut Valley	3	4	7	18	75	4	6	10	21	80
11	South San Gabriel Valley	4	5	9	20	83	5	8	12	24	89
12	South Central LA County	3	4	7	17	70	4	6	9	19	74
13	Santa Clarita Valley	3	4	7	18	74	4	5	9	20	80
15	San Gabriel Mountains	3	4	7	18	74	4	5	9	20	80
16	North Orange County	3	4	9	20	74	4	6	11	24	79
17	Central Orange County	3	4	9	22	85	4	6	11	25	92
18	North Coastal Orange County	3	5	9	22	76	5	7	12	26	83
19	Saddleback Valley	3	4	8	19	68	4	6	10	22	74
20	Central Orange County Coastal	3	5	9	22	76	5	7	12	26	83
21	Capistrano Valley	3	4	8	19	68	4	6	10	22	74
22	Norco/Corona	3	5	9	22	92	5	7	12	25	98
23	Metropolitan Riverside County	3	4	8	20	86	4	6	10	23	91
24	Perris Valley	3	4	8	20	86	4	6	10	23	91
25	Lake Elsinore	3	4	8	20	86	4	6	10	23	91
26	Temecula Valley	3	4	8	20	86	4	6	10	23	91
27	Anza Area	3	4	8	20	86	4	6	10	23	91
28	Hemet/San Jacinto Valley	3	4	8	20	86	4	6	10	23	91
29	Banning Airport	4	7	14	36	156	6	9	17	41	166
30	Coachella Valley	3	5	10	24	105	5	7	12	28	112
31	East Riverside County	3	5	10	24	105	5	7	12	28	112
32	Northwest San Bernardino Valley	4	6	12	32	141	5	8	14	36	150
33	Southwest San Bernardino Valley	4	6	12	32	141	5	8	14	36	150
34	Central San Bernardino Valley	3	5	9	23	98	4	6	12	26	104
35	East San Bernardino Valley	4	5	10	26	112	5	7	13	30	120
36	West San Bernardino Mountains	4	6	12	32	141	5	8	14	36	150
37	Central San Bernardino Mountains	3	5	9	23	98	4	6	12	26	104
38	East San Bernardino Mountains	4	5	10	26	112	5	7	13	30	120

Table C-6. PM2.5 Emission Thresholds for Construction (Continued)

SRA No.	Source Receptor Area	Significance Threshold of 10.4 ug/m^3 Allowable emissions (lbs/day) as a function of receptor distance (meters) from boundary of site				
		5 Acre				
		25	50	100	200	500
1	Central LA	8	11	18	36	126
2	Northwest Coastal LA County	6	8	14	29	95
3	Southwest Coastal LA County	8	11	19	35	96
4	South Coastal LA County	8	10	18	39	120
5	Southeast LA County	7	10	15	30	103
6	West San Fernando Valley	6	8	13	26	96
7	East San Fernando Valley	8	10	15	28	86
8	West San Gabriel Valley	7	9	14	27	93
9	East San Gabriel Valley	8	11	17	35	116
10	Pomona/Walnut Valley	7	9	15	28	93
11	South San Gabriel Valley	9	12	19	34	104
12	South Central LA County	7	10	15	27	86
13	Santa Clarita Valley	6	8	13	26	95
15	San Gabriel Mountains	6	8	13	26	95
16	North Orange County	6	9	15	34	95
17	Central Orange County	7	9	15	32	109
18	North Coastal Orange County	9	11	18	35	101
19	Saddleback Valley	8	11	16	30	90
20	Central Orange County Coastal	9	11	18	35	101
21	Capistrano Valley	8	11	16	30	90
22	Norco/Corona	8	11	18	34	113
23	Metropolitan Riverside County	8	10	16	31	105
24	Perris Valley	8	10	16	31	105
25	Lake Elsinore	8	10	16	31	105
26	Temecula Valley	8	10	16	31	105
27	Anza Area	8	10	16	31	105
28	Hemet/San Jacinto Valley	8	10	16	31	105
29	Banning Airport	11	14	25	55	189
30	Coachella Valley	8	11	19	37	128
31	East Riverside County	8	11	19	37	128
32	Northwest San Bernardino Valley	9	12	21	45	170
33	Southwest San Bernardino Valley	9	12	21	45	170
34	Central San Bernardino Valley	8	10	17	35	120
35	East San Bernardino Valley	9	12	20	40	140
36	West San Bernardino Mountains	9	12	21	45	170
37	Central San Bernardino Mountains	8	10	17	35	120
38	East San Bernardino Mountains	9	12	20	40	140

South Coast AQMD
Site Survey Report for Temecula

Last updated: May 12, 2023



AQS ID	ARB Number	Site Start Date	Reporting Agency and Agency Code
060650016	33031	06/30/2010	South Coast AQMD (0972)

Site Address	County	Air Basin	Latitude	Longitude	Elevation
33700 Borel Road Winchester, CA 92596	Riverside	South Coast	33.583018	-117.072202	453m


33700 Borel Rd, Winchester, CA 92596
Temecula AMS location
©2009 Google

Detailed Site Information

Local site name	Temecula (Lake Skinner)
AQS ID	060650016
GPS coordinates (decimal degrees)	Latitude: 33.583018, Longitude: -117.072202
Street Address	33700 Borel Road. Winchester, CA 92596
County	Riverside
Distance to roadways (meters)	1,000
Traffic count (AADT, year)	20 / 2012
Groundcover (e.g. asphalt, dirt, sand)	Asphalt
Representative statistical area name (i.e. MSA, CBSA, other)	40140-Riverside-San Bernardino-Ontario, CA MSA

Pollutant, POC	Ozone , 1	Continuous PM2.5, 3	WS & D, 1/1	RH/T, 1/1
Primary / QA Collocated / Other	N/A	Other	N/A	N/A
Parameter code	44201	88502	61101/61102	62201/62101
Basic monitoring objective(s)	NAAQS	General Public Info	Research	Research
Site type(s)	Highest Concentration	Population Exposure	Meteorological	Meteorological
Monitor (type)	SLAMS	Other	SLAMS	SLAMS
Network affiliation	N/A	N/A	N/A	N/A
Instrument manufacturer and model	Teledyne T400	Met One BAM 1020	RM Young 05305V	Rotronic HC2-S3
Method code	087	731	065/065	063/063
FRM/FEM/ARM/ other	FEM	Non-FEM	N/A	N/A
Collecting Agency	South Coast AQMD	South Coast AQMD	South Coast AQMD	South Coast AQMD
Analytical Lab (i.e., weigh lab, toxics lab, other)	N/A	N/A	N/A	N/A
Reporting Agency	South Coast AQMD	South Coast AQMD	South Coast AQMD	South Coast AQMD
Spatial scale (e.g. micro, neighborhood)	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Monitoring start date (MM/DD/YYYY)	09/30/2010	06/30/2010	06/2010	06/2010
Current sampling frequency (e.g.1:3, continuous)	1:1	1:1	Continuous	Continuous
Calculated sampling frequency (e.g. 1:3/1:1)	N/A	N/A	1:1	1:1
Sampling season (MM/DD-MM/DD)	01/01-12/31	01/01-12/31	01/01-12/31	01/01-12/31
Probe height (meters)	4.4	4.4	10	9.0
Distance from supporting structure (meters)	1.8 *Roof itself is supporting structure.	1.8 *Roof itself is supporting structure.	10	9.0
Distance from obstructions on roof (meters)	N/A	N/A	N/A	N/A

Distance from obstructions not on roof (meters)	N/A	N/A	N/A	N/A
Distance from trees (meters)	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue (meters)	N/A	N/A	N/A	N/A
Distance between collocated monitors (meters)	N/A	N/A	N/A	N/A
Unrestricted airflow (degrees)	360°	360°	360°	360°
Probe material for reactive gases (e.g. Pyrex, stainless steel, Teflon)	Teflon	N/A	N/A	N/A
Residence time for reactive gases (seconds)	12.1	N/A	N/A	N/A
Will there be changes within the next 18 months? (Y/N)	No	No	No	No
Is it suitable for comparison against the annual PM2.5? (Y/N)	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	Monthly	N/A	N/A
Frequency of one-point QC check for gaseous instruments	Nightly	N/A	N/A	N/A
Last Annual Performance Evaluation for gaseous parameters (MM/DD/YYYY)	10/06/2022	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors (MM/DD/YYYY, MM/DD/YYYY)	N/A	03/10/2022 10/06/2022	N/A	N/A

Temecula
Site Photos

Looking North from probe.

Looking East from the probe.

Looking South from the probe.

Looking West from the probe.

Temecula
Site Photos (Cont.)

Looking at the probe to the North.

Looking from the probe to the East.

Looking at the probe to the South.

Looking at the probe to the West.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765-4182
Information: 1-800-CUT-SMOG (1-800-288-7664)
Internet: http://www.aqmd.gov

Air Quality Reporting

Since 1977, the South Coast Air Quality Management District has served as the local government agency responsible for measuring, reporting and taking steps to improve air quality.

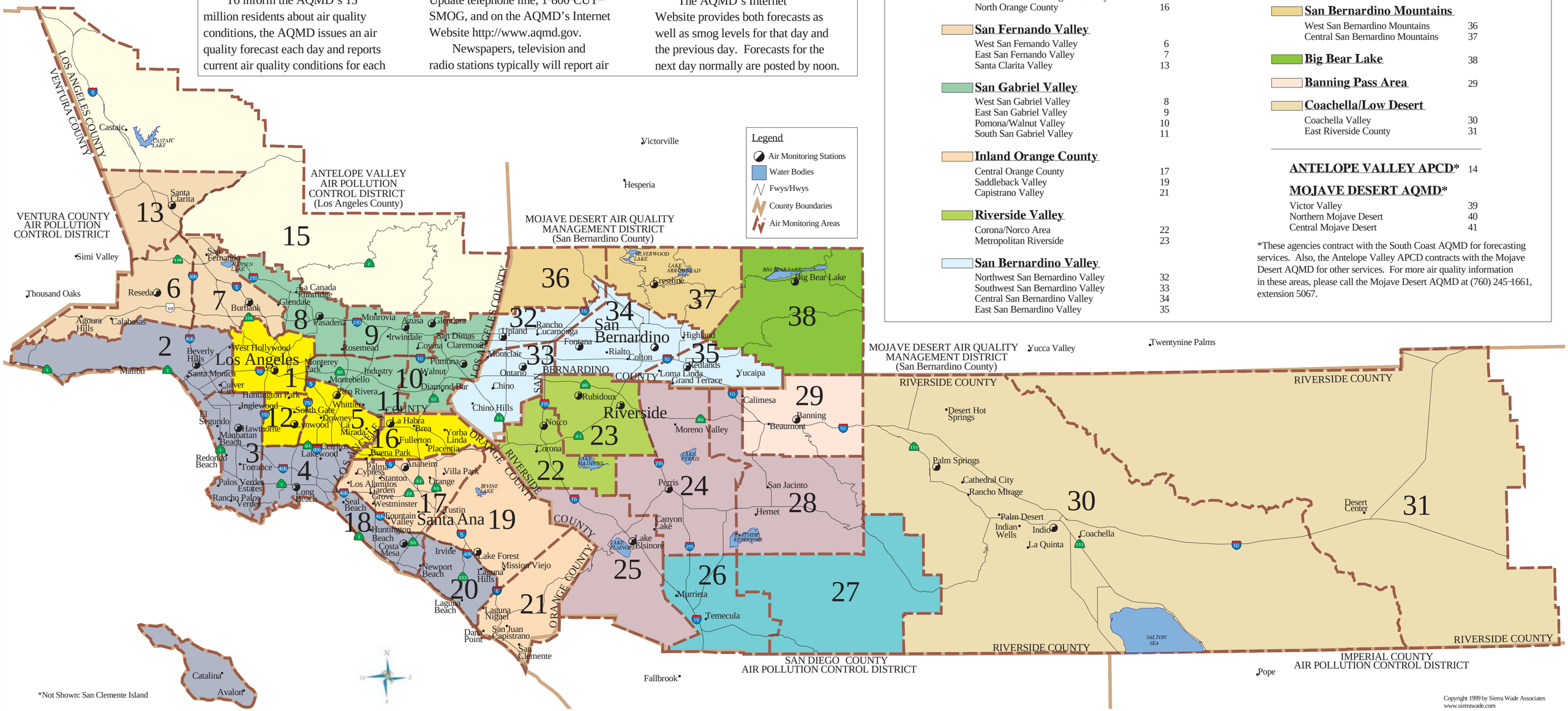
To inform the AQMD's 15 million residents about air quality conditions, the AQMD issues an air quality forecast each day and reports current air quality conditions for each numbered Monitoring Area and General Forecast Area depicted here.

This air quality information is transmitted to the public through newspapers, television, radio and pager services, through faxes to schools, through recorded messages on the AQMD's toll-free Smog Update telephone line, 1-800-CUT-SMOG, and on the AQMD's Internet Website http://www.aqmd.gov.

Newspapers, television and radio stations typically will report air quality information using the General Forecast Areas, shown in color below, which are larger groupings of the more specific Air Monitoring Areas.

The 1-800-CUT-SMOG (1-800-288-7664) line also provides smog forecast and current smog level information by ZIP code.

The AQMD's Internet Website provides both forecasts as well as smog levels for that day and the previous day. Forecasts for the next day normally are posted by noon.



General Forecast Areas & Air Monitoring Areas

Coastal

Northwest Los Angeles County Coastal	2
Southwest Los Angeles County Coastal	3
South Los Angeles County Coastal	4
North Orange County Coastal	18
Central Orange County Coastal	20

Metropolitan

Central Los Angeles County	1
Southeast Los Angeles County	5
South Central Los Angeles County	12
North Orange County	16

San Fernando Valley

West San Fernando Valley	6
East San Fernando Valley	7
Santa Clarita Valley	13

San Gabriel Valley

West San Gabriel Valley	8
East San Gabriel Valley	9
Pomona/Walnut Valley	10
South San Gabriel Valley	11

Inland Orange County

Central Orange County	17
Saddleback Valley	19
Capistrano Valley	21

Riverside Valley

Corona/Norco Area	22
Metropolitan Riverside	23

San Bernardino Valley

Northwest San Bernardino Valley	32
Southwest San Bernardino Valley	33
Central San Bernardino Valley	34
East San Bernardino Valley	35

Hemet/Elsinore Area

Perris Valley	24
Lake Elsinore	25
Hemet/San Jacinto Valley	28

Temecula/Anza Area

Temecula Valley	26
Anza Area	27

San Gabriel Mountains 15

San Bernardino Mountains

West San Bernardino Mountains	36
Central San Bernardino Mountains	37

Big Bear Lake 38

Banning Pass Area 29

Coachella/Low Desert

Coachella Valley	30
East Riverside County	31

ANTELOPE VALLEY APCD* 14

MOJAVE DESERT AQMD*

Victor Valley	39
Northern Mojave Desert	40
Central Mojave Desert	41

*These agencies contract with the South Coast AQMD for forecasting services. Also, the Antelope Valley APCD contracts with the Mojave Desert AQMD for other services. For more air quality information in these areas, please call the Mojave Desert AQMD at (760) 245-1661, extension 5067.

French Valley Childcare and Early Learning Center Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	French Valley Childcare and Early Learning Center
Construction Start Date	3/5/2024
Operational Year	2024
Lead Agency	Riverside County
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.60834700559859, -117.10766919167631
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	6829
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

Day-Care Center	13.0	1000sqft	0.30	13,000	8,000	14,000	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	1.22	11.4	11.4	0.02	0.53	5.41	5.94	0.49	2.59	3.08	—	1,821	1,821	0.07	0.02	0.50	1,829
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	24.3	11.4	11.2	0.02	0.53	5.41	5.94	0.49	2.59	3.08	—	1,812	1,812	0.07	0.02	0.03	1,819
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.66	3.08	3.89	0.01	0.14	0.21	0.35	0.13	0.08	0.21	—	739	739	0.03	0.01	0.11	743
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.12	0.56	0.71	< 0.005	0.03	0.04	0.06	0.02	0.02	0.04	—	122	122	< 0.005	< 0.005	0.02	123

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	1.45	1.22	11.4	11.4	0.02	0.53	5.41	5.94	0.49	2.59	3.08	—	1,821	1,821	0.07	0.02	0.50	1,829
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.45	24.3	11.4	11.2	0.02	0.53	5.41	5.94	0.49	2.59	3.08	—	1,812	1,812	0.07	0.02	0.03	1,819
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.39	0.66	3.08	3.89	0.01	0.14	0.21	0.35	0.13	0.08	0.21	—	739	739	0.03	0.01	0.11	743
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.07	0.12	0.56	0.71	< 0.005	0.03	0.04	0.06	0.02	0.02	0.04	—	122	122	< 0.005	< 0.005	0.02	123

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.	2.81	2.95	1.83	15.8	0.03	0.03	2.60	2.64	0.03	0.66	0.69	10.2	3,484	3,494	1.21	0.17	12.9	3,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.51	2.66	1.95	13.3	0.03	0.03	2.60	2.64	0.03	0.66	0.69	10.2	3,287	3,297	1.22	0.17	0.38	3,379
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	2.13	1.55	11.0	0.02	0.03	2.02	2.04	0.03	0.51	0.54	10.2	2,638	2,648	1.18	0.14	4.40	2,722
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.36	0.39	0.28	2.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	1.68	437	438	0.20	0.02	0.73	451

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	2.70	2.54	1.74	15.1	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,250	3,250	0.17	0.16	12.9	3,315
Area	0.10	0.40	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.33	2.33	< 0.005	< 0.005	—	2.33
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	223	223	0.02	< 0.005	—	224
Water	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Waste	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	2.81	2.95	1.83	15.8	0.03	0.03	2.60	2.64	0.03	0.66	0.69	10.2	3,484	3,494	1.21	0.17	12.9	3,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.50	2.34	1.86	13.3	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,055	3,055	0.18	0.17	0.33	3,110
Area	0.00	0.31	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	223	223	0.02	< 0.005	—	224
Water	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Waste	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	2.51	2.66	1.95	13.3	0.03	0.03	2.60	2.64	0.03	0.66	0.69	10.2	3,287	3,297	1.22	0.17	0.38	3,379
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.88	1.75	1.46	10.6	0.02	0.02	2.02	2.03	0.02	0.51	0.53	—	2,404	2,404	0.14	0.13	4.35	2,451
Area	0.07	0.37	< 0.005	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	223	223	0.02	< 0.005	—	224
Water	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2

Waste	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	1.96	2.13	1.55	11.0	0.02	0.03	2.02	2.04	0.03	0.51	0.54	10.2	2,638	2,648	1.18	0.14	4.40	2,722
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.34	0.32	0.27	1.93	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	—	398	398	0.02	0.02	0.72	406
Area	0.01	0.07	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.9	36.9	< 0.005	< 0.005	—	37.1
Water	—	—	—	—	—	—	—	—	—	—	—	0.18	1.43	1.60	0.02	< 0.005	—	2.19
Waste	—	—	—	—	—	—	—	—	—	—	—	1.51	0.00	1.51	0.15	0.00	—	5.28
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.36	0.39	0.28	2.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	1.68	437	438	0.20	0.02	0.73	451

3. Construction Emissions Details

3.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.5	23.5	< 0.005	< 0.005	—	23.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.89	3.89	< 0.005	< 0.005	—	3.90
Dust From Material Movement	—	—	—	—	—	—	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.1	66.1	< 0.005	< 0.005	0.01	67.0
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.84	1.84	< 0.005	< 0.005	< 0.005	1.86

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	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
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

3.3. 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	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
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	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—

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	0.04	0.03	0.31	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.9	46.9	< 0.005	< 0.005	—	47.1
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.77	7.77	< 0.005	< 0.005	—	7.80
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
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	0.04	0.04	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.2	99.2	< 0.005	< 0.005	0.01	100
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	0.01	2.79
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	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.46
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. 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	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.29	0.25	2.45	3.06	0.01	0.11	—	0.11	0.10	—	0.10	—	572	572	0.02	< 0.005	—	574
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	0.05	0.04	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.7	94.7	< 0.005	< 0.005	—	95.0
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	0.03	0.03	0.46	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	78.6	78.6	< 0.005	< 0.005	0.31	79.8
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.2	66.2	< 0.005	0.01	0.19	69.3
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	0.03	0.03	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.2	72.2	< 0.005	< 0.005	0.01	73.1
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.2	66.2	< 0.005	0.01	< 0.005	69.2
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	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.1	32.1	< 0.005	< 0.005	0.06	32.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.0	29.0	< 0.005	< 0.005	0.04	30.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.31	5.31	< 0.005	< 0.005	0.01	5.38
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.80	4.80	< 0.005	< 0.005	0.01	5.03
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

3.7. Paving (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.10	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.42	6.42	< 0.005	< 0.005	0.01	6.51
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	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.08
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

3.9. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	24.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.83	1.83	< 0.005	< 0.005	—	1.84
Architectural Coatings	—	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	< 0.005	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.20
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	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	2.70	2.54	1.74	15.1	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,250	3,250	0.17	0.16	12.9	3,315
Total	2.70	2.54	1.74	15.1	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,250	3,250	0.17	0.16	12.9	3,315
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	2.50	2.34	1.86	13.3	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,055	3,055	0.18	0.17	0.33	3,110
Total	2.50	2.34	1.86	13.3	0.03	0.03	2.60	2.63	0.02	0.66	0.68	—	3,055	3,055	0.18	0.17	0.33	3,110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	0.34	0.32	0.27	1.93	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	—	398	398	0.02	0.02	0.72	406

Total	0.34	0.32	0.27	1.93	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	—	398	398	0.02	0.02	0.72	406

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	123	123	0.01	< 0.005	—	124
Total	—	—	—	—	—	—	—	—	—	—	—	—	123	123	0.01	< 0.005	—	124
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	123	123	0.01	< 0.005	—	124
Total	—	—	—	—	—	—	—	—	—	—	—	—	123	123	0.01	< 0.005	—	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	20.4	20.4	< 0.005	< 0.005	—	20.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	20.4	20.4	< 0.005	< 0.005	—	20.5

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.7	99.7	0.01	< 0.005	—	100
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.7	99.7	0.01	< 0.005	—	100
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.7	99.7	0.01	< 0.005	—	100
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.7	99.7	0.01	< 0.005	—	100
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.6
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.6

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.09	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Total	0.10	0.40	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.33	2.33	< 0.005	< 0.005	—	2.33
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.31	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.01	0.07	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.26	0.26	< 0.005	< 0.005	—	0.26

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Total	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Total	—	—	—	—	—	—	—	—	—	—	—	1.07	8.61	9.68	0.11	< 0.005	—	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	0.18	1.43	1.60	0.02	< 0.005	—	2.19
Total	—	—	—	—	—	—	—	—	—	—	—	0.18	1.43	1.60	0.02	< 0.005	—	2.19

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Total	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Total	—	—	—	—	—	—	—	—	—	—	—	9.11	0.00	9.11	0.91	0.00	—	31.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	1.51	0.00	1.51	0.15	0.00	—	5.28
Total	—	—	—	—	—	—	—	—	—	—	—	1.51	0.00	1.51	0.15	0.00	—	5.28

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Day-Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/5/2024	3/18/2024	5.00	10.0	—
Grading	Grading	3/19/2024	4/1/2024	5.00	10.0	—
Building Construction	Building Construction	4/2/2024	11/11/2024	5.00	160	—
Paving	Paving	11/12/2024	11/25/2024	5.00	10.0	—
Architectural Coating	Architectural Coating	11/26/2024	12/2/2024	5.00	5.00	—

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
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
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
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	5.46	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	2.13	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.09	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	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	19,500	6,500	—

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 (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	5.00	0.00	—
Grading	0.00	0.00	7.50	0.00	—
Paving	0.00	0.00	0.00	0.00	1.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Day-Care Center	1.00	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

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
Day-Care Center	619	80.9	75.9	169,573	3,674	885	831	1,047,272

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Day-Care Center	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	19,500	6,500	—

5.10.3. Landscape Equipment

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)
Day-Care Center	84,605	532	0.0330	0.0040	311,226

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Day-Care Center	557,564	398,155

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Day-Care Center	16.9	—

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

Day-Care Center	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Day-Care Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Day-Care Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Day-Care Center	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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

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)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.7	annual days of extreme heat
Extreme Precipitation	3.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	25.1	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	80.0
AQ-PM	36.4
AQ-DPM	60.0
Drinking Water	10.2
Lead Risk Housing	11.7
Pesticides	0.00
Toxic Releases	13.7
Traffic	6.51
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00

Haz Waste Facilities/Generators	2.51
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	41.2
Cardio-vascular	92.2
Low Birth Weights	63.8
Socioeconomic Factor Indicators	—
Education	10.8
Housing	12.8
Linguistic	15.6
Poverty	15.3
Unemployment	89.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	80.07185936
Employed	72.89875529
Median HI	79.60990633
Education	—
Bachelor's or higher	58.65520339
High school enrollment	100
Preschool enrollment	37.79032465
Transportation	—
Auto Access	93.63531374

Active commuting	18.01616836
Social	—
2-parent households	79.04529706
Voting	48.72321314
Neighborhood	—
Alcohol availability	79.87937893
Park access	6.608494803
Retail density	19.67150006
Supermarket access	5.453612216
Tree canopy	4.927499038
Housing	—
Homeownership	73.73283716
Housing habitability	87.5914282
Low-inc homeowner severe housing cost burden	49.31348646
Low-inc renter severe housing cost burden	90.56845887
Uncrowded housing	58.74502759
Health Outcomes	—
Insured adults	74.51559091
Arthritis	0.0
Asthma ER Admissions	86.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	74.4

Cognitively Disabled	97.6
Physically Disabled	93.4
Heart Attack ER Admissions	2.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	4.1
SLR Inundation Area	0.0
Children	24.2
Elderly	85.6
English Speaking	89.6
Foreign-born	19.6
Outdoor Workers	80.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	53.0
Traffic Density	13.6
Traffic Access	23.0
Other Indices	—
Hardship	30.8

Other Decision Support	—
2016 Voting	63.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	15.0
Healthy Places Index Score for Project Location (b)	70.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Vacant Land
Construction: Paving	Per plans
Operations: Hearths	No fireplaces or stoves

APPENDIX C

HABITAT ASSESSMENT AND FOCUSED SURVEY REPORT

French Valley

Childcare and Early Learning Center Experience Project

Riverside County, California

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

May 3, 2019

Ms. Maribel Hyer, Senior Real Property Agent
County of Riverside Economic Development Agency
3403 Tenth Street, Suite 400
Riverside, California 92501

CFP Riverside, LLC
18336 Minnetonka Boulevard, Suite C
Deephaven, Minnesota 55391

UMB Bank as Trustee

Subject: Habitat Assessment for MSHCP Narrow Endemic Plant Species Area (NEPSSA) and Criteria Area Plant Species Survey Area (CASSA) Species for the French Valley Library Project (LSA Project No. RED1901)

Dear Ms. Hyer:

LSA was retained by the County of Riverside Economic Development Agency to conduct a habitat assessment for Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Narrow Endemic Plant Species Area (NEPSSA) and Criteria Area Plant Species Survey Area (CASSA) species for the French Valley Library Project site (Accessor's Parcel Number 480-160-021-2). The site is located at the east corner of Winchester Road and Sky View Road in the unincorporated community of French Valley, Riverside County, California (attached Figure 1).

It is determined that the site does not provide suitable habitat for NEPSSA or CASSA species.

BACKGROUND

The project site is within NEPSSA 4 and CASSA 4. Projects within NEPSSA 4 require habitat assessments or surveys (if suitable habitat is present) for the following plant species:

- Munz's onion (*Allium munzii*);
- San Diego ambrosia (*Ambrosia pumila*);
- Many-stemmed dudleya (*Dudleya multicaulis*);
- Spreading navarretia (*Navarretia fossalis*);
- California Orcutt grass (*Orcuttia californica*); and
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*).

Projects within CASSA 4 require habitat assessments or surveys (if suitable habitat is present) for the following plant species:

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

- Parish's brittlescale (*Atriplex parishii*);
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*);
- Thread-leaved brodiaea (*Brodiaea filifolia*);
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*);
- Round-leaved filaree (*Erodium macrophyllum*);
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*); and
- Little mousetail (*Myosurus minimus*).

Habitat requirements for these species are summarized in attached Tables A and B.

METHODS

The habitat assessment was conducted during the rainy season as indicated by the MSHCP for vernal pool plant species. The assessment included a review of aerial photographs to look for areas of ponding that could provide habitat for vernal pool plants. Information on mapped soils was taken from *Soil Survey of Western Riverside Area, California* (Soil Conservation Service, 1971, Washington, DC). Stan Spencer, an LSA botanist, visited the project site on February 12, 2019, between 11:45 a.m. and 2:00 p.m., to assess site conditions, including characteristics of soil, topography, hydrology, and vegetation relative to habitat requirements for the survey species listed above.

French Valley area precipitation for the 2018–2019 wet season and normal season values were taken from the WeatherCurrents.com web site (http://weathercurrents.com/frenchvalley/). Season-to-date precipitation in the French Valley area at the time of the site visit was 8.96 inches, compared to a total average season precipitation of 9.01 inches.

RESULTS

Physical Site Conditions and Soils

Mapped soils in the study area include the following:

- PtB: Porterville clay, moderately deep, slightly saline-alkali, 0 to 5 percent slopes;
- WyC2: Wyman loam, 2 to 8 percent slopes, eroded;
- YbC: Yokohl loam, 2 to 8 percent slopes; and
- YbE3: Yokohl loam, 8 to 25 percent slopes, severely eroded.

Soil mapping is shown in attached Figure 2. The Porterville clay is only in the extreme north corner of the site. Soils observed in this area during the site visit are gravelly and loamy, not clay, and were likely imported for construction of the road. The remaining mapped soils are also loamy. There are no alkali soils in the study area as evidenced by soil mapping and the general absence of plant species adapted to alkali soils as well as the absence of other surface indicators of alkalinity. Based on a review of aerial imagery, the entire study area except for the immediate road edge and the east edge of the site along the creek has been graded within the last 10 years. The grading has lowered

the elevation by several feet in places, exposing subsoils, including layers of clay that have been invaded by non-native species.

Vegetation

Subsequent to grading, the site has been invaded by non-native species. Most of it is now dominated by shortpod mustard (*Hirschfeldia incana*), redstem stork's bill (*Erodium cicutarium*), tree tobacco (*Nicotiana glauca*), Mediterranean tamarisk (*Tamarix ramosissima*), and black mustard (*Brassica nigra*). A small area along the northeast edge is dominated by mule fat (*Baccharis salicifolia*), a native species, and by Spanish false fleabane (*Pulicaria paludosa*), a non-native species.

HABITAT SUITABILITY

An evaluation of site habitat suitability for each of the NEPSSA and CASSA species listed above is provided in attached Tables A and B. Due to the absence of exposed mapped clay soils, alkali soils, and indicated native plant communities, as well as grading of most of the study area within the past few years, the site does not provide suitable habitat for any of these species.

If you have any questions concerning the report, I can be contacted at (951) 781-9310 or stan.spencer@lsa.net.

Sincerely,

LSA ASSOCIATES, INC.

Stanley C. Spencer, Ph.D.
Associate, Senior Botanist

Attachments: Table A: MSHCP Narrow Endemic Plant Species of NEPSSA 4
Table B: MSHCP Criteria Area Plant Species of CASSA 4
Figure 1: Study Area
Figure 2: Soils

cc: Michelle Murphy-Mariscal, MSHCP Biological Monitoring Program

Table A: MSHCP Narrow Endemic Plant Species of NEPSSA 4

Species	MSHCP Habitat	Habitat and Blooming Period	Occurrence Probability
Munz's onion *Allium munzii*	Clay soils on mesic exposures or seasonally moist microsites in grassy openings of coastal sage scrub, chaparral, juniper woodland or valley and foothill grassland. The MSHCP account for this species states that "Munz's onion is found on clay and cobbly clay soils which include the following series: Altamont, Auld, Bosanko, Claypit, and Porterville." The account also mentions that "one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay." However, weathering of pyroxenite generally results in a clay soil. It is therefore expected that any Munz's onion population associated with pyroxenite outcrops would be in clay soils.	Perennial bulb April–May	**Absent**. No exposed mapped clay soils. Site graded within last 10 years. Exposed clay subsoils have been invaded by non-native species and would not be spontaneously colonized by this species under these conditions. Suitable native plant communities are not present.
San Diego ambrosia *Ambrosia pumila*	Open floodplain terraces on Garretson gravelly fine sandy loams, or in the watershed margins of vernal pools or alkali playas on Las Posas loam in close proximity to Willow silty alkaline soils. Occurs in sparse annual vegetation.	Perennial Generally non-flowering	**Absent**. Indicated soils not present; no vernal pools or alkali playas.
Many-stemmed dudleya *Dudleya multicaulis*	Clay soils in barrens, rocky places, and ridgelines, as well as thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands on clay soils. Visible population size varies considerably year-to-year depending on rainfall patterns. The MSHCP account for this species states that "Many-stemmed dudleya is associated with openings in chaparral, coastal sage scrub, and grasslands underlain by clay and cobbly clay soils of the following series: Altamont, Auld, Bosanko, Claypit, and Porterville."	Perennial May - June	**Absent**. No exposed mapped clay soils. Site graded within last 10 years. Exposed clay subsoils have been invaded by non-native species and would not be spontaneously colonized by this species under these conditions. Suitable native plant communities are not present.
Spreading navarretia *Navarretia fossalis*	Saline alkaline soils of vernal pools and depressions and ditches in areas that once supported vernal pools. The MSHCP account for this species states that it "is primarily restricted to the alkali floodplains of the San Jacinto River, Mystic Lake and Salt Creek in association with Willows, Domino and Traver soils" and that "in western Riverside County, spreading navarretia has been found in relatively undisturbed and moderately disturbed vernal pools, within a larger vernal floodplains dominated by annual alkali grassland or alkali playa."	Annual May–June	**Absent**. No vernal pools or similar habitats; no alkali areas.

Table A: MSHCP Narrow Endemic Plant Species of NEPSSA 4

Species	MSHCP Habitat	Habitat and Blooming Period	Occurrence Probability
California Orcutt grass *Orcuttia californica*	Alkaline soils and southern basaltic clay pan in vernal pools. The MSHCP account for this species states that, in Riverside County, it "is found in southern basaltic clay pan vernal pools at the Santa Rosa Plateau, and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet."	Annual April–June	**Absent**. No vernal pools; no alkali areas.
Wright's trichocoronis *Trichocoronis wrightii* var. *wrightii*	Alkali soils in alkali playa, alkali annual grassland, and alkali vernal pools. The MSHCP account for this species states that "Wright's trichocoronis is restricted to highly alkaline, silty-clay soils in association with Traver, Domino, and Willows soils …"	Annual May–September	**Absent**. No alkali playa, alkali annual grassland, or vernal pools.

Table B: MSHCP Criteria Area Plant Species of CASSA 4

Species	MSHCP Habitat	Habitat and Blooming Period	Occurrence Probability
Parish's brittlescale *Atriplex parishii*	Domino, Willows and Traver soils in alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains.	Annual June–October	**Absent**. Indicated soils and alkali habitats not present.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	Domino, Willows and Traver soils in alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains.	Annual May–October	**Absent**. Indicated soils and alkali habitats not present.
Thread-leaved brodiaea *Brodiaea filifolia*	Clay or alkaline silty-clay soils in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native–non-native grassland and alkali grassland.	Perennial bulb March–June	**Absent**. No suitable soils or plant communities present
Smooth tarplant *Centromadia pungens* ssp. *laevis*	Primarily alkaline soils in alkali scrub, alkali playas, riparian woodland, watercourses, and alkaline grasslands. The MSHCP account for this species states that "Suitable habitat for the smooth tarplant includes alkali scrub, alkali playas, and grasslands with alkaline affinities … smooth tarplant is restricted to clay and alkaline, silty-clay soils."	Annual April–November	**Absent**. No suitable soils or alkali habitats present; not known from general project vicinity.
Round-leaved filaree *Erodium macrophyllum*	Clay soils in open cismontane woodland (e.g. oak, juniper woodlands) and valley and foothill grassland. The MSHCP account for this species states that it is restricted to "very friable clay soils. … Within the Plan Area, two of the mapped localities occur on Bosanko clay soils" and that "this species tends to be associated primarily with wild oats (*Avena fatua*)."	Annual/biennial March–May	**Absent**. No exposed mapped clay soils. Site graded within last 10 years. Exposed clay subsoils have been invaded by non-natives and would not be spontaneously colonized by this species under these conditions. Suitable native plant communities are not present.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Traver, Domino or (usually) Willows soils in alkali scrub, alkali playas, vernal pools, and alkali grasslands.	Annual February–June	**Absent**. Indicated soils and alkali habitats not present.
Little mousetail *Myosurus minimus*	Alkaline soils in vernal pools and vernal plains. The MSHCP account for this species states that it "little mousetail is found in areas that have semiregular inundation."	Annual April–May	**Absent**. No vernal pools or vernal plains; no alkali areas.

LSA

LEGEND

APN 480-160-021

Biological Study Area

FIGURE 1

N

0 125 250

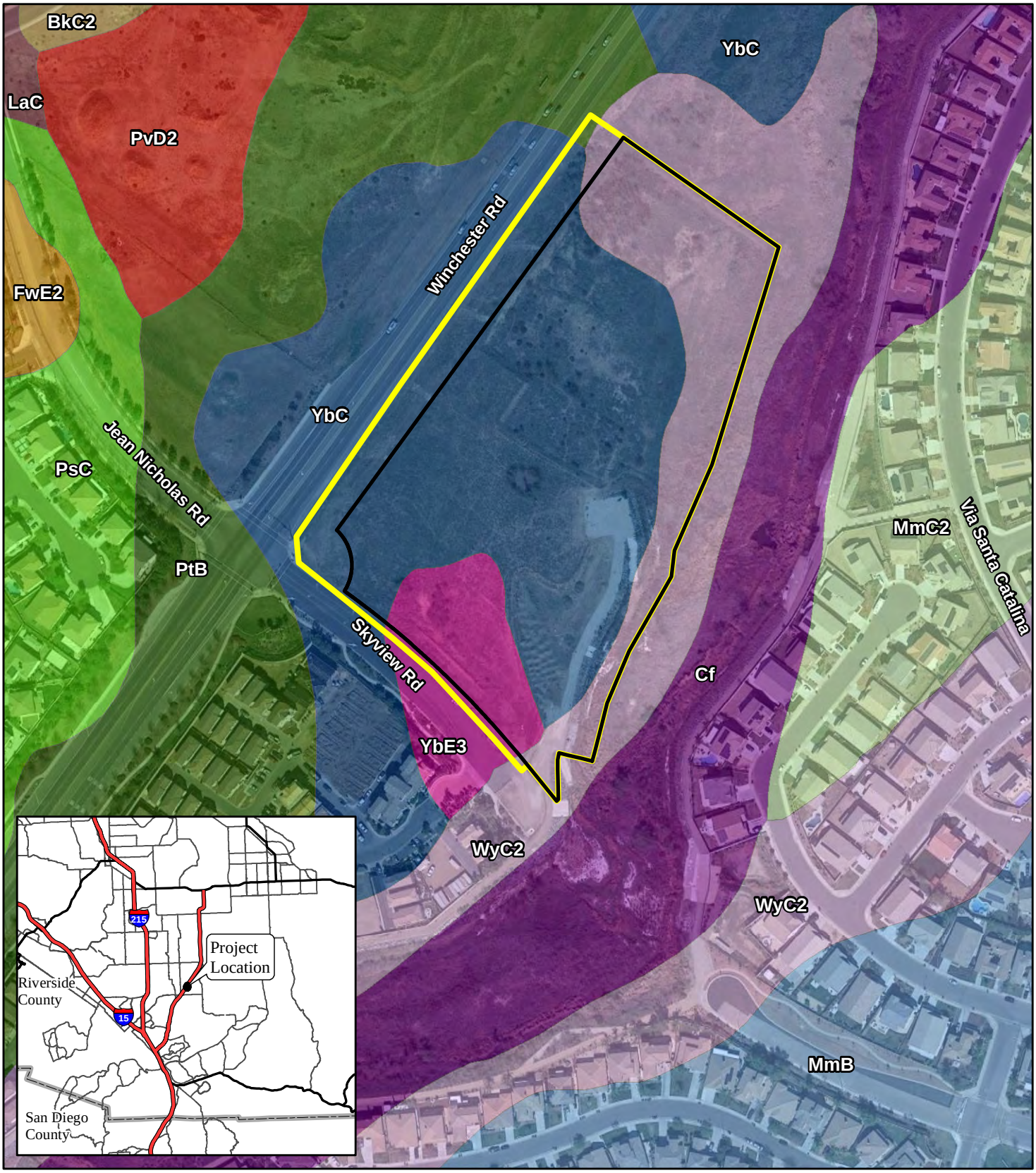
FEET

French Valley Library

Study Area

SOURCE: County of Riverside (2/19), Google (8/18)

I:\RED1901\GIS\MXD\StudyArea_r1.mxd (2/13/2019)



LSA

LEGEND

APN 480-160-021

Biological Study Area

Soils

BkC2
Cf
FwE2
LaC
MmB
MmC2
PsC
PtB
PvD2
WyC2
YbC
YbE3

N

0 125 250

FEET

SOURCE: County of Riverside (2/19), Google (8/18)

I:\RED1901\GIS\MXD\Soils.mxd (3/4/2019)

FIGURE 2

French Valley Library

Soils

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APPENDIX B2

BURROWING OWL SURVEY REPORT

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

May 22, 2019

Ms. Maribel Hyer, Senior Real Property Agent
County of Riverside, Economic Development Agency
3403 Tenth Street, Suite 400
Riverside, California 92501

CFP Riverside, LLC
18336 Minnetonka Boulevard, Suite C
Deephaven, Minnesota 55391

TRUSTEE:
Ashraf Almurdaah
Vice President
U.S. Bank National Association
633 W. 5th Street, 24th Floor
Los Angeles, California 90071

Subject: Results of a Burrowing Owl Survey for the French Valley Library Project (LSA Project No. RED1901.01)

Dear Ms. Hyer:

This report documents the results of a burrowing owl (*Athene cunicularia*) survey for the French Valley Library Project site (Accessor's Parcel Number 480-160-021-2). The approximately 13-acre parcel is located at the east corner of Winchester Road and Sky View Road in the unincorporated community of French Valley, Riverside County, California (attached Figure 1).

The survey results were negative for burrowing owl.

BACKGROUND

Burrowing owls are found in open, dry grasslands; agricultural and range lands; desert habitats; and grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other animals, in pipes, rock and debris piles, and in other similar features.

Burrowing owls and their nests and eggs are protected from "take" under Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Activities that cause destruction of active nests, or that cause nest abandonment and subsequent death of eggs or young, may constitute violations of this law.

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SURVEY AREA

The area surveyed with transects (Figure 2) is approximately 13 acres and includes areas of potentially suitable habitat within the Biological Study Area (BSA) as well as within accessible portions of a 150-meter buffer area. The topography of this area is generally flat with elevation ranging from approximately 1,360 to 1,380 feet above mean sea level. Areas of potentially suitable habitat consisted of non-native grassland dominated by shortpod mustard (*Hirschfeldia incana*), redstem stork's bill (*Erodium cicutarium*), common fiddleneck (*Amsinckia intermedia*), and ripgut brome (*Bromus diandrus*). Stands of cattail (*Typha* sp.), mule fat (*Baccharis salicifolia*), black mustard (*Brassica nigra*), shortpod mustard, Mediterranean tamarisk (*Tamarix ramosissima*), and tree tobacco (*Nicotiana glauca*) were unsuitable due to vegetation height and density and were not surveyed.

METHODS

The survey was conducted according to the *County of Riverside Guidelines for Burrowing Owl Surveys* (revised March 29, 2006). The survey was conducted by walking approximately 20-meter transects throughout areas of suitable habitat to look for burrowing owls, potential burrows (burrows greater than 11 centimeters (cm) in diameter and 150 cm in depth), and burrowing owl sign. Stan Spencer, LSA biologist, conducted the survey on April 16, 2019, from 7:15 to 9:15 a.m. The temperature was 60 degrees, with 96 percent cloud cover and wind speeds below 3 miles per hour. Areas of potentially suitable habitat within 150 meters of the BSA (Figure 2) that were visible from the BSA but for which access was not provided were viewed through binoculars.

RESULTS

Wildlife species detected during the survey include American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), common raven (*Corvus corax*), common yellowthroat (*Geothlypis trichas*), lesser goldfinch (*Carduelis psaltria*), mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), song sparrow (*Melospiza melodia*), western wood-pewee (*Contopus sordidulus*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*).

No burrowing owls, burrowing owl sign, or burrows or similar features suitable for burrowing owl occupation were found to be present on site. Because of the absence of potential burrows, no additional survey visits for this presence/absence survey are required. Since portions of the site are otherwise suitable for burrowing owl, however, and burrowing owl could occupy the site prior to construction, a pre-construction burrowing owl survey will be required.

If you have any questions concerning the report, I can be contacted at (951) 781-9310 or stan.spencer@lsa.net.

Sincerely,

LSA ASSOCIATES, INC.

Stanley C. Spencer, Ph.D.
Associate/Biologist

Attachments: Figure 1: Study Area
Figure 2: Survey and Vegetation Map
Figure 3: Site Photographs

LSA

LEGEND

APN 480-160-021

Biological Study Area

FIGURE 1

N

0 125 250

FEET

French Valley Library

Study Area

SOURCE: County of Riverside (2/19), Google (8/18)

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LSA

FIGURE 2

LEGEND

Biological Study Area
20-Meter Transects
150-Meter Buffer
Photo Locations

Vegetation Visible During Survey
Cattail Stand
Mule Fat Stand
Mustard Stand

Non-native Grassland
Tamarix Stand
Tree Tobacco Stand
Willow Scrub

N

0 150 300
FEET

French Valley Library

Survey and Vegetation Map

SOURCE: County of Riverside (2/19), Google (8/18)

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Photograph 1. View of survey area, looking northwest.

Photograph 2. View of survey area, looking west.

Photograph 3. View of survey area, looking southwest.

Photograph 4. View of survey area, looking northwest.

LSA

FIGURE 3

French Valley Library
Site Photographs

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APPENDIX D

GEOTECHNICAL EVALUATION

French Valley

Childcare and Early Learning Center Experience

Project

Riverside County, California

TWINING

Engineering a Better Tomorrow

Geotechnical Evaluation Report

31526 Skyview Road (APN 480-160-021)
Winchester, California

Prepared for:

CFP Riverside, LLC
18336 Minnetonka Boulevard, Suite C
Deephaven, Minnesota 55391

October 18, 2019
Project No.: 190759.3

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October 18, 2019
Project No.: 190759.3

Mr. Steve Collins
President
CFP Riverside, LLC
18336 Minnetonka Boulevard, Suite C
Deephaven, Minnesota 55391

Subject: **Geotechnical Evaluation Report**
Proposed French Valley Public Library
31526 Skyview Road (APN 480-160-021)
Winchester, California

Dear Mr. Collins,

In accordance with your request and authorization, we are presenting the results of our geotechnical investigation for the Proposed French Valley Public Library project located at 31526 Skyview Road in Winchester, California (APN 480-160-021). The purpose of our investigation has been to evaluate the subsurface conditions at the site and to provide geotechnical engineering recommendations for the construction of the proposed project. This report was prepared in accordance with the requirements of the 2016 California Building Code.

Based on our findings, the proposed project is geotechnically feasible, provided that the recommendations in this report are incorporated into the design and are implemented during construction of the project.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned.

Respectfully submitted,
TWINING, INC.

REGISTERED PROFESSIONAL ENGINEER
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GE 3033
EXP. 12/31/20
GEOTECHNICAL
STATE OF CALIFORNIA

Liangcai He, PhD, RCE 73280, GE 3033
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1. INTRODUCTION

This report presents the results of the geotechnical investigation performed by Twining, Inc. (Twining) for the Proposed French Valley Public Library project located at 31526 Skyview Road in Winchester, California. A description of the site and the proposed development is provided in the following section. The objectives of this study have been to evaluate subsurface conditions at the site and to provide geotechnical recommendations for design and construction of the proposed development, including recommendations for foundations and earthwork.

2. PROJECT DESCRIPTION

The proposed project is to construct a single-story public library branch approximately 25,000 square feet on a portion of Assessor's Parcel Number (APN) 480-160-021 located at 31526 Skyview Road in Winchester, California. The location of the site is depicted on Figure 1 – Site Location Map. The approximate site coordinates are latitude 33.608773°N and longitude 117.108073°W, and the site is located on the Bachelor Mountain, California 7½-Minute Quadrangle, based on the United States Geological Survey (USGS) topographic map (USGS 2018).

The site is currently unpaved and unoccupied. It is bounded on the east by a creek and related rip rap embankment, a flood control easement, and a 100-year floodplain; on the south by Skyview Road, on the west and north by Winchester Road (Highway 79).

Proposed structures will consist of reinforced masonry block walls and structural steel and/or wood-framed truss roof systems and will be supported on reinforced concrete shallow foundations. It is also proposed to include other appurtenant improvements such as parking spaces, a stormwater infiltration basin, hardscape, light poles, and utility pipelines. The size and depth of the infiltration basin are to be determined.

The site plan and borings performed during this evaluation are shown in Figure 2 – Site Plan and Boring Location Map.

The site plan shows that a portion of the proposed building footprint will be built on an approximately 10-foot-high slope. A cut-and-fill transition is anticipated to occur below the building pad, due to the existing surface conditions discussed in Section 4.2 of this report. Approximately 10 feet of engineered fill will be placed to create a uniform building pad, which will create 2H:1V (horizontal : vertical) fill slopes up to 10 feet high along the north and east sides of the pad.

3. SCOPE OF WORK

Our scope of work included review of background information, pre-field activities and field exploration, laboratory testing, engineering analyses and report preparation. These tasks are described in the following subsections.

3.1. Literature Review

We reviewed readily available background data including published geologic maps, topographic maps, seismic hazard maps and literature, and flood hazard maps relevant to the subject site. Relevant information has been incorporated into this report.

3.2. Pre-Field Activities and Field Exploration

Before starting our exploration program, we performed a geotechnical site reconnaissance to observe the general surficial conditions at the site and to select field exploration locations. After exploration locations were delineated, Underground Service Alert was notified of the planned locations a minimum of 72 hours prior to excavation. The approximate locations of the borings are shown on Figure 2, Site Plan and Exploration Location Map.

The field exploration was conducted on September 30, 2019 and consisted of drilling, testing, sampling, and logging 4 exploratory hollow-stem-auger (HSA) borings (B-1 through B-4) and percolation testing in four hand-auger borings (P-1 through P-4). The HSA borings (B-1 through B-4) were advanced to approximate depths of 16.5 to 51.5 feet below ground surface (bgs) using a CME-85 truck-mounted drill rig equipped with 8-inch-diameter HSAs. The hand-auger borings (P-1 through P-4) were drilled to approximately 5 feet bgs for percolation testing. The approximate locations of the borings are shown on Figure 2, Site Plan and Boring Location Map.

Drive samples of the soils were obtained from the HSA borings using a Standard Penetration Test (SPT) sampler without room for liner and a modified California split spoon sampler. The samplers were driven using a 140-pound automatic hammer falling approximately 30 inches. The blow-counts to drive the samplers were recorded, and subsurface conditions encountered in the borings were logged by a Twining field engineer. Soil samples obtained from the borings were transported to Twining Laboratories for examination and testing.

Percolation tests were performed in the 5-foot hand-auger borings (P-1 through P-4) according to the boring percolation test guidance provided in the Riverside County Design Handbook for Low Impact Development Best Management Practices. Testing was performed to provide estimates of infiltration rate of the site soils for use in preliminary design of the stormwater infiltration facility.

Upon completion of drilling or percolation testing, the borings were backfilled by the drilling subcontractor using drilled soil cuttings.

Detailed descriptions of the field exploration, soils encountered during drilling, and the percolation tests are presented in Appendix A – Field Exploration.

3.3. Geotechnical Laboratory Testing

Laboratory tests were performed on selected samples obtained from the borings to aid in the soil classification and to evaluate the engineering properties of site soils. The following tests were performed in general accordance with ASTM standards:

- In-situ moisture and density;
- #200 Wash
- Atterberg Limits;
- Expansion Index;
- Maximum density and optimum moisture;
- Direct shear;
- Consolidation;
- R-Value; and

- Corrosivity.

Detailed laboratory test procedures and results are presented in Appendix B – Laboratory Testing.

3.4. Engineering Analyses and Report Preparation

We compiled and analyzed the data collected from our field exploration and laboratory testing. We performed engineering analyses based on our literature review and data from field exploration and laboratory testing programs. Our analyses included the following:

- Site geology, and subsurface conditions;
- Groundwater conditions;
- Geologic hazards and seismic design parameters;
- Liquefaction potential and seismic settlement;
- Soil corrosion potential;
- Soil collapse and expansion potential;
- Site preparation and earthwork;
- Foundation design parameters including bearing capacity, settlement, and lateral resistance;
- Modulus of subgrade reaction for slab design;
- Pole foundations for light poles, street lights and similar structures;
- Pavement section recommendations; and
- Stormwater infiltration rates.

We prepared this report to present our conclusions and recommendations from this investigation.

4. SITE GEOLOGY AND SUBSURFACE CONDITIONS

4.1. Regional Geology

According to the Morton Geologic Map of the Bachelor Mountain quadrangle (Morton, 2003), the site is underlain by very old alluvial valley deposits that are early to middle Pleistocene in age (geologic map symbol: $Qvov_a$) consisting of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-veering alluvium. A portion of the geologic map is reproduced as Figure 3 – Regional Geologic Map.

4.2. Surface and Subsurface Conditions

The site was vacant and unpaved at the time of our field exploration. Based on our review of aerial photos (Figure 4), it appears that the north portion of the site was cut between 2009 and 2011 to approximately 1,364 feet to 1,371 feet above mean sea level (msl), about 10 feet below adjacent ground surface with an average elevation of approximately 1375 feet msl. There are large trees along the slopes formed by the cut.

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During our field investigation, we noticed a depressed area occupied by large trees in the proposed parking lot area in the southern portion of the site between boring P-1 and the proposed building, and another depressed area in the proposed infiltration facility area in the north portion of the site. In 2011, the depressed areas appeared as ponds on the 2011 aerial photo (Figure 4).

Subsurface conditions encountered during the field exploration consisted of interbedded layers of silt, clay, silty sand and clayey sand in the upper 20 feet and predominantly clay below 20 feet. The silt and clay layers were very stiff to hard, and the silty and clayey sand layers were dense to very dense.

4.3. Groundwater Conditions

During drilling, groundwater was encountered at approximately 30 to 45 feet bgs in our borings. In about two hours after the end of drilling, the water level rose to about 16 feet bgs, or approximate elevation 1,358 feet msl.

Historically high groundwater level at the project site is 10 to 20 feet bgs based on the Seismic Hazard Zone Report 120 of California Geological Survey (CGS) for the Bachelor Mountain quadrangle (CGS, 2018). Based on groundwater level data measured in 1968 in wells adjacent to the site in the California Water Data Library (CWDL), the groundwater level at the site in 1968 appeared at approximate elevation 1,355 feet msl. It may be assumed that the historic high groundwater at the site is 10 feet bgs or at elevation 1,365 feet msl.

Groundwater conditions may vary across the site due to stratigraphic and hydrologic conditions and may change over time as a consequence of seasonal and meteorological fluctuations, or of activities by humans at this and nearby sites.

5. GEOLOGIC HAZARD AND SEISMIC DESIGN CONSIDERATIONS

The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered high during the design life of the proposed development. The hazards associated with seismic activity in the vicinity of the site area discussed in the following sections.

5.1. Surface Fault Rupture

As shown on Figure 5, the project site is not located within a State of California Earthquake Fault Zone (formerly known as a Special Studies Zone) or an area with the potential for earthquake-induced landslides (CGS, 2018). The nearest known active faults belong to the Elsinore fault zone located about 6.4 miles southwest of the site. Based on our review of geologic and seismologic literature and our site evaluation, it is our opinion that the likelihood of surface fault rupture and earthquake-induced landslides at the site during the life of the proposed improvements is low.

5.2. Landslides

The area of the project site is not within an area with the potential for earthquake-induced landslides. Considering the site is relatively flat and not close to significant slopes, the potential for earthquake-induced landslides to occur at the site is considered very low.

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5.3. Liquefaction and Seismic Settlement Potential

The project site is not within a zone of required investigation for liquefaction according to CGS (2018). The Riverside Liquefaction Map shows liquefaction susceptibility of the site is low. Considering these results, the site subsurface conditions discussed above, and the site seismic shaking intensity discussed below, liquefaction potential at the site is considered low, and seismically induced settlement is negligible.

5.4. CBC Seismic Design Parameters

Based on the 2006 CGS Site Classification Map, the average shear wave velocity in the top 30 meters (or approximately 100 feet) of the soil profile ($V_{s,30}$) at the site is about 349 meters per second (or approximately 1,145 feet per second). Based on global $V_{s,30}$ from topographic slope (Wald & Allen 2008), the site $V_{s,30}$ is about 303 meters per second (or approximately 994 feet per second). The site $V_{s,30}$ values and the subsurface conditions discussed above suggest the site seismic class is D consisting of a stiff soil profile.

Our recommendations for seismic design parameters have been developed in accordance with the 2016 California Building Code (2016 CBC) and ASCE 7-10 (ASCE, 2010) standards. Table 1 presents the seismic design parameters for the site.

Table 1 – 2016 California Building Code Design Parameters

Design Parameters	Value
Site Class	D
Mapped Spectral Acceleration Parameter at Period of 0.2-Second, S_s (g)	1.5
Mapped Spectral Acceleration Parameter at Period 1-Second, S_1 (g)	0.6
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Adjusted MCE_R[1] Spectral Response Acceleration Parameter, S_{MS} (g)	1.5
Adjusted MCE_R[1] Spectral Response Acceleration Parameter, S_{M1} (g)	0.9
Design Spectral Response Acceleration Parameter, S_{DS} (g)	1.0
Design Spectral Response Acceleration Parameter, S_{D1} (g)	0.6
Peak Ground Acceleration, PGA_M[2] (g)	0.544
Seismic Design Category	D

Notes: [1] Risk-Targeted Maximum Considered Earthquake
[2] Peak Ground Acceleration adjusted for site effects

Using the USGS Seismic Hazard Interactive Reaggregation Tool, a modal moment earthquake magnitude of 7.7 and a modal seismic source distance of 6.4 miles (10.3 kilometers) were obtained for a peak acceleration of 0.68 g at the site, which corresponds to a probability of exceedance of 2% in 50 years.

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6. GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Based on the results of our literature review and the field exploration, laboratory testing, and engineering analyses, it is our opinion that the proposed construction is feasible from a geotechnical standpoint, provided that the recommendations in this report are incorporated into the design plans and are implemented during construction.

6.1. General Considerations

Geotechnical engineering recommendations presented in this report for the proposed project are based on our understanding of the proposed development, subsurface conditions encountered during our field exploration, the results of laboratory testing on soil samples taken from the site, and our engineering analyses.

Key geotechnical considerations for the project are as follows:

- A cut/fill transition will occur under the building pad;
- Construction of the building pad will create a 10-foot-high 2H:1V fill slope;
- Subsurface materials consist predominantly of fine-grained soils;
- Relatively high groundwater at approximately 1,358 to 1,365 feet msl.

The following sections present our conclusions and recommendations pertaining to the engineering design for this project. If the design substantially changes, then our geotechnical engineering recommendations would be subject to revision based on our evaluation of the changes.

6.2. Soil Expansion and Collapse Potential

Based on our field exploration and laboratory test results, the risk of soil expansion and collapse is low at the site and will not adversely affect the design and construction of the project.

6.3. Corrosive Soil Evaluation

The potential for the near-surface on-site materials to corrode buried steel and concrete improvements was evaluated. Laboratory testing was performed on one selected near-surface soil to evaluate pH and electrical resistivity, as well as chloride and sulfate contents. The pH and electrical resistivity tests were performed in accordance with California Test 643, and the sulfate and chloride tests were performed in accordance with California Tests 417 and 422, respectively. These laboratory test results are presented in Appendix B.

In accordance with the County of Los Angeles (2014) criteria, corrosive soil is defined as the soil has minimum electrical resistivity less than 1,000 ohm-centimeters, or chloride concentration greater than 500 ppm, or sulfate concentration in soils greater than 2,000 ppm, or a pH less than 5.5.

6.3.1. Reinforced Concrete

Laboratory tests indicate that the soil has 205 ppm or 0.0205% of water soluble sulfate (SO_4) in soil by weight. Based on ACI 318, concrete in contact with the site soils will have a sulfate exposure class S0.

Test results indicate that the potential for chloride attack of reinforcing steel in concrete structures and pipes in contact with soil is negligible.

6.3.2. Buried Metal

A factor for evaluating corrosivity to buried metal is electrical resistivity. The electrical resistivity of a soil is a measure of resistance to electrical current. Corrosion of buried metal is directly proportional to the flow of electrical current from the metal into the soil. As resistivity of the soil decreases, the corrosivity generally increases. Test results indicate the site soils have minimum electrical resistivity value of 1,000 ohm-centimeters.

Correlations between resistivity and corrosion potential published by the National Association of Corrosion Engineers (NACE, 1984) indicate that the soils have severely corrosive potential to buried metals. As such, corrosion protection for metal in contact with site soils should be considered. Corrosion protection may include the use of epoxy or asphalt coatings. A corrosion specialist should be consulted regarding appropriate protection for buried metals and suitable types of piping.

6.4. Site Preparation and Earth Work

In general, earthwork should be performed in accordance with the recommendations presented in this report. Twining should be contacted for questions regarding the recommendations or guidelines presented herein.

6.4.1. Site Preparation

Site preparation should begin with the removal of utility lines, asphalt, concrete, vegetation, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is not present. Clearing and grubbing should extend to the outside edges of the proposed excavation and fill areas. We recommend that unsuitable materials such as organic matter or oversized material be removed and disposed offsite. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed at a legal dump site away from the project area.

Tree stumps, roots, and potentially loose or soft materials are anticipated in the two depressed areas discussed in Section 4.2. The depth of removal of soil materials may be deeper in these areas in order to expose competent native soil.

6.4.2. Excavation and Subgrade Preparation

Temporary excavations for the project are expected. We anticipate that unsurcharged excavations with vertical side slopes less than 4 feet high will generally be stable; however, some sloughing of cohesionless sandy materials encountered at the site should be expected.

Where space is available, temporary, un-surcharged excavation sides over 4 feet in height should be sloped no steeper than an inclination of 1H:1V (horizontal:vertical). Where sloped excavations are created, the tops of the slopes should be barricaded so that vehicles and storage loads are away from the top edge of the excavated slopes with a distance at least equal to the height of the slopes. A greater setback may be necessary when considering heavy vehicles, such as concrete trucks and cranes. Twining should be advised of such heavy vehicle loadings so that specific setback requirements can be established. If the temporary construction slopes are to be maintained during the rainy season, berms are recommended to be graded along the tops of the slopes in order to prevent runoff water from entering the excavation and eroding the slope faces.

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Excavations shall not undermine existing adjacent footings. We recommend that excavations for the proposed improvements do not encroach within a 1:1 plane projected from the top outside edge of any existing at-grade or below-grade existing facilities including foundations of existing structures, trenches, underground pipelines. Otherwise, shoring should be implemented to maintain foundation support of the adjacent facilities.

Undocumented fill was not encountered in our borings. However, if undocumented fill materials are encountered during excavations, those materials should be removed to the full depth of fill.

Slopes are anticipated during site grading. Fill placed on slopes should be properly benched and keyed into undisturbed native material. New fill placed against any existing approved fill slopes should be properly benched into the existing fill.

A cut/fill transition and a significant variation in the thickness of fill are anticipated across the building pad. Therefore, the pad should be over-excavated and recompacted a minimum of three feet below the bottom of footings to create a blanket of similar fill under the pad.

For minor structures and slabs-on-grade that are structurally separated from the building, the excavation should extend at least 2 feet below the finished grade or at least 1 feet below the bottom of the footing of the minor structures and slabs-on-grade, whichever is greater. Excavation for pavements and hardscape should be over-excavated at least 1 feet as measured from the bottom of the pavement or hardscape section.

Laterally, excavation should extend beyond the foundation limits a minimum distance equal to two feet or the depth of excavation, whichever is greater. Excavation for other improvements (e.g., concrete walkways, flatwork, pavement) should extend laterally at least two feet beyond the limits of the improvements.

The extent and depths of all removal should be evaluated by Twining's representative in the field based on the materials exposed. Should excavations expose soft or soils considered as unsuitable for use as fill by a Twining representative, additional removals may be recommended.

The exposed excavation bottom should be evaluated and approved by Twining. It should then be scarified to a minimum depth of 6 inches and moisture conditioned to achieve generally consistent moisture contents approximately 2 percent above the optimum moisture content. The scarified bottom should be compacted to at least 90 percent relative compaction in accordance with the latest version of ASTM Test Method D1557 and then evaluated and approved by Twining.

Fill and backfill materials should be compacted fill in accordance with Sections 6.4.3 and 6.4.4 of this report. Prior to placement of any fill, the geotechnical engineer or their representative should review the bottom of the excavation for conformance with the recommendations of this report.

Personnel from Twining should observe the excavations so that any necessary modifications based on variations in the encountered soil conditions can be made. All applicable safety requirements and regulations, including CalOSHA requirements, should be met. Stability of temporary excavations is the responsibility of the contractor.

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6.4.3. Materials for Fill

In general, most on-site soils are considered as suitable for use as engineered fill. All fill soils should be free of organics, debris, rocks or lumps over three inches in largest dimension, other deleterious material, and not more than 40 percent larger than ¾ inch. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or may be disposed offsite.

Any imported fill material should consist of granular soil having a “very low” expansion potential (i.e., expansion index of 20 or less). Import material should also have low corrosion potential (that is, chloride content less than 500 parts per million [ppm], soluble sulfate content of less than 0.1 percent, and pH of 5.5 or higher).

All fill soils should be evaluated and approved by a Twining representative prior to importing or filling.

6.4.4. Compacted Fill

Unless otherwise recommended, the exposed excavation bottom to receive fill should be prepared in accordance with Section 6.4.2 of this report. Prior to placement of compacted fill, the contractor should request Twining to evaluate the exposed excavation bottoms.

Compacted fill should be placed in horizontal lifts of approximately 8 to 10 inches in loose thickness, depending on the equipment used. Prior to compaction, each lift should be moisture conditioned, mixed, and then compacted by mechanical methods. The moisture content should be approximately 2 percent above the optimum moisture content. Fill materials should be compacted to a minimum relative compaction of 95 percent within the upper one foot below new vehicle trafficked pavement sections, and 90 percent in all other areas. The relative compaction should be determined by ASTM D1557. Successive lifts should be treated in the same manner until the desired finished grades are achieved.

6.4.5. Excavation Bottom Stability

In general, we anticipate that bottoms of the excavations will be stable and should provide suitable support for the proposed improvements. Conditions of the excavation bottom should be evaluated by Twining during the scarification and re-compaction efforts. If unstable bottom conditions are encountered, remedial measures would be required to stabilize the bottom. Soft bottom conditions can be identified by surface yielding under rubber-tired equipment loading and the inability to achieve proper compaction.

Unstable bottom conditions may be mitigated by over-excavation of the bottom to suitable depths, and/or replacement with a minimum 1-foot-thick aggregate base underlain by geogrid (Tensar TX7 or equivalent).

As an alternative, excavation bottom stabilization may be achieved by cement treatment for the upper 15 inches below the bottom according to Section 6.4.6 of this report.

Recommendations for stabilizing excavation bottoms should be based on evaluation in the field by the geotechnical consultant at the time of construction.

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6.4.6. Cement Treatment

Cement treatment, if needed, should be performed according the following processes under the guidance of a Twining Geotechnical engineer:

- Upon achieving rough grade, cement powder is spread on the surface at a rate that is dependent upon the thickness of the treated section. We recommend cement-treatment by 5 to 7 percent cement (by dry weight). The cement powder is then dry mixed with the pulverizer into the subgrade to a depth of at least 12 inches below the rough grade surface. From the time the material is wet mixed, the material should be fully compacted within no more than 2 hours.

- Compaction is performed using a large sheepsfoot compactor. Depending on the type of equipment, a section as thick as 18 inches can be compacted in one lift. The type of equipment proposed for use should be approved by the engineer based on the lift thickness prior to bringing the equipment on site. The cement-treated section should be compacted to 92 percent of the maximum density as determined by ASTM D 1557.

- Upon completion of compaction with the sheepsfoot compactor, the surface is bladed and finish-rolled with a smooth drum roller.

- The surface of the treated material is wetted at least twice daily (possibly more depending on weather) to promote hydration of the cement.

- For at least 24 hours, traffic on the surface after completion of compaction should be minimized to the maximum extent possible and heavy construction equipment traffic should be completely avoided to prevent breakdown of the treated material prior to the curing process being completed. After 24 hours, the surface can be proof-rolled and checked for yielding under heavy rubber-tire vehicle loads (such as a fully-loaded water truck). If the surface indicates signs of yielding or instability, an additional 24 hours of cure time should be implemented while again minimizing traffic loading

6.4.7. Backfill for Utility Trench

Utility trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials at the time of backfill placement.

At locations where the trench bottom is yielding or otherwise unstable, pipe support may be improved by placing 12 inches of ¾-inch crushed rock as defined in Section 200-1.2 of the "Greenbook" Standard Specifications for Public Works Construction. Remedial earthwork at the trench bottom should be performed where oversize materials (rocks or clods greater than 3 inches) are present. Removal of oversize materials to a depth of 6 inches below the bottom of the pipeline and replacement with fill compacted to at least 90% relative compaction is recommended. Alternatively, ¾-inch crushed rock may be used.

The trench should be bedded with clean sand extending to at least one foot over the top of pipe. Pipe bedding as specified in SSPWC can be used. Bedding material should consist of clean sand having a sand equivalent (SE) of 30 or greater. Alternative materials meeting the intent of the bedding specifications are also acceptable. Samples of materials proposed for use as bedding should be provided to the engineer for inspection and testing before the material is imported for use on the project. The onsite materials can only be used following the requirement of "Greenbook" bedding specification when the SE is not less than 30. The pipe bedding

material should be placed over the full width of the trench. After placement of the pipe, the bedding should be brought up uniformly on both sides of the pipe to reduce the potential for unbalanced loads. No void or uncompacted areas should be left beneath the pipe haunches.

Above pipe bedding, trench backfill may be onsite soils and should not contain rocks or lumps over 3 inches in largest dimension. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or may be disposed offsite. The moisture content should be approximately 2 percent above the optimum moisture content.

Backfill may be placed and compacted by mechanical means and should be compacted to 90 percent of the laboratory maximum dry density as per ASTM Standard D1557. Where pavement is planned, the top 12 inches of subgrade soils and the overlying aggregate base should be compacted to 95 percent.

Jetting or flooding of pipe bedding and backfill material is not recommended.

6.4.8. Rippability

The earth materials underlying the site should be generally excavatable with heavy-duty earthwork equipment in good working condition. Some gravels, cobbles and man-made debris should be anticipated.

6.4.9.Construction Dewatering

As discussed earlier, groundwater was at approximately 1,358 feet msl. Construction of the project is anticipated to occur above the groundwater. The possibility to encounter groundwater is low during earthwork and foundation preparation for the proposed structures, and the need for dewatering is not anticipated for construction of structures and utility trenches.

If needed, considerations for construction dewatering should include anticipated drawdown, volume of pumping, potential for settlement of nearby structures, and groundwater discharge. Disposal of groundwater should be performed in accordance with guidelines of the Regional Water Quality Control Board.

6.5. Foundation Recommendations

Based upon the excavation/over-excavation and backfill recommendations, the proposed structures may be supported on continuous strip footings or isolated footings designed in accordance with the geotechnical recommendations presented below. Structural design of foundations should be performed by the structural engineer and should conform to the 2016 California Building Code.

6.5.1. Building Foundation Bearing Capacity and Settlement

Footings for the building should be placed on the subgrade prepared in accordance the requirements for the building pad as described in Section 6.4. Geotechnical design parameters for these footings presented in Table 2 may be used, assuming less than 25 kips on shallow spread footings and less than 5 kips per lineal foot on perimeter foundations. Twining should be contacted for footing dimensions, allowable bearing pressures, and settlements that are outside the indicated applicable ranges.

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The total lateral resistance can be taken as the sum of the friction at the base of the footing and passive resistance. The upper one foot of soil should be neglected when calculating the passive resistance. The passive resistance value may be increased by one-third when transient loads from wind or earthquake.

Table 2 - Geotechnical Design Parameters for Shallow Foundations

Minimum Footing Dimensions	• Continuous footings: 12 inches in width. • Square footings: 24 inches in width. • Minimum embedment: 12 inches measured from the lowest adjacent grade to the bottom of the footing.
Allowable Bearing Pressure	• Footings should be supported on at least 3 feet of compacted fill. • Continuous footings: an allowable bearing pressure of 2,500 pounds per square foot (psf) may be used. The allowable may be increased by 75 psf for each additional foot of width and 220 psf for each additional foot of embedment, up to a maximum allowable capacity of 3,000 psf. • Square footings: an allowable bearing pressure of 3,000 psf may be used. The allowable may be increased by 60 psf for each additional foot of width and 220 psf for each additional foot of embedment, up to a maximum allowable capacity of 4,000 psf. • The allowable bearing values may be increased by one-third for transient loads from wind or earthquake.
Estimated Static Settlement	• Approximately one inch of total settlement with differential settlement estimated to be on the order of ½ inches over 50 feet. • Most static settlement of foundation system is expected to occur immediately upon application of loading. Long term total and differential settlement is expected to be less than one inch and ½ inches, respectively.
Allowable Coefficient of Friction Below Footings	0.30
Allowable Lateral Passive Resistance	Increases with depth at a rate of 200 psf per foot (200 pcf equivalent fluid pressure)

6.6. Retaining Walls

Recommendations for wall lateral loads, backfill, and drainage are provided below. Lateral resistance may be based on 6.5 of this report. Retaining walls should be designed to have a factor of safety of 1.5 for static stability and 1.1 for stability due to transient loads from wind or seismic.

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6.6.1. Backfill and Drainage of Walls

The backfill material behind walls should consist of granular non-expansive material and be approved by the project geotechnical engineer. Based on the soil materials encountered during our exploration, some on-site soils will meet this requirement.

Wall backfill should be adequately drained. Adequate backfill drainage is essential to provide a free-drained backfill condition and to limit hydrostatic buildup behind walls. Drainage behind walls may be provided by a geosynthetic drainage composite such as TerraDrain, MiraDrain, or equivalent, attached to the outside perimeter of the wall and installed in accordance with the manufacturer's recommendations. The drainage system should meet the minimum requirements of Sections 1805.4.2 and 1805.4.3 of 2016 CBC.

6.6.2. Lateral Earth Pressure

The values presented below assume that the supported grade is level and that surcharge loads are not applied. The recommended design lateral earth pressure is calculated assuming that a drainage system will be installed behind retaining walls in accordance with Sections 1805.4.2 and 1805.4.3 of 2016 CBC and that external hydrostatic pressure will not develop behind the walls. Where wall backfill does not have adequate drainage, the full hydrostatic pressure should be added to the lateral earth pressures provided below in design.

Walls that are free to move and rotate at the top (such as cantilevered walls) and have adequate drainage may be designed for the active earth pressure equivalent to a fluid weighting 50 pcf.

Walls that are restricted to move horizontally at the top (such as by a floor deck) and have adequate drainage may be designed for the "at-rest" earth pressure equivalent to a fluid weighing 72 pcf.

Vertical surcharge loads within a 1:1 plane projected from the bottom of the wall distributed over retained soils should be considered as additional uniform horizontal pressures acting on the wall. These additional pressures can be estimated as approximately 40% and 60% of the magnitude of the vertical surcharge pressures for the "active" and "at-rest" conditions, respectively.

6.6.3. Seismic Lateral Earth Pressure

Walls retaining more than 6 feet high earth should be designed for seismic lateral earth pressure. The seismic pressure distribution may be considered a triangle with the maximum pressure at the bottom. The combination of static and incremental seismic pressures shown in the following diagram may be used for seismic design for both cantilever and restrained walls.

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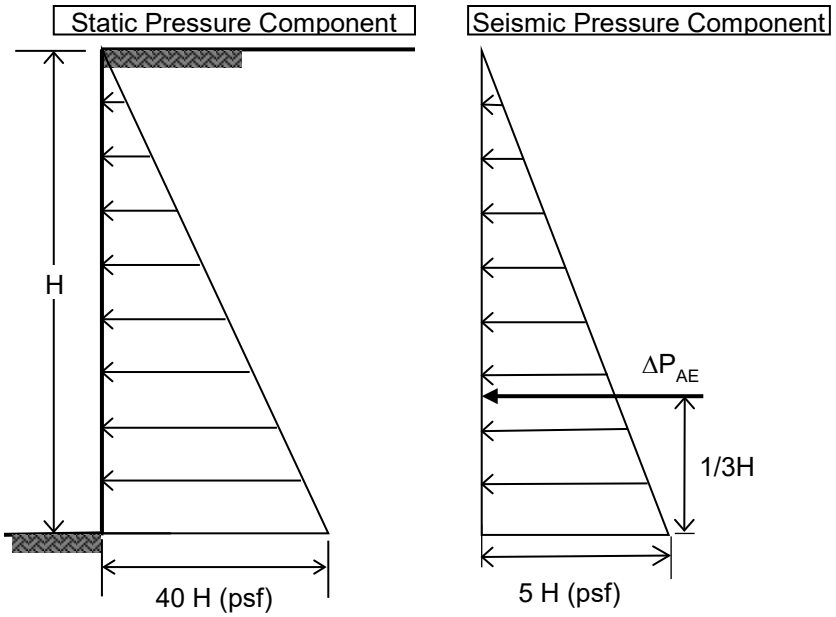

where H is in feet

Seismic Earth Pressure Distribution on Walls

6.7. Concrete Slabs

Slabs should be supported on non-expansive engineered fill in accordance with Section 6.4 of this report. For design of concrete slabs, a base modulus of subgrade reaction (*k*) of 150 pounds per cubic inch (pci) may be used provided it is modified by the formulas below based on slab dimensions.

$$k_1 = 150\ pci$$

$$k(BxB) = k_1 \left(\frac{B+1}{2B}\right)^2$$

$$k(BxL) = k_{BxB}\left(\frac{1 + 0.5\ {}^{B}/_{L}}{1.5}\right)$$

Where:

$$k_1 = Modulus\ for\ 1x1\ plate$$

$$B = Width\ of\ Square\ Foundation$$

$$L = Length\ of\ Rectangular\ Foundation$$

Floor slabs should be designed and reinforced in accordance with the structural engineer's recommendations. In moisture sensitive areas, the floor slabs should be dampproofed in accordance

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with Section 1805.2 of 2016 CBC. Specific recommendations can be provided by a waterproofing consultant.

6.8. Fence Poles and Sign Posts

The Project may involve fence poles and sign posts. Geotechnical recommendations for conditions with and without lateral constraint provided at the ground surface conditions are provided below based on 2016 CBC.

6.8.1. Non-Constrained Ground

The embedment of sign posts where no lateral constraint is provided at or above the ground surface should be calculated using Equation 18-1 of 2016 CBC (shown below) or a minimum 3 feet below the ground surface, whichever is deeper.

$$d = \frac{A}{2}\left(1 + \sqrt{1 + \frac{4.36h}{A}}\right)$$ (Equation 18-1 of 2016 CBC)

where:

A = 2.34P/(S_1 * b)

b = Diameter of round post or footing or diagonal dimension of square post or footing, feet

d = Depth of embedment in earth in feet but not over 12 feet for purpose of computing lateral pressure.

h = Distance in feet from ground surface to point of application of "P".

P = Applied lateral force in pounds.

S_1 = Allowable lateral soil-bearing pressure based on a depth of one-third the depth of embedment in pounds per square foot.

An allowable passive earth pressure of 200 pcf up to a maximum of 2,000 psf may be used for design provided the upper one foot of passive resistance is neglected in the structural design.

6.8.1. Constrained Ground

The embedment of sign posts where lateral constraint is provided at the ground surface, such as by a rigid floor or pavement, should be calculated using Equation 18-2 of 2016 CBC (shown below) or a minimum 3 feet below the ground surface, whichever is deeper.

$$d = \sqrt{\frac{4.24Ph}{S_3 b}}$$ (Equation 18-2 of 2016 CBC)

where:

b = Diameter of round post or footing or diagonal dimension of square post or footing, feet

d = Depth of embedment in earth in feet but not over 12 feet for purpose of computing lateral pressure.

h = Distance in feet from ground surface to point of application of "P".

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P = Applied lateral force in pounds.

S_3 = Allowable lateral soil-bearing pressure based on a depth of one-third the depth of embedment in pounds per square foot.

An allowable passive earth pressure of 200 pcf up to a maximum of 2,000 psf may be used for design provided the upper one foot of passive resistance is neglected in the structural design.

6.9. Flexible Pavement Design

Our pavement structural design is in accordance with Chapter 630 of the Caltrans Highway Design Manual, which is based on a relationship between the gravel equivalent (GE) of the pavement structural materials, the traffic index (TI), and the R-value of the underlying subgrade soil. Our laboratory test results indicate an R value of 12, which was used in our asphalt pavement structural calculations. On this basis, Table 3 provides recommended minimum thicknesses for hot mix asphalt (HMA) and aggregate base sections for different traffic indices. These minimum thicknesses may be adjusted based on additional R-value tests during construction.

The asphalt pavement section should be constructed on top of properly prepared subgrade in accordance with Section 6.4 of this report and aggregate base section compacted to 95 percent of the maximum dry density in accordance with ASTM D1557.

Table 3 – Recommended Minimum HMA and Base Section Thicknesses

Traffic Index	5.0	6.0	7.0
HMA Thickness (in)	4.0	4.0	5.0
Aggregate Base Thickness (in)	7.0	11.0	12.0

6.10. Rigid Pavement Design

For preliminary design of rigid pavement section, Table 4 provides minimum thicknesses for Jointed Plain Concrete Pavement (JPCP) section and Class 2 Aggregate Base (AB) section for different traffic indices. Final design of rigid pavement should be performed by the project Civil Engineer based on field observations and additional R-value tests during construction. The subgrade should be prepared in accordance with Section 6.4.2 of this report. The AB section should be compacted to 95 percent of the maximum dry density in accordance with ASTM D1557.

Table 4 – Recommended Rigid Pavement Minimum Thicknesses

Traffic Index	5.0	6.0	7.0
JPCP Thickness (in)	4	5.5	7.0
Aggregate Base Thickness (in)	4	4	4
Maximum Joint Spacing (feet)	15.0	15.0	15.0

The above pavement section is based on a minimum 28-day concrete compressive strength of 3,500 psi. Positive drainage should be provided away from all pavement areas to prevent seepage of surface and/or subsurface water into the pavement base and/or subgrade.

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6.11. Stormwater Infiltration Facility

The design of stormwater infiltration facility should be based on percolation test results with an appropriate factor of safety.

Our percolation test results may be used in preliminary design. Details of the percolation tests are presented in Appendix A. Infiltration rates with a factor of safety of 3 from our percolation tests are summarized in Table 5. The proposed infiltration facility should have a minimum setback from property lines and foundations recommended in Table 6.

However, the Riverside County requires a minimum of 10 feet between the bottom of the infiltration facility and the historical high groundwater. The historic high groundwater is about 10 feet bgs at the site, and thus site does not appear suitable for the proposed infiltration facility.

Table 5 – Infiltration Rate with a Factor of Safety of 3

Test Location	Depth of Test Borehole (feet)	Design Infiltration Rate (inch/hour)
P-1	5	Testing was abandoned due to negligible water level drop during pre-soaking
P-2	5	
P-3	5	
P-4	5	1.2

Table 6 – Recommended Minimum Infiltration Facility Setback

Setback from	Distance
Property lines	10 feet
Foundations	15 feet or outside of 1:1 plane drawn up from the bottom of foundation, whichever is greater.

6.12. Drainage Control

The control of surface water is essential to the satisfactory performance of the building and site improvements. Surface water should be controlled so that conditions of uniform moisture are maintained beneath the improvements, even during periods of heavy rainfall. The following recommendations are considered minimal:

- Ponding and areas of low flow gradients should be avoided.
- If bare soil within 5 feet of the structure is not avoidable, then a gradient of 5 percent or more should be provided sloping away from the improvement. Corresponding paved surfaces should be provided with a gradient of at least 1 percent.

- The remainder of the unpaved areas should be provided with a drainage gradient of at least 2 percent.
- Positive drainage devices, such as graded swales, paved ditches, and/or catch basins should be employed to accumulate and to convey water to appropriate discharge points.
- Concrete walks and flatwork should not obstruct the free flow of surface water.
- Brick flatwork should be sealed by mortar or be placed over an impermeable membrane.
- Area drains should be recessed below grade to allow free flow of water into the basin.
- Enclosed raised planters should be sealed at the bottom and provided with an ample flow gradient to a drainage device. Recessed planters and landscaped areas should be provided with area inlet and subsurface drain pipes.
- Planters should not be located adjacent to the structures wherever possible. If planters are to be located adjacent to the structures, the planters should be positively sealed, should incorporate a subdrain, and should be provided with free discharge capacity to a drainage device.
- Planting areas at grade should be provided with positive drainage. Wherever possible, the grade of exposed soil areas should be established above adjacent paved grades. Drainage devices and curbing should be provided to prevent runoff from adjacent pavement or walks into planted areas.
- Gutter and downspout systems should be provided to capture discharge from roof areas. The accumulated roof water should be conveyed to off-site disposal areas by a pipe or concrete swale system.

Landscape watering should be performed judiciously to preclude either soaking or desiccation of soils. The watering should be such that it just sustains plant growth without excessive watering. Sprinkler systems should be checked periodically to detect leakage and they should be turned off during the rainy season.

6.13. Slope Stability

Slope stability analyses were performed to evaluate the static and seismic stability of the fill slopes. Seismic stability was evaluated using the pseudo-static method with a horizontal seismic coefficient of 0.15. Results of the analysis shown in Appendix C indicate that the slopes have adequate factors of safety.

It should be noted that a small portion of the toe of the slope at the east corner extends to the 100-year floodplain. It is recommended that riprap be placed against the toe as a protection against the 100-year flood event.

7. DESIGN REVIEW AND CONSTRUCTION MONITORING

Geotechnical review of plans and specifications is of paramount importance in engineering practice. The poor performance of many structures has been attributed to inadequate geotechnical review of construction documents. Additionally, observation and testing of the subgrade will be important to the

performance of the proposed development. The following sections present our recommendations relative to the review of construction documents and the monitoring of construction activities.

7.1. Plans and Specifications

The design plans and specifications should be reviewed by Twining, Inc. prior to bidding and construction, as the geotechnical recommendations may need to be reevaluated in the light of the actual design configuration and loads. This review is necessary to evaluate whether the recommendations contained in this report and future reports have been properly incorporated into the project plans and specifications. Based on the work already performed, this office is best qualified to provide such review.

7.2. Construction Monitoring

Site preparation, removal of unsuitable soils, assessment of imported fill materials, fill placement, foundation installation, and other site grading operations should be observed and tested, as appropriate. The substrata exposed during the construction may differ from that encountered in the test excavations. Continuous observation by a representative of Twining, Inc. during construction allows for evaluation of the soil conditions as they are encountered and allows the opportunity to recommend appropriate revisions where necessary.

8. LIMITATIONS

The recommendations and opinions expressed in this report are based on Twining, Inc.'s review of available background documents, on information obtained from field explorations, and on laboratory testing. It should be noted that this study did not evaluate the possible presence of hazardous materials on any portion of the site. In the event that any of our recommendations conflict with recommendations provided by other design professionals, we should be contacted to aid in resolving the discrepancy.

Due to the limited nature of our field explorations, conditions not observed and described in this report may be present on the site. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation and laboratory testing can be performed upon request. It should be understood that conditions different from those anticipated in this report may be encountered during grading operations, for example, the extent of removal of unsuitable soil, and that additional effort may be required to mitigate them.

Site conditions, including groundwater elevation, can change with time as a result of natural processes or the activities of man at the subject site or at nearby sites. Changes to the applicable laws, regulations, codes, and standards of practice may occur as a result of government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Twining, Inc. has no control.

Twining's recommendations for this site are, to a high degree, dependent upon appropriate quality control of subgrade preparation, fill placement, and foundation construction. Accordingly, the recommendations are made contingent upon the opportunity for Twining to observe grading operations and foundation excavations for the proposed construction. If parties other than Twining are engaged to provide such services, such parties must be notified that they will be required to assume complete responsibility as the geotechnical engineer of record for the geotechnical phase of the project by concurring with the recommendations in this report and/or by providing alternative recommendations.

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This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Twining should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report has been prepared for the exclusive use by the client and its agents for specific application to the proposed project. Land use, site conditions, or other factors may change over time, and additional work may be required with the passage of time. Based on the intended use of this report and the nature of the new project, Twining may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the Client or anyone else will release Twining from any liability resulting from the use of this report by any unauthorized party.

Twining performed its evaluation using the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical professionals with experience in this area in similar soil conditions. No other warranty, either express or implied, is made as to the conclusions and recommendations contained in this report.

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9. SELECTED REFERENCES

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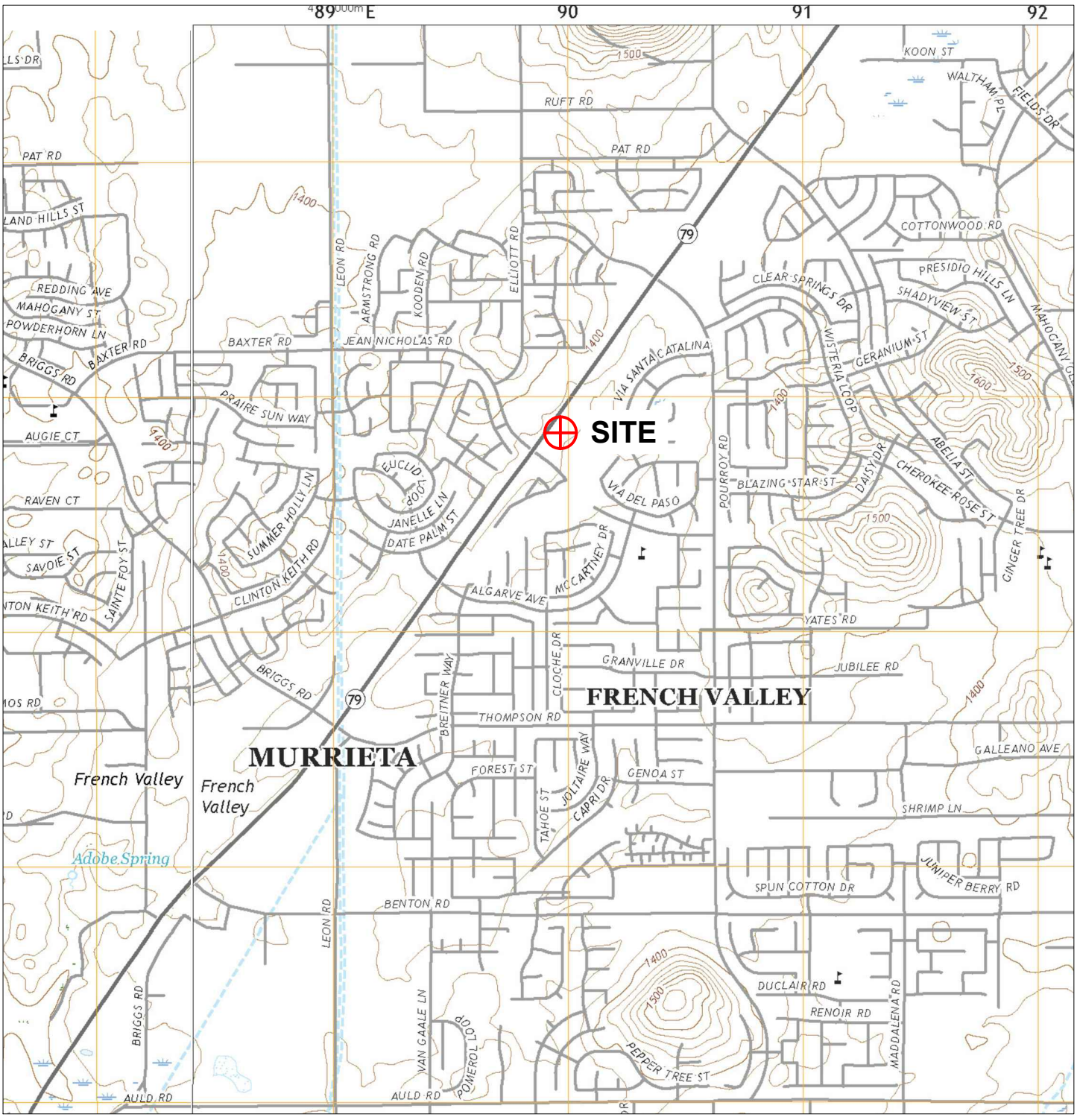
FIGURES



N

SCALE IN FEET

0 2000 4000

REFERENCE: USGS (2018)

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SITE LOCATION MAP

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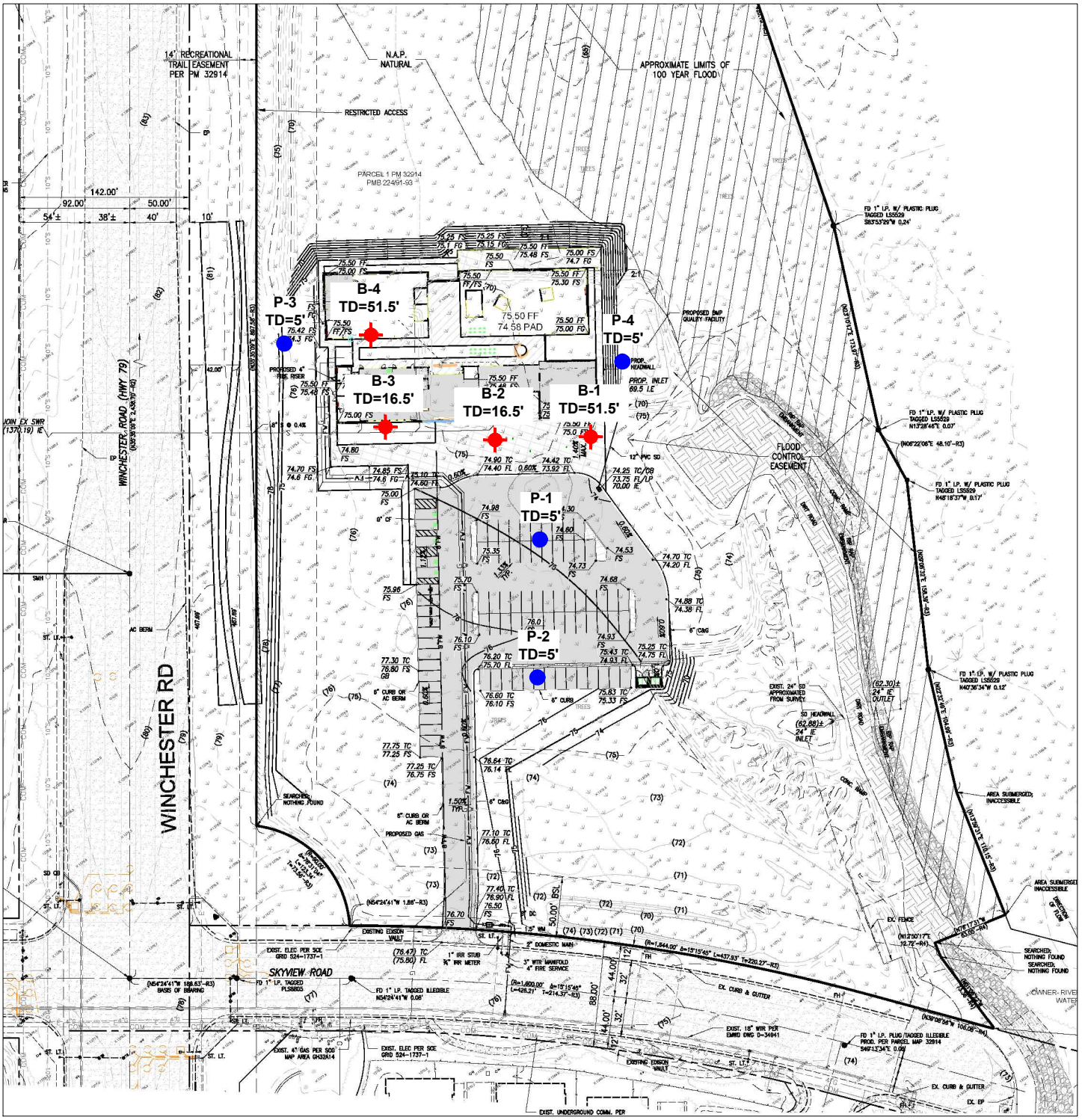
31526 SKYVIEW ROAD
WINCHESTER, CALIFORNIA

PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	FIGURE 1



LEGEND

B-1 TD=51.5' — APPROXIMATE LOCATION OF BORING AND TOTAL DEPTH

P-1 TD=5' — APPROXIMATE LOCATION OF PERCOLATION TEST AND TOTAL DEPTH

SCALE IN FEET

0 120 240

REFERENCE: ARMSTRONG AND BROOKS (2019)

TWINING

SITE PLAN AND BORING LOCATION MAP

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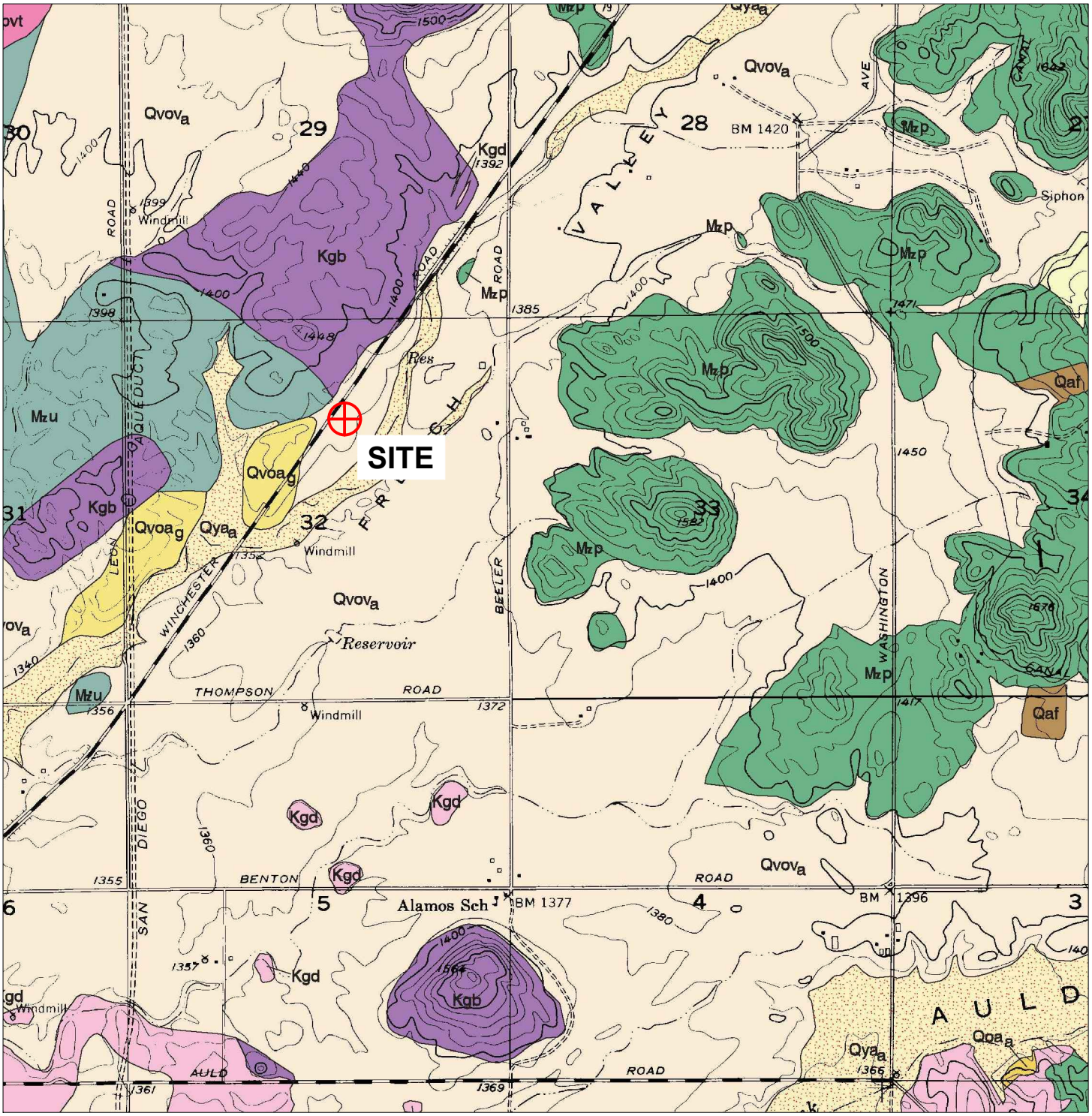
PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	2



LEGEND

Qvov	Very old alluvial valley deposits
Qvoa	Very old alluvial channel deposits
Qya	Young alluvial channel deposits
Kgb	Gabbro (Cretaceous)
Mzu	Mesozoic metasedimentary rocks
Mzp	Phyllite (Mesozoic)

SCALE IN FEET
0 2000 4000

REFERENCE: MORTON, KENNEDY, BOVARD, BURNS (2003)

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REGIONAL GEOLOGIC MAP

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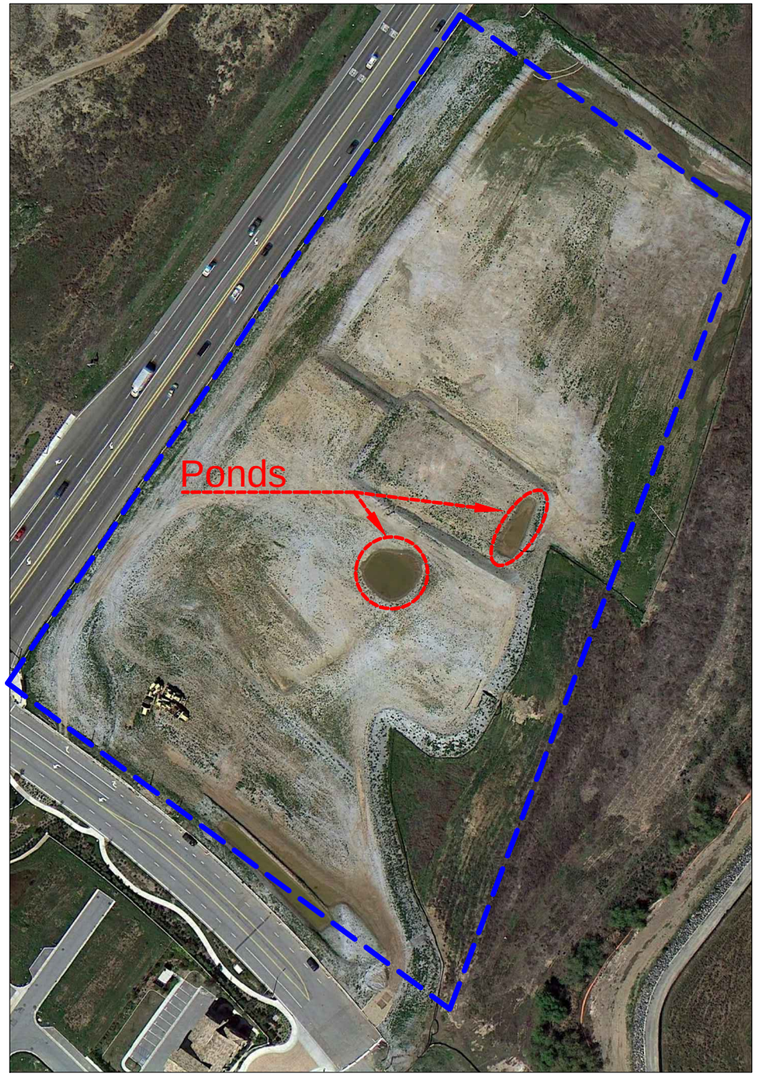
WINCHESTER, CALIFORNIA

PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	3

2009



2011

2018

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APPROXIMATE PROPERTY BOUNDARIES

APPROXIMATE SCALE IN FEET

0 175 350

HISTORICAL SITE GRADING

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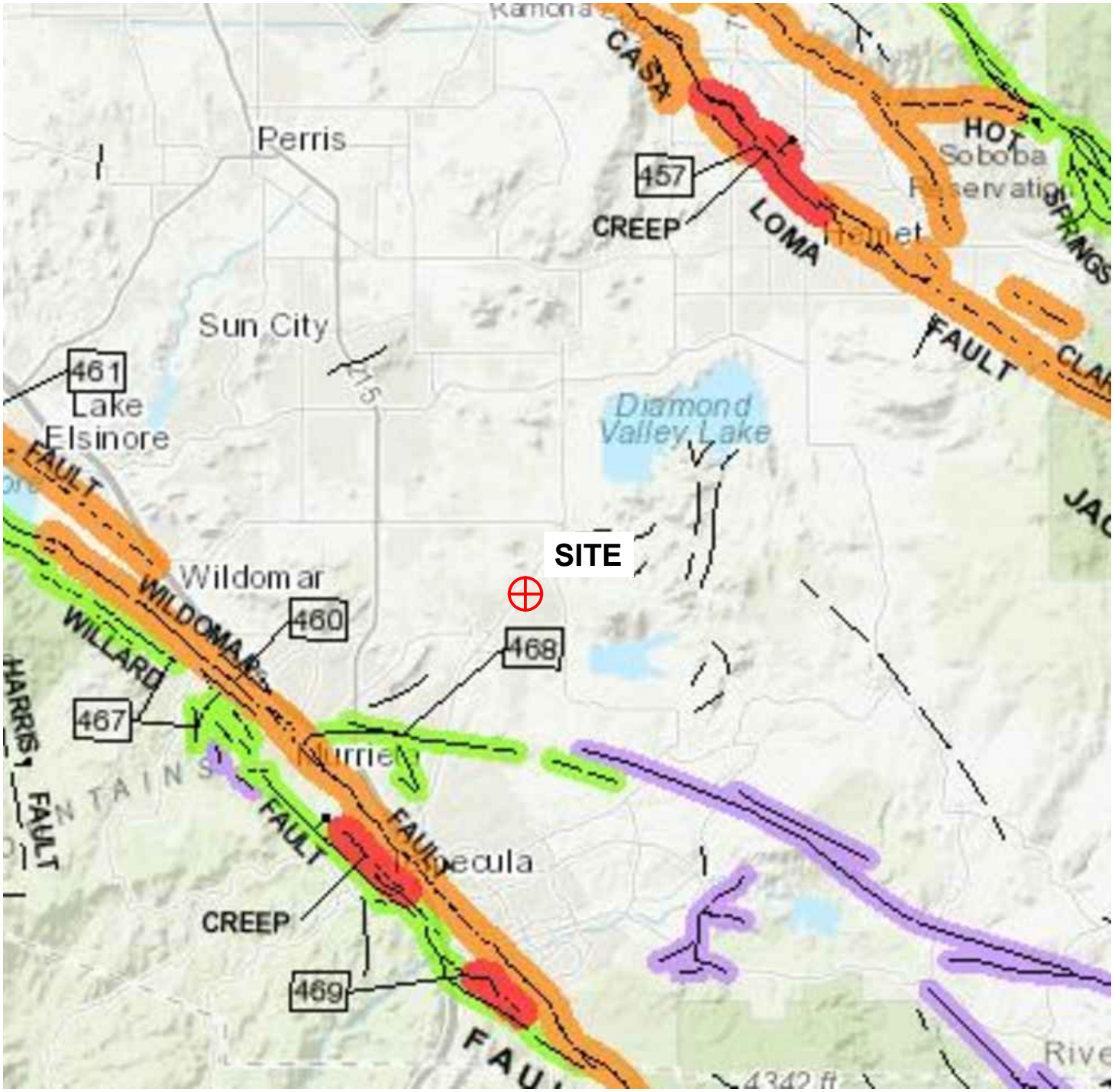
PROJECT NO.	REPORT DATE	FIGURE 4
180759.3	October 2019	



REFERENCE: JENNINGS AND BRYANT (2010)

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REGIONAL FAULT LOCATION MAP

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	FIGURE 5

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APPENDIX A
FIELD EXPLORATION

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Appendix A
Field Exploration

General

The subsurface exploration program for the proposed project consisted of drilling, testing, sampling and logging four hollow-stem-auger (HSA) exploratory borings (B-1 through B-4) and percolation testing in four hand-auger borings (P-1 through P-4) at the site on September 30, 2019.

The HSA Borings (B-1 through B-4) were advanced to depths of approximately 16½ to 51½ feet below ground surface (bgs). Drilling operation for the HSA borings was performed using a truck-mounted CME-85 hollow-stem-auger drill rig by Baja Exploration of Escondido, California. Borings P-1 through P-4 were advanced to a depth of approximately 5 feet bgs using a 5-inch diameter hand auger.

The approximate locations of the borings are shown on Figure 2, Site Plan and Boring Location Map.

Drilling and Sampling

An explanation of the boring logs is presented as Figure A-1. The boring logs are presented as Figures A-2 through A-7. The boring logs describe the earth materials encountered, samples obtained, and show the field and laboratory tests performed. The logs also show the boring number, drilling date, and the name of the logger and drilling subcontractor. The borings were logged by an engineer using the Unified Soil Classification System. The boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual. Drive and bulk samples of representative earth materials were obtained from the borings.

Disturbed samples were obtained from selected depths using a Standard Penetration Test (SPT) sampler. This sampler consists of a 2-inch O.D., 1.4-inch I.D. split barrel shaft without room for liner. Soil samples obtained by the SPT sampler were retained in plastic bags. A California modified sampler was also used to obtain drive samples of the soils from selected depths. This sampler consists of a 3-inch outside diameter (O.D.), 2.4-inch inside diameter (I.D.) split barrel shaft. The samples were retained in brass rings for laboratory testing.

When the boring was drilled to the selected depth, the sampler was lowered to the bottom of the boring and then driven a total of 18-inches into the soil using an automatic hammer weighing 140 pounds dropped from a height of approximately 30 inches. The number of blows required to drive the samplers the final 12 inches is presented on the boring logs.

Upon completion of the borings, the boreholes were backfilled with drilled soil cuttings.

Percolation Testing

Percolation testing was performed on September 30, 2019 in the 5-foot-deep borings (P-1 through P-4) in accordance with the procedures of the Riverside County Design Handbook for Low Impact Development Best Management Practices. After installing pipe and filter rock, the boreholes were filled with water to approximately one foot bgs and presoaked for two consecutive 25-minute sessions prior to testing. At the end of each presoak session, water level change in borings P-1 through P-3 was negligible, and the testing was terminated. In P-4, water level change in boring was less than 6 inches.

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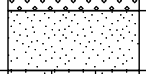
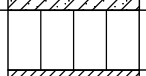
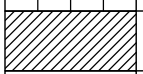
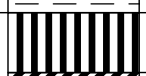
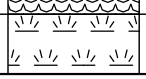
After presoaking, the boreholes were filled with water to depths approximately 0.9 to 1.9 feet bgs. Measurements were recorded at 10-minute intervals for a total of 7 readings. The last reading was used to determine the percolation rate at each test location.

Our calculated design infiltration rates are presented in Table A-1 below with a factor safety of 3. Detailed test data is attached at the end of this appendix.

Table A-1 – Design Infiltration Rates with a Factor of Safety of 3

Test Location	Depth of Test Borehole (feet)	Design Infiltration Rate (inch/hour)
P-1	5	Testing was abandoned due to negligible water level drop during pre-soaking
P-2	5	
P-3	5	
P-4	5	1.2

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

COARSE-GRAINED SOILS

Relative Density	SPT (blows/ft)	Relative Density (%)
Very Loose	<4	0 - 15
Loose	4 - 10	15 - 35
Medium Dense	10 - 30	35 - 65
Dense	30 - 50	65 - 85
Very Dense	>50	85 - 100

FINE-GRAINED SOILS

Consistency	SPT (blows/ft)
Very Soft	<2
Soft	2 - 4
Medium Stiff	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	>30

NOTE: SPT blow counts based on 140 lb. hammer falling 30 inches

Sample Symbol	Sample Type	Description
	SPT	1.4 in I.D., 2.0 in. O.D. driven sampler
	California Modified	2.4 in. I.D., 3.0 in. O.D. driven sampler
	Bulk	Retrieved from soil cuttings
	Thin-Walled Tube	Pitcher or Shelby Tube

LABORATORY TESTING ABBREVIATIONS

ATT	Atterberg Limits
C	Consolidation
CORR	Corrosivity Series
DS	Direct Shear
EI	Expansion Index
GS	Grain Size Distribution
K	Permeability
MAX	Moisture/Density (Modified Proctor)
O	Organic Content
RV	Resistance Value
SE	Sand Equivalent
SG	Specific Gravity
TX	Triaxial Compression
UC	Unconfined Compression

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EXPLANATION FOR LOG OF BORINGS

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	A-1

STANDARD LOG EXPLANATION 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/16/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-1**		
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	16		
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)		

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
						CORR, R		ML	SANDY SILT, brown, moist
1370	5		26	9.8	125.0				same, very stiff
1365	10		54					SM	SILTY SAND, very dense, light brown, moist
1360	15		50/5"	16.0	115.9				▼ same
1355	20		36			ATT		CL	SANDY lean CLAY, hard, dark brown
1350	25		50	25.1	104.2				same
1345	30		28/50/3"			ATT		SC	CLAYEY SAND, very dense, dark brown
1340	35								

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

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LOG OF BORING

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	A - 2

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-1**		
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	16		
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)		

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
			50/4"	14.5	112.3	C		CL	SANDY lean CLAY, hard, dark brown, same with some gravel
1335	40		50					CL	same
1330	45		50/6"	17.2	112.4			CL	same
1325	50		36/50/4"					CL	same
									Total Depth = 51.5 feet Backfilled on 9/30/2019 Groundwater encounterd at 16' bgs. Borehole filled with cuttings at completion.
1320	55								
1315	60								
1310	65								
1305	70								

TWINING

LOG OF BORING

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 2

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-2**		
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)			
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)		

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
								CL	SANDY lean CLAY with gravel, dark brown, moist
1370	5		14			ATT		CL	same, very stiff
1365	10		70	20.9	101.1	C		CL	same, hard
1360	15		22					CL	same, very stiff
									Total Depth = 16.5 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1355	20								
1350	25								
1345	30								
1340	35								

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	A - 3

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-3**		
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)			
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)		

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
				13.4		DS, EI, MAX		ML	SANDY SILT,dark brown, moist
1370	5		47	5.5	126.9	DS		SC	CLAYEY SAND, dense, reddish brown, moist
1365	10		24					CL	SANDY lean CLAY with some white sand, very stiff, brown, moist
1360	15		60	26.3	99.0			ML	SANDY SILT, hard, brown, moist
									Total Depth = 16.5 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1355	20								
1350	25								
1345	30								
1340	35								

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 4

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-4**		
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	16		
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)		

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
								SM	SILTY SAND, light brown, moist
1370	5		16					ML	SANDY SILT, very stiff, brown, moist
1365	10		52	7.5	121.2	DS		SM	SILTY SAND,dense, light brown, moist
1360	15		15			ATT		CL	SANDY lean CLAY, very stiff, light brown, moist
1355	20		50	16.5	114.8			CL	same, hard
1350	25		31/50/4"					CL	same
1345	30		50/4"	22.3	105.0			CL	same
1340	35								

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	A - 5

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**B-4**
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	16
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
			44					CL	SANDY lean CLAY, very stiff, light brown, moist *(continued)*
								CL	same, hard
1335	40		30/50/3"	15.2	116.9			CL	same
1330	45		25/50/3"					CL	same
1325	50		50/2"	13.0	118.7			CL	same
									Total Depth = 51.5 feet Backfilled on 9/30/2019 Groundwater encounterd at 16' bgs. Borehole filled with cuttings at completion.
1320	55								
1315	60								
1310	65								
1305	70								

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PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	A - 5

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**P-1**
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
							SM	SILTY SAND, dark brown, moist
							SC	CLAYEY SAND, dark brown, moist
1370	5							Total Depth = 5.0 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1365	10							
1360	15							
1355	20							
1350	25							
1345	30							
1340	35							

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 6

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**P-2**
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
							SM	SILTY SAND, dark brown, moist
							SC	CLAYEY SAND, dark brown, moist
1370	5							Total Depth = 5.0 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1365	10							
1360	15							
1355	20							
1350	25							
1345	30							
1340	35							

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LOG OF BORING

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 7

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**P-3**
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1375 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
							SM	SILTY SAND, dark brown, moist
							SC	CLAYEY SAND, dark brown, moist
1370	5							Total Depth = 5.0 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1365	10							
1360	15							
1355	20							
1350	25							
1345	30							
1340	35							

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LOG OF BORING

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 7

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

DATE DRILLED	9/30/19	LOGGED BY	SZ	**BORING NO.**	**P-4**
DRIVE WEIGHT	140 lbs.	DROP	30 inches	DEPTH TO GROUNDWATER (ft.)	
DRILLING METHOD	8" HSA	DRILLER	Baja Exploration	SURFACE ELEVATION (ft.)	1369 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
							SM	Silty SAND; brown; slightly moist; some gravel
							SC	Clayey SAND; light brown; slightly moist
1364	5							Total Depth = 5.0 feet Backfilled on 9/30/2019 Groundwater was not encounterd. Borehole filled with cuttings at completion.
1359	10							
1354	15							
1349	20							
1344	25							
1339	30							
1334	35							

BORING LOG 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/17/19

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LOG OF BORING

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PROJECT NO.	REPORT DATE	
190759.3	October 2019	FIGURE A - 7

Infiltration Rate Calculation Sheet

Project :	French Valley Library	Project No. :	190759.3	Date :	9/30/2019
Test Hole No.:	P-4	Tested by :	DHC		
Depth of Test Hole, D_T (in):	60	USCS Soil Classification :	SC		
Test Hole Dimension (inches)			Length	Width	
Diameter (if round) (inches) =	8	Sides (if rectangular) =			

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (in.)	Final Depth to Water (in.)	Change in Water Level (in.)	Greater than or Equal to 6" ? (Y/N)
1	12:30 PM	12:55 PM	25	12.0	36.0	24.0	Y
2	12:58 PM	1:23 PM	25	13.2	38.4	25.2	Y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every 10 minutes. Otherwise, pre-soak overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

			Δt	H_o	H_f	ΔH	
Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Water Height (inches)	Final Water Height (inches)	Change in Water Level (inches)	Tested Infiltration Rate
1	1:42 PM	1:52 PM	10	38.40	25.20	13.20	4.69
2	1:53 PM	2:03 PM	10	49.20	30.60	18.60	5.33
3	2:03 PM	2:13 PM	10	42.00	29.40	12.60	4.01
4	2:13 PM	2:23 PM	10	40.80	29.40	11.40	3.69
5	2:23 PM	2:33 PM	10	42.00	30.00	12.00	3.79
6	2:34 PM	2:44 PM	10	40.20	28.80	11.40	3.75
7	2:44 PM	2:54 PM	10	37.20	27.00	10.20	3.59
8							
9							
10							
11							
12							
13							
14							
15							

Infiltration Rate with a factor of safety of 3 = 1.2 inch /hr

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APPENDIX B
LABORATORY TESTING

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Appendix B
Laboratory Testing

Laboratory Moisture Content and Density Tests

The moisture content and dry densities of selected driven samples obtained from the exploratory borings were evaluated in general accordance with the latest version of ASTM D 2937. The results are shown on the boring logs in Appendix A, and also summarized in Table B-1.

No. 200 Wash Sieve

The amount of fines passing the No. 200 sieve was evaluated in accordance with ASTM D 1140. The results are presented in Table B-2.

Atterberg Limits

Tests were performed on selected representative fine-grained soil samples to evaluate the liquid limit, plastic limit, and plasticity index in general accordance with ASTM D 4318. These test results were utilized to evaluate the soil classification in accordance with the Unified Soil Classification System. The test results are summarized in on Figure B-1 and Table B-3.

Resistance Value (R-value)

R-value testing was performed on a select bulk sample of the near-surface soils encountered at the site. The test was performed in general accordance with ASTM D 2844. The results are summarized in Table B-4.

Expansion Index

The expansion index of a select soil sample was evaluated in general accordance with ASTM D 4829. The specimen was molded under a specified compactive energy at approximately 50 percent saturation. The prepared 1-inch thick by 4-inch diameter specimen was loaded with a surcharge of 144 pounds per square foot and was inundated with tap water. Readings of volumetric swell were made for a period of 24 hours. The result of Expansion Index test is presented in Table B-5.

Direct Shear

Direct shear tests were performed on a remolded sample and select modified-California soil samples in general accordance with the latest version of ASTM D 3080 to evaluate the shear strength characteristics of the selected materials. The remolded sample was prepared to a relative compaction of 90% according to the maximum density as determined by ASTM D1557. The samples were inundated during shearing to represent adverse field conditions. Test results are presented on Figures B-2 through B-4.

Maximum Density and Optimum Moisture

A Modified Proctor test was performed on near-surface soils to determine the maximum dry density and optimum water content for compaction. The test was performed in accordance with ASTM D 1557 Method A. The curve is attached to this appendix as Figure B-5.

Consolidation

Consolidation tests were performed on select modified-California soil samples in general accordance with the latest version of ASTM D2435. The samples were inundated during testing

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to represent adverse field conditions. The percent consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. The results of the tests are attached to this appendix. The tests were performed by Twining and Hushmand Associates, Inc. (HAI) of Irvine, California. The test results are presented in Figure B-6 and the HAI report included in this appendix.

Corrosivity

Soil pH and resistivity tests were performed by Anaheim Test Lab, Inc. (ATLI) of Anaheim, California on a representative soil sample. The resistivity of the soil assumes saturated soil conditions. The chloride and sulfate contents of the selected samples were evaluated in general accordance with the latest versions of Caltrans test methods CT417, CT422, and CT 643. The test results are presented on Table B-6 and the ATLI report included in this appendix.

Table B-1
Moisture Content and Dry Density

Boring No.	Depth (feet)	Moisture Content (%)	Dry Density (pcf)
B-1	5	9.8	125.0
B-1	15	16.0	115.9
B-1	25	25.1	104.2
B-1	35	14.5	112.3
B-1	45	17.2	112.4
B-2	10	20.9	101.1
B-3	5	5.5	126.9
B-3	15	26.3	99.0
B-4	10	7.5	121.2
B-4	20	16.5	114.8
B-4	30	22.3	105.0
B-4	40	15.2	116.9
B-4	50	13.0	118.7

Table B-2
Number 200 Wash Results

Boring No.	Depth (feet)	Percent Passing #200
B-1	0-5	67.5
B-1	20	73.2
B-1	30	43.4
B-2	5	50.9
B-4	15	69.0

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Table B-3
Atterberg Limits Results

Boring No.	Depth (feet)	Liquid Limit	Plastic Limit	Plasticity Index	U.S.C.S. Classification
B-1	20	33	17	16	CL
B-1	30	32	14	18	CL
B-2	5	25	13	12	CL
B-4	15	42	14	28	CL

Table B-4
Resistance Value (R-value)

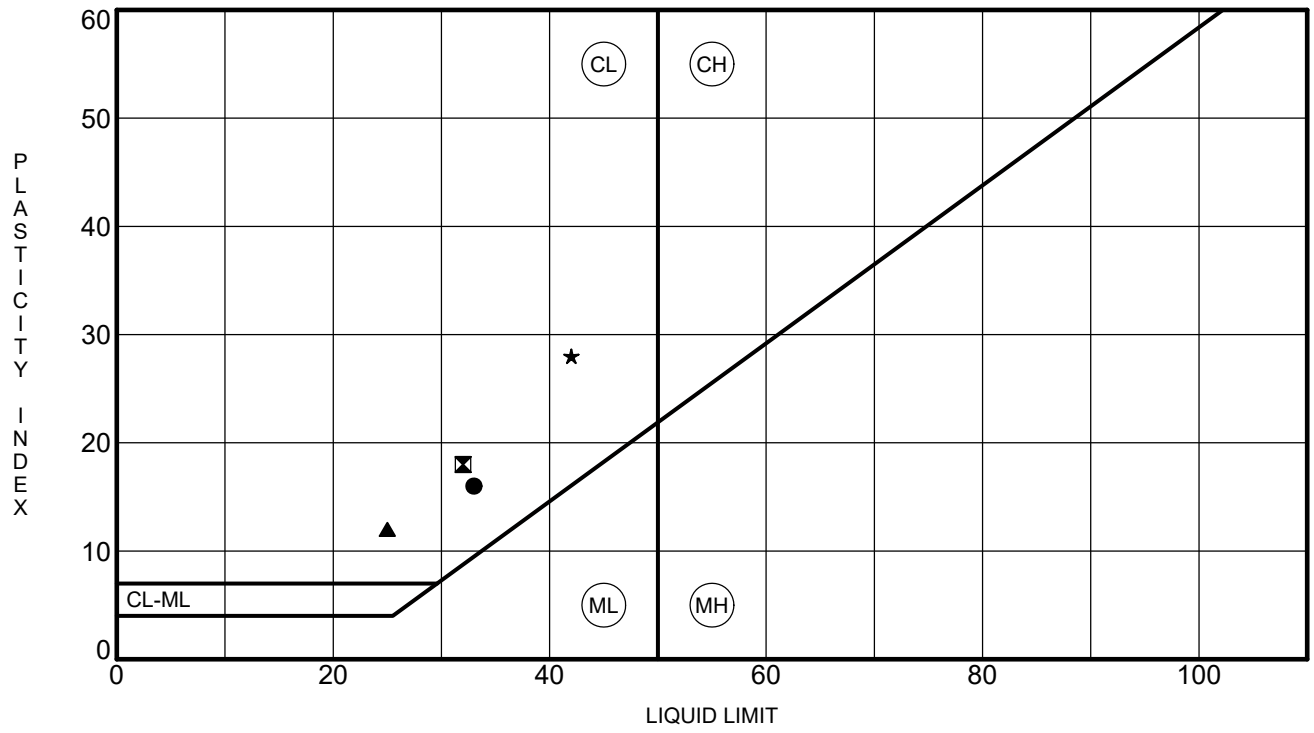
Boring No.	Depth (feet)	R Value
B-1	0 – 5	12

Table B-5
Expansion Index

Boring No.	Depth (feet)	Expansion Index	Expansion Potential
B-3	0 – 5	42	low

Table B-6
Corrosivity Test Results

Boring No.	Depth (feet)	pH	Water Soluble Sulfate (ppm)	Water Soluble Chloride (ppm)	Minimum Resistivity (ohm-cm)
B-1	0-5	7.4	205	106	1,000



	Sample Location	LL	PL	PI	U.S.C.S. Classification
●	**B-1 at 20 ft**	**33**	**17**	**16**	**SANDY lean CLAY**
⊠	**B-1 at 30 ft**	**32**	**14**	**18**	**CLAYEY SAND**
▲	**B-2 at 5 ft**	**25**	**13**	**12**	**SANDY lean CLAY**
★	**B-4 at 15 ft**	**42**	**14**	**28**	**SANDY lean CLAY**

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ATTERBERG LIMITS

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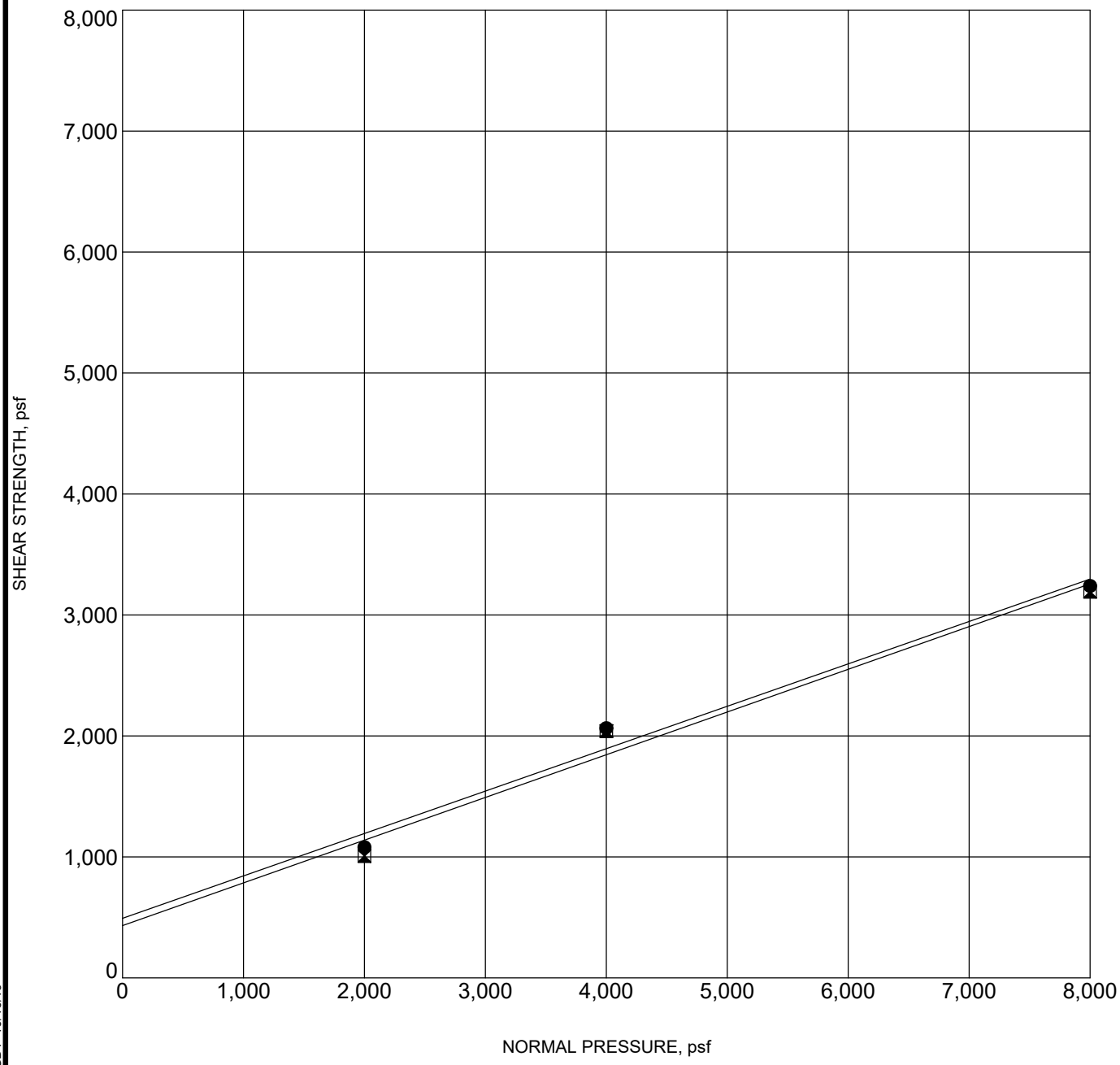
PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	B-1

ATTERBERG LIMITS 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/16/19



Shear Strength Parameters

	Peak	Ultimate
Cohesion, C (psf):	492	432
Friction Angle, Ø (deg):	19	19

Boring No.: B-3
Sample Depth (ft): 0-5' BULK
Sample Description: SANDY SILT
Strain Rate (in./min): 0.005
Dry Density (pcf): 111.0

Initial Moisture (%): 8.0
Final Moisture (%): 13.4

Remolded Shear: Compacted to 90% Relative Compaction

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DIRECT SHEAR TEST

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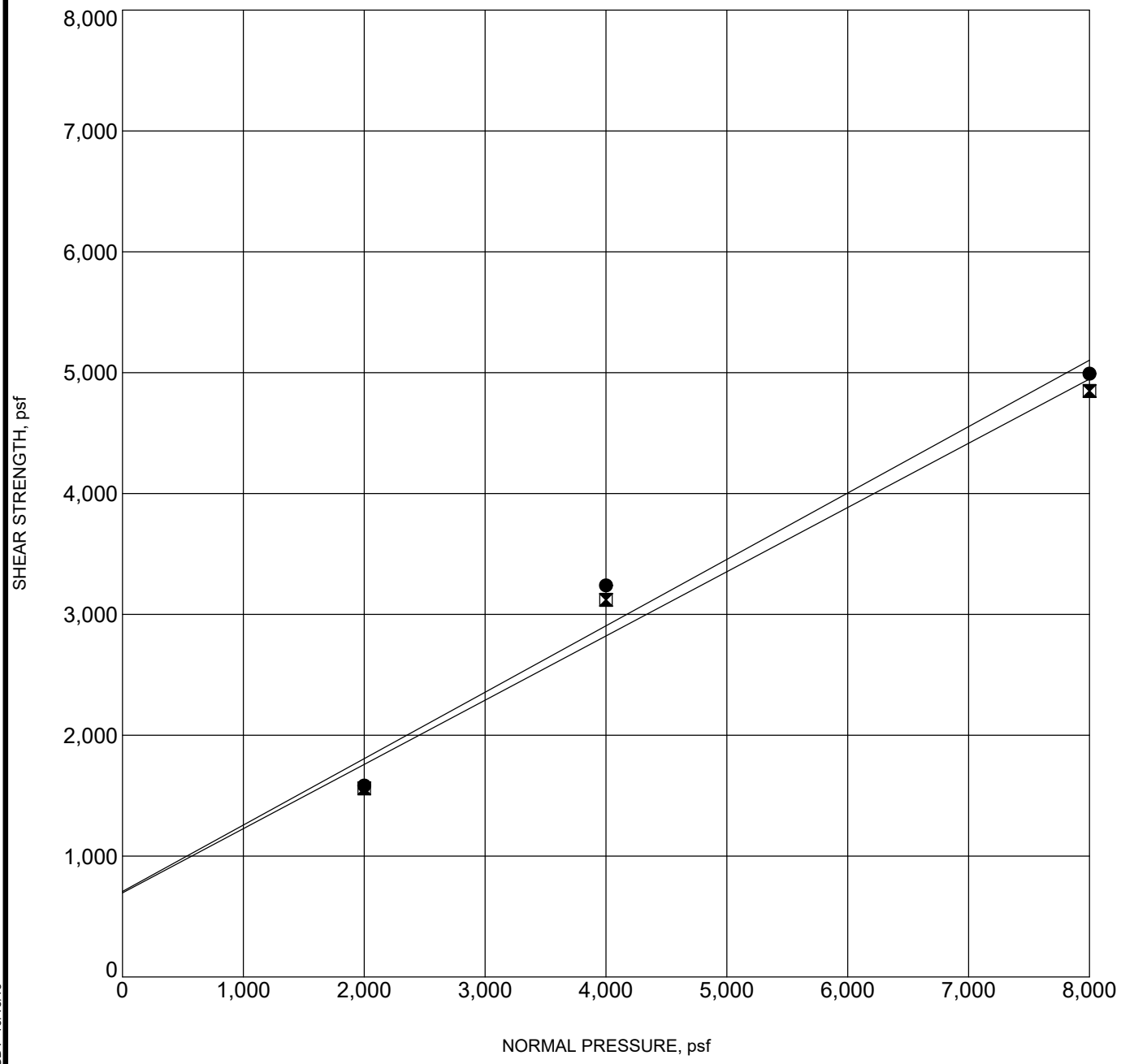
Winchester, California

PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	B-1

DIRECT SHEAR 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/16/19



Shear Strength Parameters

	Peak	Ultimate
Cohesion, C (psf):	708	696
Friction Angle, Ø (deg):	29	28

Boring No.: B-3
Sample Depth (ft): 5
Sample Description: CLAYEY SAND
Strain Rate (in./min): 0.005
Dry Density (pcf): 126.9

Initial Moisture (%): 5.5
Final Moisture (%): 10.0

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DIRECT SHEAR TEST

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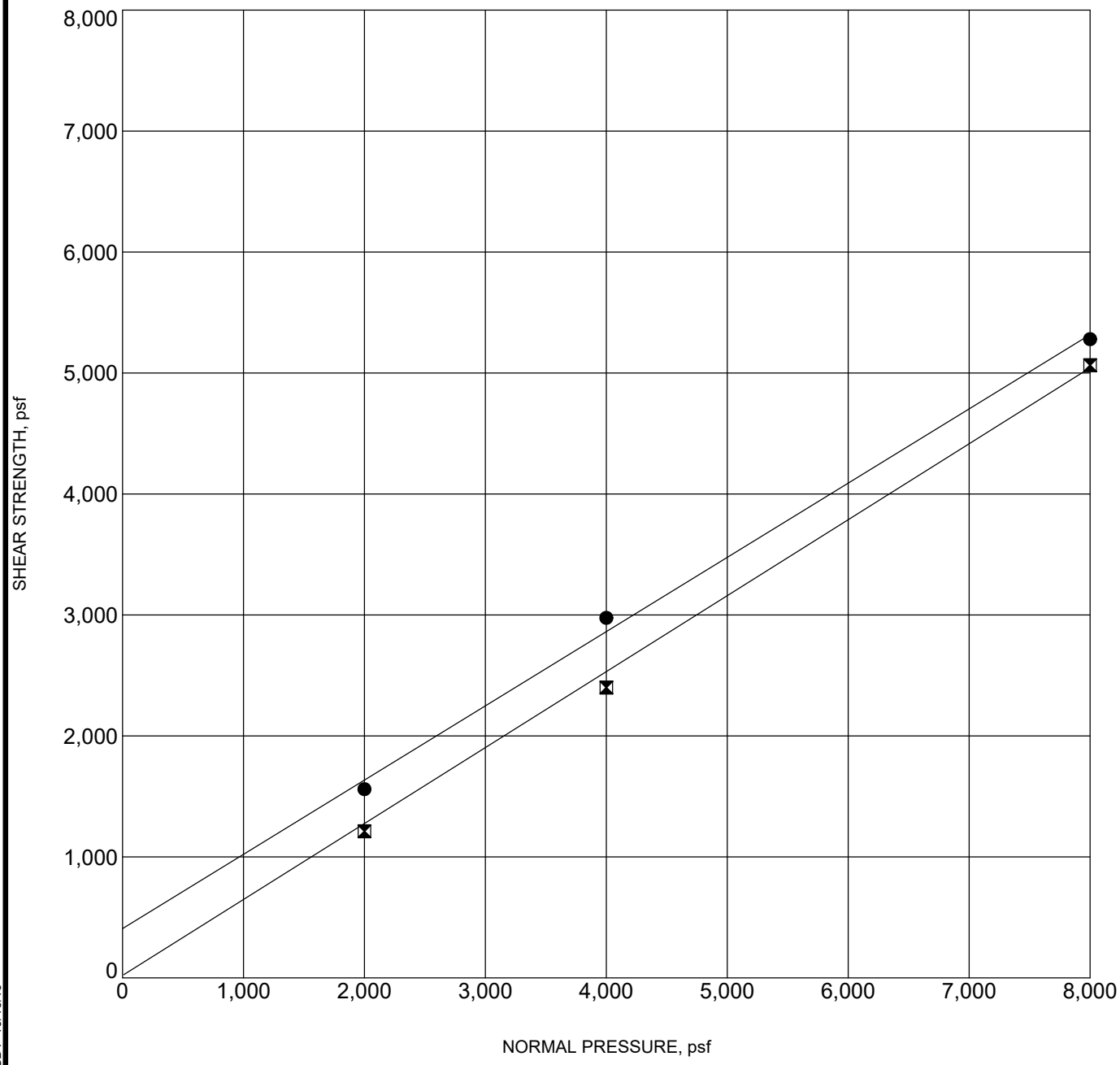
Winchester, California

PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	FIGURE B-2



Shear Strength Parameters

	Peak	Ultimate
Cohesion, C (psf):	408	0
Friction Angle, Ø (deg):	32	33

Boring No.: B-4
Sample Depth (ft): 10
Sample Description: SILTY SAND
Strain Rate (in./min): 0.005
Dry Density (pcf): 121.2

Initial Moisture (%): 7.5
Final Moisture (%): 12.1

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DIRECT SHEAR TEST

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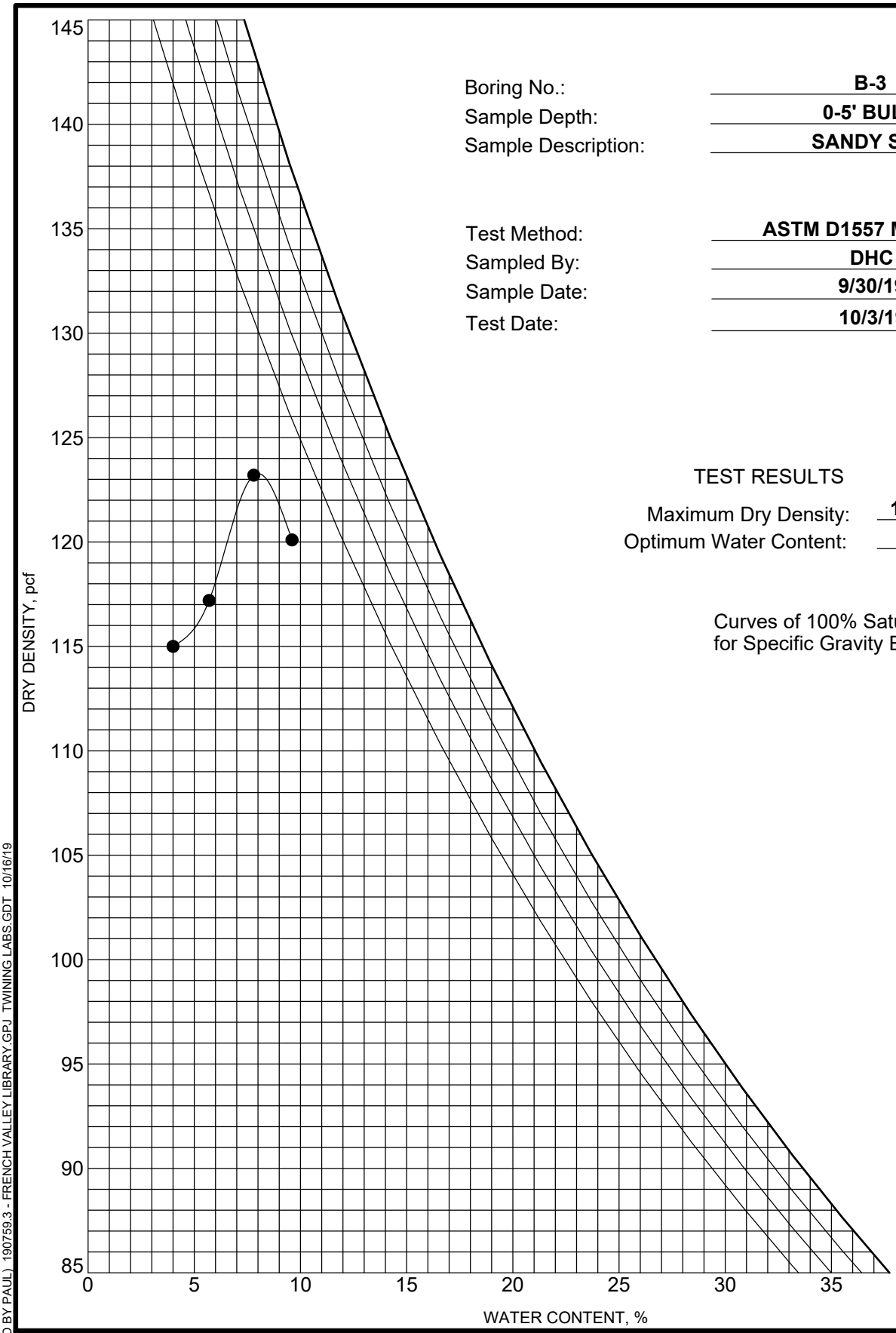
PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	B-3

DIRECT SHEAR 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/16/19



Boring No.:	**B-3**
Sample Depth:	**0-5' BULK**
Sample Description:	**SANDY SILT**
Test Method:	**ASTM D1557 Method A**
Sampled By:	**DHC**
Sample Date:	**9/30/19**
Test Date:	**10/3/19**

TEST RESULTS

Maximum Dry Density:	**123.5 pcf**
Optimum Water Content:	**8.0 %**

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

2.50

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MOISTURE-DENSITY RELATIONSHIP

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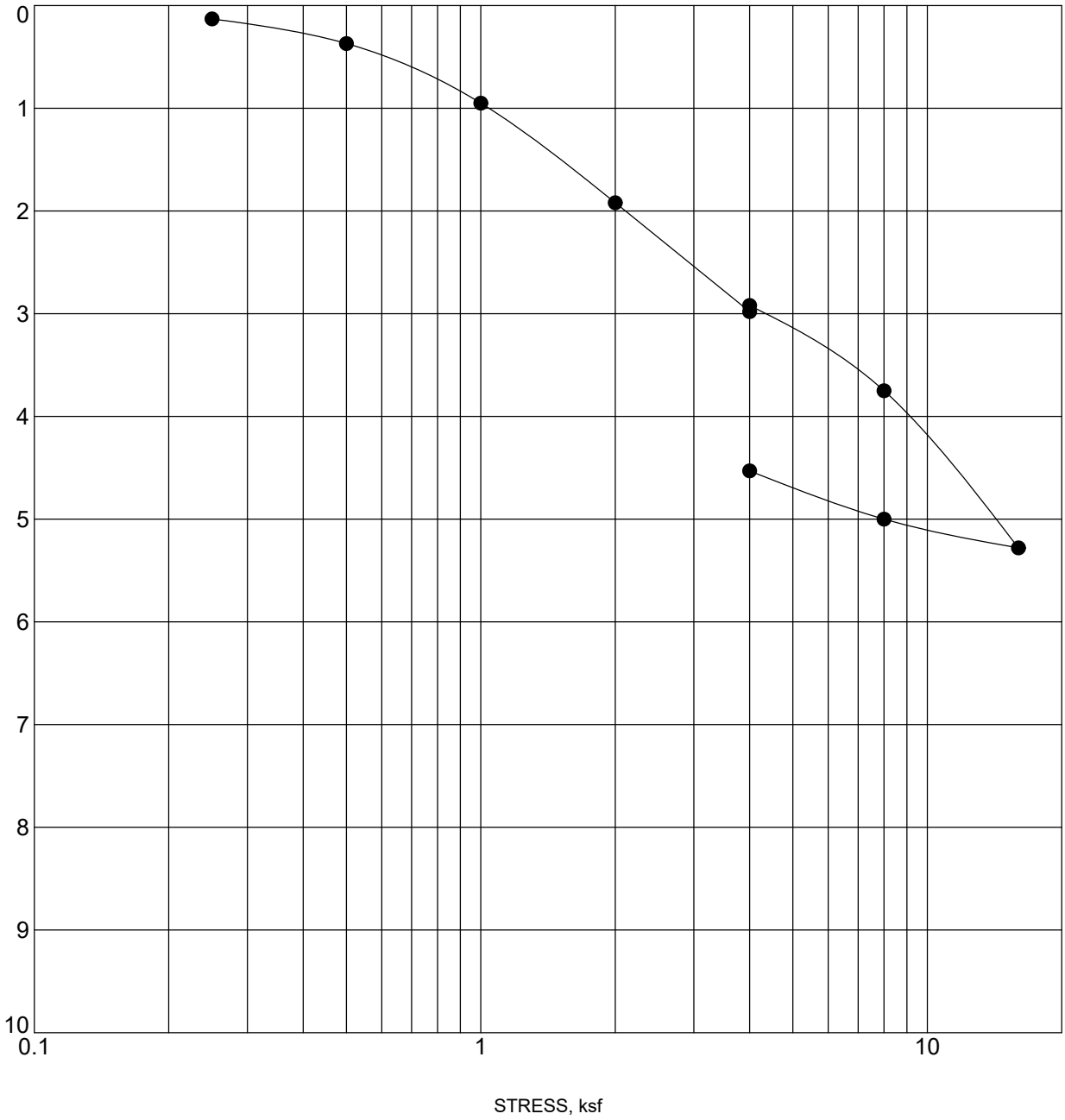
PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	FIGURE B-5

COMPACTION (MODIFIED BY PAUL) 190759.3 - FRENCH VALLEY LIBRARY.GPJ TWINING LABS.GDT 10/16/19



Sample Location	Soil Description	Dry Density (pcf)	Moisture Content (%)
● **B-2 at 10 ft**	**SANDY lean CLAY**	**101.1**	**20.9**

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CONSOLIDATION TEST

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Winchester, California

PROJECT NO.	REPORT DATE	FIGURE
190759.3	October 2019	B-6

HUSHMAND ASSOCIATES, INC.
Geotechnical and Earthquake Engineers

Hushmand Associates, Inc.
250 Goddard, Irvine,
CA 92618

p. (949) 777-1274
w. haieng.com
e. hai@haieng.com

October 14, 2019

Twining, Inc.
3310 Airport Way,
Long Beach, CA 90806

Attention: Mr. Steven Chang

SUBJECT: **Laboratory Test Result**
Project Name: **French Valley**
Project No.: **190759.3**
HAI Project No.: **TWI-19-009**

Dear Mr. Chang:

Enclosed is the result of the laboratory testing program conducted on samples from the above referenced project. The testing performed for this program was conducted in general accordance with the following test procedure:

Type of Test	Test Procedure
Moisture Content & Dry Density	ASTM D2216 & D2937
Consolidation	ASTM D2435

Attached are: one (1) Moisture Content & Dry Density test result; and one (1) Consolidation test result.

We appreciate the opportunity to provide our testing services to Twining Inc. If you have any questions regarding the test results, please contact us.

Sincerely,

HUSHMAND ASSOCIATES, INC.

Kang C. Lin, BS, EIT
Laboratory Manager

Woongju (MJ) Mun, PhD, PE
Senior Staff Engineer

MOISTURE CONTENT AND DRY DENSITY OF RING SAMPLES

ASTM D2216 & ASTM D2937

Client: Twining, Inc.
Project Name: French Valley
Project No.: 190759.3

HAI Proj No.: TWI-19-009
Performed by: KL
Checked by: MJ
Date: 10/2/2019

No.	Boring No.	Sample No.	Depth	Wt of Ring + Soil	Height of Sample	Dia. of Sample	Volume of Sample	Wt of Rings	Wt of Soil	Wet Density	Wt of Cont. + Wet Soil	Wt of Cont. + Dry Soil	Wt of Container	**Moisture Content**	**Dry Density**
			ft	gr	in	in	cu.ft	gr	gr	pcf	gr	gr	gr	**%**	**pcf**
1	**B-1**	**1**	**35**	1002.47	5.00	2.416	0.0133	228.50	773.97	128.6	220.65	194.16	11.72	**14.5**	**112.3**

CONSOLIDATION TEST

ASTM D2435

Client :	Twining, Inc.	*HAI Project No.:*	TWI-19-009
Project Name:	French Valley	*Tested by:*	KL
Project Number:	190759.3	*Checked by:*	MJ
Boring No.:	B-1	*Date:*	10/02/19
Sample No.:	1		
Type of Sample:	Undisturbed Ring		
Depth (ft):	35		
Soil Description:	Olive Brown, Sandy Fat Clay (CH)		

Initial Total Weight	Final Total Weight	Final Dry Weight
(g)	(g)	(g)
158.97	162.18	139.03

			Initial Conditions	Final Conditions
Height	H	(in)	1.026	0.994
Height of Solids	H_s	(in)	0.685	0.685
Height of Water	H_w	(in)	0.265	0.308
Height of Air	H_a	(in)	0.075	0.000
Dry Density		**(pcf)**	**112.6**	**116.9**
Water Content		**(%)**	**14.3**	**16.7**
Saturation		**(%)**	**77.9**	**99.8**

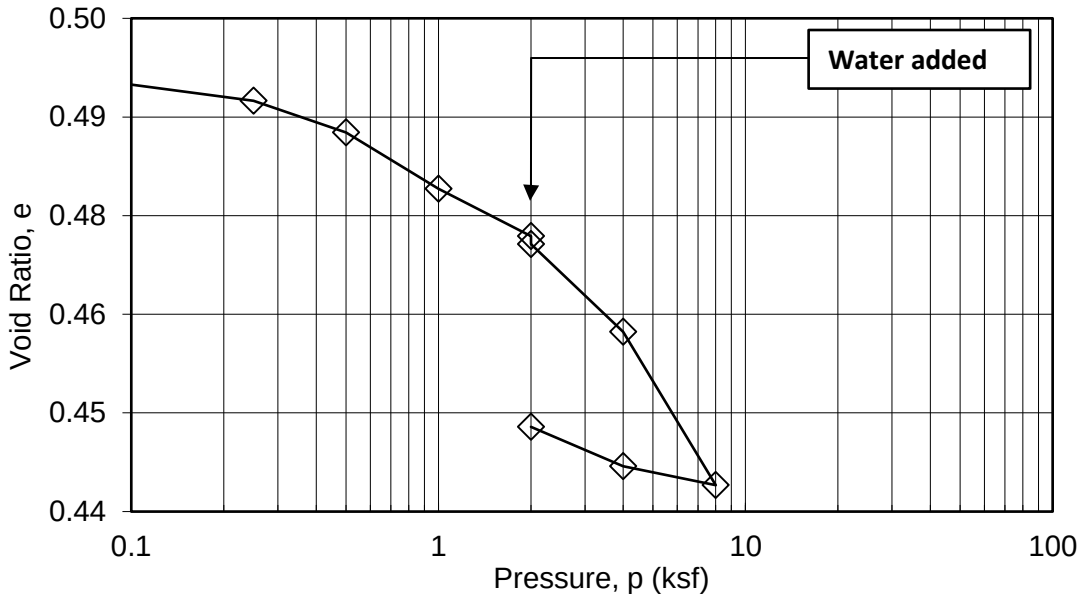
* Saturation is calcualted based on Gs= 2.70

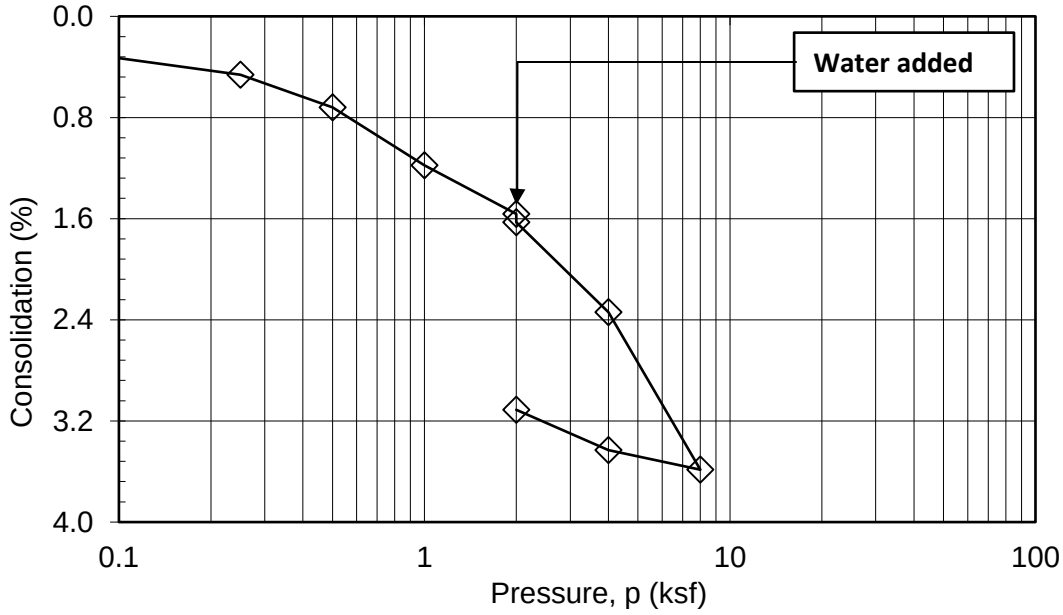
Load (ksf)	δH (in)	H (in)	Voids (in)	e	Consol. (%)	a_v (ksf^{-1})	M_v (ksf^{-1})	Comment
0.01	-------	1.0260	0.341	0.497	0			
0.25	0.0047	1.0213	0.336	0.490	0.5	2.9E-02	1.9E-02	
0.5	0.0074	1.0186	0.333	0.486	0.7	1.5E-02	1.0E-02	
1	0.0121	1.0139	0.328	0.479	1.2	1.4E-02	9.3E-03	
2	0.0160	1.0100	0.325	0.473	1.6	5.8E-03	3.9E-03	
2	0.0167	1.0093	0.324	0.473	1.6	Water Added		
4	0.0240	1.0020	0.317	0.462	2.3	5.3E-03	3.6E-03	
8	0.0368	0.9892	0.304	0.443	3.6	4.7E-03	3.2E-03	
4	0.0352	0.9908	0.305	0.446	3.4	Unloaded		
2	0.0319	0.9941	0.309	0.450	3.1			

CONSOLIDATION TEST

ASTM D2435

Client :	Twining, Inc.	*HAI Project No.:*	TWI-19-009
Project Name:	French Valley	*Tested by:*	KL
Project Number:	190759.3	*Checked by:*	MJ
Boring No.:	B-1	*Date:*	10/02/19
Sample No.:	1		
Type of Sample:	Undisturbed Ring		
Depth (ft):	35		
Soil Description:	Olive Brown, Sandy Fat Clay (CH)		





ANAHEIM TEST LAB, INC

196 Technology Drive, Unit D
Irvine, CA 92618
Phone (949)336-6544

TWINING LABS
3310 AIRPORT WAY
LONG BEACH, CA 90806

DATE: 10/03/2019

P.O. NO: Soils 10119

LAB NO: C-3261

SPECIFICATION: CTM-417/422/643

MATERIAL: Soil

Project No.: 190759.3
Project: French Valley
Date sampled: 09/30/2019
Boring ID: B-1 Bulk

ANALYTICAL REPORT

CORROSION SERIES
SUMMARY OF DATA

pH	SOLUBLE SULFATES per CT. 417 ppm	SOLUBLE CHLORIDES per CT. 422 ppm	MIN. RESISTIVITY per CT. 643 ohm-cm
7.4	205	106	1,000

RESPECTFULLY SUBMITTED

WES BRIDGER LAB MANAGER

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Appendix C
Slope Stability Analysis

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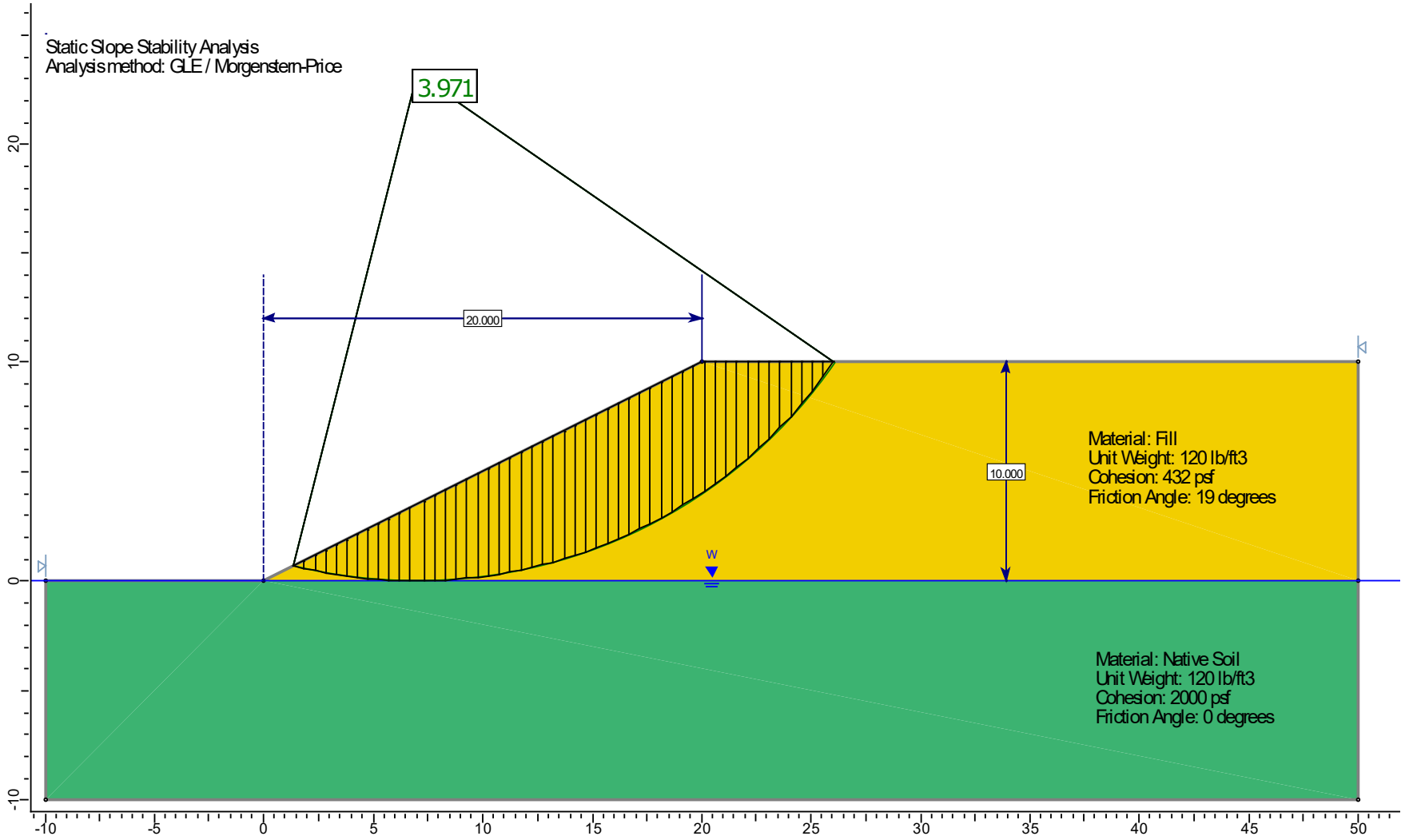

Figure C-1 Static Slope Stability Analysis

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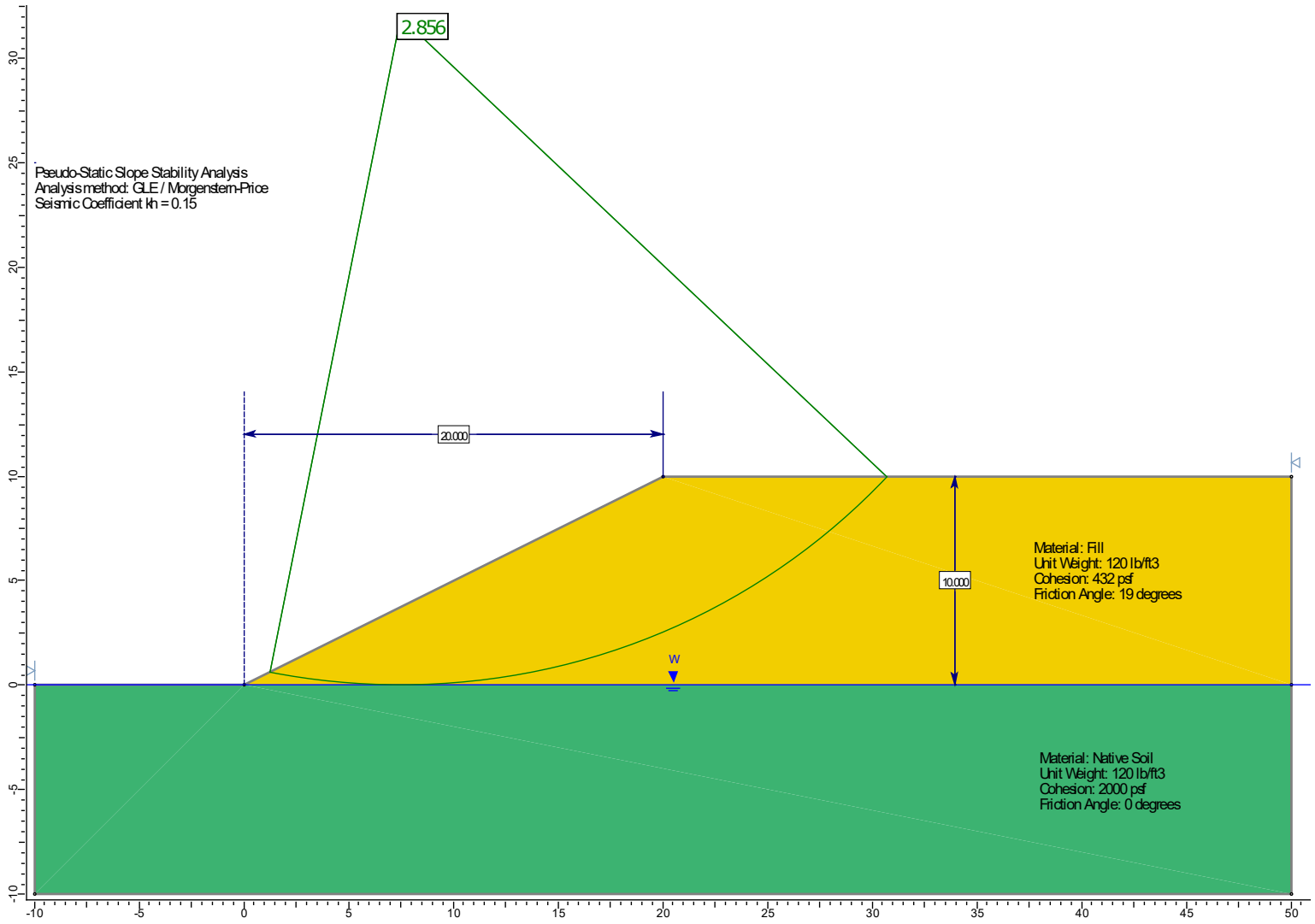

Figure C-1 Pseudo-Static Slope Stability Analysis