Agoura Village Specific Plan Update Project

Recirculated Public Review Initial Study / Mitigated Negative Declaration

February 2024

Lead Agency:

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1.0 Introduction

1.1 Background and Purpose

The City of Agoura Hills ("City") prepared an Initial Study/Mitigated Negative Declaration ("IS/MND") for the Kanan Road/Agoura Road Ultimate Intersection Improvement project ("Intersection Component") (SCH No. 2022120241). The IS/MND evaluated the environmental impacts associated with construction and operation of the Intersection Component. The Intersection Component proposed to amend the 2008 Agoura Village Specific Plan ("2008 AVSP") to change the Kanan Road/Agoura Road intersection design from a roundabout to a standard intersection. The Intersection Component IS/MND was made available for review and comment to the public, responsible and trustee agencies, interested groups, and organizations for a 30-day review period that occurred between December 15, 2022 and January 13, 2023. The IS/MND was also made available directly to State agencies through the State Clearinghouse, Office of Planning and Research. Comments on the IS/MND were received only from one public agency (i.e., Caltrans). However, following the Intersection Component IS/MND's public review, further updates to the 2008 AVSP were proposed, necessitating revisions to the Intersection Component IS/MND.

After public notice was given on December 15, 2022, of the availability of the Intersection Component IS/MND for public review under State CEQA Guidelines § 15073 (i.e., before its adoption), significant new information was added to the Intersection Component IS/MND concerning the Agoura Village Specific Plan Update Project ("AVSPU" or "Proposed Project"). Therefore, pursuant to State CEQA Guidelines § 15073.5, because the Intersection Component IS/MND has been substantially revised after public notice of availability has previously been given pursuant to State CEQA Guidelines § 15072, but prior to its adoption, to ensure the public is not deprived of a meaningful opportunity to comment upon the new information, the City has elected to recirculate the IS/MND, thus, has prepared this Recirculated IS/MND. The Recirculated IS/MND, which replaces the Intersection Component IS/MND, is being recirculated for public review and comment per the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, as discussed below.

1.2 Statutory Authority and Requirements

This Recirculated IS/MND has been prepared in accordance with the California Environmental Quality Act ("CEQA") (Public Resources Code [PRC] § 21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations [CCR], § 15000 et seq). Pursuant to State CEQA Guidelines § 15063, this Recirculated IS/MND has been conducted to determine if the Proposed Project would have a significant effect on the environment.

Pursuant to State CEQA Guidelines § 15063, the purposes of an Initial Study are to:

- Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report ("EIR") or a Negative Declaration ("ND");
- Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a ND;
- Assist in the preparation of an EIR, if one is required;
- Facilitate environmental assessment early in the design of a project;

- Provide documentation of the factual basis for the finding in a ND that a project will not have a significant effect on the environment;
- Eliminate unnecessary EIRs; and
- Determine whether a previously prepared EIR could be used with the project.

This Initial Study is intended to be used as a decision-making tool for the Lead Agency and responsible agencies in considering and acting on the Proposed Project. Responsible agencies would comply with State CEQA Guidelines by considering this environmental analysis for discretionary actions associated with Proposed Project implementation, if any.

State CEQA Guidelines § 15063(g) specifies that as soon as a Lead Agency has determined that an Initial Study will be required for a project, the Lead Agency shall consult informally with all Responsible Agencies and all Trustee Agencies responsible for resources affected by a project to obtain their recommendations as to whether an EIR or ND should be prepared.

As discussed in **Section 1.1: Background and Purpose**, because significant new information was added to the Intersection Component IS/MND concerning the proposed AVSPU, the City has elected to recirculate the IS/MND, thus, has prepared this Recirculated IS/MND. State CEQA Guidelines § 15073.5 specifies that a "lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to State CEQA Guidelines § 15072, but prior to its adoption." As such, this Recirculated IS/MND has been prepared to evaluate the potential environmental effects of the Proposed Project (i.e., the AVSPU), inclusive of the Intersection Component, and other 2023 AVSP components, as described below.

1.3 Proposed Project Background and History

The AVSP is the City's long-range planning effort to lead the revitalization, appropriate uses, and beautification of the Agoura Village ("Village"). The AVSP is a comprehensive document that identifies the vision for the Village and provides regulations and guidelines for new development and redevelopment, streetscape beautification, and mobility improvements. The Agoura Hills City Council adopted the 2008 AVSP ("2008 AVSP" or "Approved Project") and certified the supporting updated Final Revised and Recirculated Program Environmental Impact Report ("Certified PEIR") (State Clearinghouse [SCH] No. 2003111051) on October 22, 2008 (Resolution 08-1503). One of the 2008 AVSP's proposed components was a roundabout at the Kanan Road/Agoura Road intersection, which was evaluated throughout the Certified PEIR as the Preferred Alternative.

In September 2014, the City Council voted to discontinue the Kanan Road/Agoura Road roundabout as the Preferred Alternative because of the large amount of property outside of the existing right-of-way ("ROW") which the City would need to acquire to construct the roundabout. Hence, to limit ROW acquisition, the City Council authorized the design of a widened standard four-leg signalized intersection as the ultimate configuration. The standard intersection (i.e., the Intersection Component) was analyzed in the Intersection Component IS/MND, which was completed and circulated for public review December 15, 2022 through January 13, 2023, but not adopted by the City.

In early 2022, the City initiated preparation of a comprehensive update to the 2008 AVSP, which would identify an appropriate mix of land uses and meet the needs of the Agoura Hills 2021-2029 Housing Element Update ("2021-2029 HEU"). The updated AVSP (i.e., "2023 AVSP") includes the 15 Planning Principles (see 2023 AVSP, page 7) that were established as a framework for a Citizens Advisory Group ("CAG") to guide and make recommendations on the AVSPU. In June 2022, after numerous meetings with the CAG, property owners, and City staff, the recommendations on the AVSPU were presented to the City

Council; see 2023 AVSP Appendix C: Agoura Village Specific Plan Update Citizens Advisory Group. As such, the Proposed Project includes updates to the 2008 AVSP, which are based on CAG's Planning Principles, and which consider the Intersection Component and the 2021-2029 HEU.

In October 2022, the State Department of Housing and Community Development ("HCD") certified the City's 2021-2029 HEU, which addresses the 6th Cycle Regional Housing Needs Assessment ("RHNA"). On August 10, 2022, the City Council certified the City of Agoura Hills General Plan Housing Element, Community Conservation and Development, Community Safety, Infrastructure and Community Services, and Natural Resources Elements Update Subsequent Program Environmental Impact Report ("GPU FEIR") (State Clearinghouse No. 2021090588). The 2021-2029 HEU identified a total of 20 opportunity housing sites (Sites A-T), with a development potential of 2,348 dwelling units ("DU"). The 2021-2029 HEU rezoned all housing opportunity sites with a new Affordable Housing Overlay ("AHO") District. This optional overlay would layer on top of the base zoning regulations and would allow a density increase and "by right" (i.e., ministerial) approval process, with no additional project-specific CEQA review, in exchange for providing at least 20 percent of the proposed units affordable at the lower income ranges. Other projects that could undergo a ministerial approval process include qualified projects under Government Code § 65913.4 (SB 35) and projects on sites identified in a prior housing element where at least 20 percent of the proposed units were affordable at the lower income ranges. Developments that do not meet any of the above characteristics would not be considered ministerial and would be subject to project-specific CEQA analysis at that time.

For projects proposed under the AHO and approved ministerially, the City developed a set of objective design and development standards ("Objective Standards") that were adopted within the Zoning Ordinance, as part of the General Plan Update; see GPU FEIR Section III: Project Description. As such, any future project within the AVSP would be subject to compliance with the City's Objective Standards, which would be applied for purposes of environmental impact analysis. The AHO District and the Objective Standards were analyzed as part of the GPU FEIR; see **Section 1.5: Incorporation by Reference** below.

Under a typical development review within the AVSP area, the City would condition an applicant to construct half-width street frontage improvements pursuant to the street sections in 2008 AVSP Chapter 3: Mobility - Street Improvements, which depict the future road conditions in the AVSP area. However, because the City recognized the City's Objective Standards did not include specific details related to street frontage improvements, the 2023 AVSP also proposes the Street Frontage Objective Design Standards Checklist ("Street Frontage Standards"), which would apply to all projects within the AVSP area (excluding those with frontage along the Intersection Component site). The Street Frontage Standards (see 2023 AVSP Chapter 4: Mobility – Vehicular Circulation, Proposed Roadway System) are intended to provide clarity regarding required street frontage improvements within the AVSP and shorten review and processing times for ministerial projects; see **Section 2.5: Project Characteristics** below for further discussion concerning the proposed Street Frontage Standards. As such, any future project within the AVSP area would be subject to compliance with the Objective Standards and the proposed Street Frontage Standards; see GPU FEIR Section III: Project Description and 2023 AVSP Chapter 4: Mobility, respectively.

Of the 20 opportunity housing sites identified in the 2021-2029 HEU, eight sites (Sites A, B, C, E, G, I, J, and K) with a development potential of up to 1,016 DU, are within the AVSP area. Of the eight opportunity housing sites within the AVSP area, small portions of two sites (0.14 acre in Site A and 0.04 acre in Site B) are within the Intersection Component site.

1.4 Summary of Findings

Pursuant to State CEQA Guidelines § 15367, the City, as Lead Agency, has the authority for environmental review and adoption of the environmental documentation, in accordance with State CEQA Guidelines.

This Initial Study has evaluated the environmental issues outlined in **Section 3.2: Environmental Factors Potentially Affected**. It provides decision-makers and the public with information concerning the Proposed Project's potential environmental effects and recommended mitigation measures, if any.

Based on the Environmental Checklist Form (see **Section 3.0**) and supporting environmental analysis (see **Section 4.0**), the Proposed Project would have no impact or a less than significant impact concerning all environmental issue areas, except the following, for which the Proposed Project would have a less than significant impact with mitigation incorporated:

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Mandatory Findings of Significance

As set forth in State CEQA Guidelines § 15070, an Initial Study leading to a Mitigated Negative Declaration can be prepared when the Initial Study identifies potentially significant effects, but (1) revisions would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.5 Initial Study Public Review Process

The Notice of Intent (NOI) to Adopt a MND has been provided to the Clerk of the County of Los Angeles and mailed to all Responsible Agencies and Trustee Agencies concerned with the Proposed Project and other public agencies with jurisdiction by law over resources affected by the Proposed Project. A 30-day public review period has been established for the Initial Study in accordance with State CEQA Guidelines § 15073. During the public review period, the Initial Study, including the Technical Appendices, are available for review on the City's website, at:

https://www.agourahillscity.org/department/planning-community-development/environmental-documents-for-public-review.

In reviewing the Initial Study, affected Responsible Agencies, Trustee Agencies, and the interested public should focus on the document's adequacy in identifying and analyzing the Proposed Project's potential environmental effects and the ways in which the potentially significant effects can be avoided or mitigated. Written comments on this Initial Study may be sent to:

Denice Thomas, AICP, Community Development Director
City of Agoura Hills, Community Development Department
30001 Ladyface Court
Agoura Hills, CA 91301
Email: DThomas@agourahillscity.org

Following receipt and evaluation of comments from agencies, organizations, and/or individuals, the City will determine whether any substantial new environmental issues have been raised. If so, further documentation may be required. If no substantial new environmental issues have been raised or if the issues raised do not provide substantial evidence that the Proposed Project would have a significant effect on the environment, the Initial Study will be considered for adoption and the Proposed Project for approval.

1.6 Incorporation by Reference

Pursuant to State CEQA Guidelines § 15150, an Initial Study may incorporate by reference all, or portions of, another document which is a matter of public record or is generally available to the public. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the Initial Study's text.

Unless otherwise noted, the references outlined below are available for review on the City's website, at:

https://www.agourahillscity.org/department/planning-community-development/general-plan

https://www.agourahillscity.org/department/planning-community-development/agoura-village-specific-plan

Agoura Hills Municipal Code. The Agoura Hills Municipal Code ("AHMC") regulates municipal affairs within the City's jurisdiction including, without limitation, the zoning regulations codified in AHMC Article IX: Zoning (known as the "Zoning Ordinance of the City of Agoura Hills" hereafter referred to as "Zoning Ordinance"). The Zoning Ordinance was adopted to accomplish the City of Agoura Hills General Plan's ("General Plan") stated goals, objectives, and policies, and to implement the General Plan. To accomplish these matters, the Zoning Ordinance is intended to regulate: the use of buildings, structures and land; the location, height, bulk, number of stories and size of buildings and structures; the size and use of lots, yards, courts and other open spaces; the percentage of a lot which may be occupied by a building or structure; and the intensity of land use. The Zoning Ordinance is also intended to establish requirements for: off-street parking and loading; building setback lines; and other aspects of land use regulation which may be deemed necessary for the public peace, health, safety, morals, and general welfare of the people working and living within the City. Further, the Zoning Ordinance is intended to preserve and maintain the natural character and visual quality of hillsides as a scenic resource by establishing regulations for hillside development. The AHMC is referenced throughout this Initial Study to establish the Proposed Project's baseline regulatory requirements.

The AHMC is available for review at:

https://library.municode.com/ca/agoura_hills/codes/code_of_ordinances

Agoura Village Specific Plan Updated Final Revised and Recirculated Program Environmental Impact Report (Rincon Consultants, Inc., August 2008) (SCH No. 2003111051) (Certified PEIR). This document analyzes the potential environmental impacts that would result from implementation of the 2008 AVSP ("Approved Project"). The analysis includes consideration of various roadway improvements and 2008 AVSP land use and development standards, design guidelines, and a street beautification program. The 2008 AVSP elements, which were analyzed in the Certified PEIR and are relevant to the Proposed Project, are described in the following AVSP Chapters:

- 2008 AVSP Chapter 2: Existing Conditions – Traffic Circulation Summary
- 2008 AVSP Chapter 3: Mobility
    - Traffic Calming Elements: Curb Extensions/Bulb-Outs, Accent Paving, Street Trees, Medians and Refuge Islands, On-Street Diagonal Parking, Narrowed Travel Lanes, and Roundabouts,
    - Street Improvements,
    - Bicycle Circulation: Bike Travel and Bicycle Parking,
    - Bus Stops,

- Equestrian/Trail Access, and
- Parking Strategies

- 2008 AVSP Chapter 4: Land Use and Development Standards
  - Land Uses
  - Development Standards
  - Village Zoning Plates
- 2008 AVSP Chapter 5: Design Guidelines
  - Site Planning and Design: Pedestrian and Vehicular Connections, Parking Lot Design and Treatment,
- AVSP Chapter 6: Street Beautification and Public Improvements:
  - Village Gateways and Signage: Village Monuments, Village Gateways
  - Street Furnishings: Street and Pedestrian Lighting, Benches and Trash Receptacles, Bicycle Racks, Paving Materials, and Bollards
  - Landscape Recommendations.

This Certified PEIR concluded 2008 AVSP implementation, including the above elements, would result in significant unavoidable adverse impacts related to air quality because construction and operational emissions would exceed established South Coast Air Quality Management District ("SCAQMD") thresholds for reactive organic gases ("ROG") and nitrogen oxides ("NO_x"). Additionally, the Certified PEIR concluded a significant unavoidable adverse impact related to traffic because 2008 AVSP buildout would result in an additional 17,593 new average daily trips onto the local circulation network and would cause Agoura Road east of Kanan Road to operate below the City's Level of Service (LOS) C standard. However, it is noted that with the California Natural Resources Agency's certification and adoption of the changes to the State CEQA Guidelines in 2018, automobile delay, as measured by LOS and other similar metrics generally no longer constitutes a significant environmental effect under CEQA (PRC § 21099). The Certified PEIR further concluded 2008 AVSP implementation would result in significant impacts that can be mitigated to less than significant concerning aesthetics, biological resources, hazards and hazardous material, hydrology and water quality, land use, and public services. The Certified PEIR was used throughout this Initial Study as a source of baseline data and environmental impact analysis coverage for the proposed AVSPU, including the proposed Street Frontage Standards and General Plan Amendment (GPA) road classification updates.

City of Agoura Hills General Plan (PBS&J, March 2010). The City adopted its General Plan in March 2010. The General Plan is comprised of the following "super elements" and companion "sections":

- Community Conservation and Development
  - Land Use & Urban Form
  - Economic Development
  - Historic and Cultural Resources
- Infrastructure and Community Services
  - Mobility
  - Community Services
- Utility Infrastructure
- Natural Resources
  - Open Space
  - Visual Resources
  - Biological Resources
  - Water
  - Mineral Resources
  - Energy Conservation

- Community Safety
  - Flood Hazards
  - Geological and Seismic Hazards
  - Wildland and Urban Fire Hazards
  - Crime Prevention and Protection
  - Hazardous Materials
  - Emergency Preparedness
  - Noise
- Implementation Plan

The General Plan outlines the City's goals, plans, and objectives for land use within the City's jurisdiction. The General Plan was used throughout this Initial Study as a source of baseline data and City policy requirements. While there is a General Plan Update (described below), only certain General Plan super elements (Housing Element, Community Conservation and Development, Community Safety, Infrastructure and Community Services, and Natural Resources) were updated; therefore, where necessary, updated information from the General Plan Update is used in this Initial Study.

City of Agoura Hills General Plan Final Environmental Impact Report (PBS&J, February 2010) (SCH No. 2009051013) ("General Plan FEIR"). This document analyzed the potential environmental impacts that would result from General Plan implementation, with a forecast 2035 buildout. The General Plan FEIR assumed a population of 25,394 persons, a housing stock of 8,139 DU, and non-residential development totaling 1,997,530 SF at buildout. The General Plan FEIR was used throughout this Initial Study as a source of baseline data and mitigation requirements. As previously noted, while there is a General Plan Update (described below), only certain elements were updated; therefore, updated information from the GPU FEIR is used in this Initial Study, as appropriate.

City of Agoura Hills General Plan Update (Karen Warner Associates, August 2022). The General Plan Update ("GPU") included the 2021-2029 HEU and related updates to the Community Conservation and Development, Community Safety, Infrastructure and Community Services, and Natural Resources Chapters and corresponding amendments to the Zoning Map to create and implement the AHO District.

In addition to the above updates, other changes were made to the General Plan in response to recent State legislation, including goals and polices for wildland and urban fire hazards, flood hazards, a climate change vulnerability assessment, and climate change adaptation and resiliency strategies in the General Plan Community Safety Chapter. Additionally, the City adopted the Transportation Study Guidelines for Vehicle Miles Traveled ("VMT") in July 2020. The General Plan Infrastructure and Community Services Chapter - Mobility Section goals and policies were updated per State requirements to reflect the use of VMT methodology when assessing development project traffic under State CEQA Guidelines. The General Plan Natural Resources Chapter text and policies were also updated concerning air quality and the location of certain housing opportunity sites along major traffic corridors.

In October 2022, HCD certified the City's 2021-2029 HEU, which addresses the 6th Cycle RHNA, establishes the City's strategy for housing development, and guides all housing activities in the City. The 2021-2029 HEU identified a total of 20 opportunity housing sites, with a development potential of 2,348 DU. Of the 20 opportunity housing sites, eight sites (Sites A, B, C, E, G, I, J, and K) with a development potential of 1,016 DU, are within the AVSP area. Of the eight opportunity housing sites within the AVSP area, portions of two sites (Sites A and B) are within the Intersection Component site. This Initial Study analyzes the AVSPU's consistency with the 2021-2029 HEU, concerning Sites A and B, which are adjacent to the Intersection Component.

City of Agoura Hills General Plan Update Final Subsequent Program Environmental Impact Report ("GPU FEIR") (EcoTierra Consulting, August 2022) (SCH No. 2021090588). This document analyzes the potential environmental impacts that would result from implementation of the GPU, which includes the 2021-2029 HEU, and related updates to the Community Conservation and Development, Community Safety, Infrastructure and Community Services, and Natural Resources Elements and adoption of land use and

zoning regulations (i.e., Agoura Hills Zoning Code and Specific Plan amendments) and the corresponding amendments to the Zoning Map to create and implement the AHO District. The 2021-2029 HEU also required re-zoning of some proposed opportunity sites and amending specific plans for others. The adoption of land use and zoning regulations and the corresponding amendments to the Zoning Map to create and implement the AHO were evaluated under this document at the same time as the GPU.

A total of 20 sites, including eight within the AVSP (Sites A, B, C, E, G, I, J, and K) were selected as those most viable and suitable for development within the eight-year planning period. The eight opportunity housing sites within the AVSP area would develop between 685 and 1,016 DU. The GPU FEIR analyzes the maximum impact that could occur under the GPU by assuming development of these 20 housing opportunity sites at the "higher" development scenario. As such, the GPU FEIR analyzed the environmental impacts associated with up to 1,016 DU within the AVSP area, which is the maximum allowable buildout capacity allowed under the 2021-2029 HEU, and associated population growth of 2,805 persons.[1]

The 2021-2029 HEU rezoned all housing opportunity sites with a new AHO District. This optional overlay would layer on top of the base zoning regulations and would allow a density increase and a ministerial approval process, with no additional project-specific CEQA review, in exchange for providing at least 20 percent of proposed units affordable at the lower income ranges. For projects proposed under the AHO and that would be approved ministerially, the City has developed Objective Standards that were adopted simultaneously as part of the GPU within the Zoning Ordinance. The Objective Standards are provided within GPU FEIR Section III: Project Description by environmental impact threshold (e.g., Aesthetics, Biological Resources, Cultural Resources, etc.) and are designed to avoid/lessen environmental impacts from ministerial projects on AHO sites. The Objective Standards, which were analyzed in the GPU FEIR and are relevant to the Proposed Project, include lighting standards (i.e., height limitations, shielding requirements, illumination levels), material standards, buffer distances for biological resources, oak tree preservation, technical report requirements (i.e., Cultural Resources Report, SWPPP, SUSMP, ESCP, etc.), and plan submittal requirements (i.e., site access plans).

The GPU FEIR concluded GPU implementation, including the above-mentioned components, would result in significant and unavoidable impacts related to air quality because construction and operational emissions would exceed established South Coast Air Quality Management District ("SCAQMD") thresholds for reactive organic gases ("ROG") and nitrogen oxides ("NO_x"). The GPU FEIR also concluded a significant and unavoidable impact related to construction and traffic noise that would exceed City standards. The GPU FEIR concluded GPU implementation would result in a less than significant or no impact related to all other environmental issues analyzed in the FEIR. The GPU FEIR was used throughout this Initial Study as a source of baseline data and environmental impact analysis coverage for the AVSPU, including the allowable buildout capacity, Street Frontage Standards, and GPA road classification updates.

Kanan Road/Agoura Road Ultimate Intersection Improvements Project Initial Study/Mitigated Negative Declaration (Kimley-Horn, December 2022) (SCH No. 2022120241). The Kanan Road/Agoura Road Project IS/MND analyzed the potential environmental impacts that would result from the Intersection Component (Intersection Component IS/MND). The Intersection Component IS/MND determined that the Intersection Component would have no impact or a less than significant impact concerning all environmental issue areas, except concerning aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, tribal cultural resources, and utilities and services systems, which would have a less than significant impact with mitigation

[1] Agoura Hills General Plan Update Draft SEIR Page IV.J-14 – Estimated population increase was based on an average household size for Agoura Hills of 2.76 persons per household. State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State – January 1, 2011-2021. Sacramento, California, May 2021.

incorporated. The Intersection Component IS/MND was circulated for public review December 15, 2022, through January 13, 2023, but was not adopted by the City Council. The Intersection Component IS/MND was used throughout this Initial Study as the base analysis, which has been updated to incorporate other 2023 AVSP components, as described in **Section 2.5: Project Characteristics**; see also **Section 1.1: Statutory Authority and Requirements**.

Agoura Village Specific Plan, April 2023 Draft (RRM Design, April 2023). On October 22, 2008, the Agoura Hills City Council adopted the 2008 AVSP, which established a long-range planning effort that would lead to the revitalization, the appropriate use, and the beautification of the Agoura Village area. The 2008 AVSP included extensive design standards for ROW and private development design. In addition to the design standards within the 2008 AVSP, the 2023 AVSP expands on the existing design standards to include the Street Frontage Standards, which outline the specific street frontage improvement requirements by road classification to create clear requirements for applicants/developers pursuing a ministerial approval either on an AHO site, or within the AVSP area. The intent behind the Street Frontage Standards is to generate greater certainty for applicants and encourage shorter City review times for applicants/developers pursuing approvals within the AVSP area.

Further, in 2022, the City tasked staff with the preparation of an update to the 2008 AVSP. As part of this update, the City Council established 15 Planning Principles as a framework for the AVSP CAG to provide guidance and form recommendations for the AVSPU. The CAG met with the AVSPU project team, including City staff and RRM Design Group, between February 2021 and January 2022 for a total of 11 meetings. In addition to the AVSP revisions, which also include the Intersection Component and Street Frontage Standards, the AVSPU reorganizes the 2008 AVSP for consistency with current planning practices, reduces duplicative content, and allows for concise location of information. The AVSPU is analyzed in this Initial Study.

1.7 Report Organization

This document is organized into the following sections:

Section 1.0: Introduction provides an introduction to the Proposed Project, cites the State CEQA Guidelines to which the Proposed Project is subject, summarizes the Initial Study's conclusions, identifies the public review process, and identifies source documents.

Section 2.0: Project Description describes and shows the Proposed Project's location, environmental setting, characteristics, land use designations and zoning, construction phasing, and agreements and required permits and approvals. This Section also identifies the Initial Study's intended uses, including a list of anticipated permits and other approvals.

Section 3.0: Environmental Checklist Form provides the Proposed Project information and an overview of potential impacts that may or may not result from Proposed Project implementation.

Section 4.0: Evaluation of Environmental Impacts provides an analysis of potential environmental impacts identified in the environmental checklist.

Section 5.0: References identifies resources used to prepare the Initial Study.

2.0 Project Description

2.1 Project Location

The Proposed Project area is in the City of Agoura Hills ("City"), in the western portion of the County of Los Angeles ("County"). **Figure 2-1: Regional Vicinity Map,** depicts the Proposed Project area in a regional context. Agoura Hills is located in the foothills of the Santa Monica Mountains in the Conejo Valley on the County's western edge, along U.S. Highway 101 ("US 101"), approximately 30 miles west of downtown Los Angeles and four miles east of the boundary between Ventura and Los Angeles counties. **Figure 2-2: Local Vicinity Map** depicts the boundaries of the approximately 135-acre AVSP area and shows it is in the City's southern portion and generally around the Kanan Road/Agoura Road intersection. This Initial Study considers AVSPU policy updates that apply throughout the AVSP area, which includes the Intersection Component area.

The Intersection Component area comprises approximately 6.1 acres in the AVSP area's north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange; see **Figure 2-3: Intersection Component**. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location (see **Section 2.5: Project Characteristics** below), which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. As shown in **Figure 2-3**, the Intersection Component is generally comprised of three discontinuous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

Figure 2-4: AVSP Housing Opportunity Sites depicts the locations of the housing opportunity sites within the AVSP area (i.e., Sites A, B, C, E, G, I, J, and K) and shows Sites A and B are along Kanan and Agoura Roads, within the Intersection Component.

The Street Frontage Standards would apply to the street frontages for all projects within the AVSP, including certain ministerial projects within the AVSP area (excluding those with frontage along the Intersection Component site). **Figure 2-5: AVSP Road Classifications** depicts the locations of the AVSP area's Semi-Rural, Secondary, and Primary Arterials, and Collector streets where Street Frontage Standards would apply (i.e., Roadside Drive, Agoura Road, Cornell Road, and Kanan Road). The types of improvements proposed under the Street Frontage Standards were previously evaluated for environmental impacts in the Certified PEIR[2] and/or the GPU FEIR[3] as part of the future road conditions.

The Proposed Project footprint is the area that would be physically affected by Proposed Project construction (i.e., temporary disturbances and permanent infrastructures), operations, and maintenance. Except for the Intersection Component, the proposed AVSPU includes policy updates, which either do not have the potential for causing a significant effect on the environment or result in a net increase in residential development that was previously evaluated for environmental impacts in the GPU FEIR, or which include street improvements

[2] City of Agoura Hills. (2008). Agoura Village Specific Plan Updated Final Revised and Recirculated Environmental Impact Report

[3] City of Agoura Hills. (2022). City of Agoura Hills General Plan Draft Subsequent Program Environmental Impact Report

consistent with the future road conditions previously evaluated for environmental impacts in the Certified PEIR and GPU FEIR.

Because the policy updates that may result in a net increase in residential development and street frontage improvements were previously evaluated for potential environmental impacts (see **Section 1.5: Incorporation by Reference**), for purposes of the analysis in this Initial Study, the Intersection Component is considered to be the Proposed Project's footprint.

The Intersection Component footprint encompasses multiple portions along Agoura Road and Kanan Road and totals approximately 6.1 acres. Most of the Intersection Component footprint (approximately 5.2 acres or approximately 227,870 SF) is within existing public (i.e., City) ROW, but a small portion of the footprint (approximately 0.89 acre or approximately 38,576 SF) involves private properties; see **Table 2-1: Intersection Component – Site Breakdown.**

Table 2-1: Intersection Component - Site Breakdown

Improvement	Public Right-of-Way	Private Property
Kanan Road/Agoura Road Intersection Improvements	138,813 SF (approximately 5,505 SF overlaps with Utility Undergrounding)	9,068 SF (APN 2061-004-034, 2061-031-020, 2061-006-052, and 2061-032-021, in part)
Kanan Road/Agoura Road Right-of-Way Acquisition	Not applicable	7,767 SF[1] (APN 2061-031-020 and 2061-032-021, in part)
Agoura Village Gateway Monument South Location (on Kanan Road)	3,010 SF (approximately 2,976 SF overlaps with Utility Undergrounding)	1,444 SF (APN 2061-031-020, 2061-032-022, and 2061-032-028, in part)
Kanan Road Utility Undergrounding	44,359 SF (approximately 15,728 SF overlaps with Intersection Improvements, South Pilaster Location, and Monument Location)	Not applicable
City Gateway Entry Monuments Location (on Kanan Road)	7,247 SF (approximately 7,247 SF overlaps with Utility Undergrounding)	10,534 SF (APN 2061-031-020 and 2061-032-028, in part)
Agoura Village Gateway Monument East Location (on Agoura Road)	9,885 SF	4,125 SF (APN 2061-007-905 and 2061-029-004, in part)
Agoura Village Gateway Monument West Location (on Agoura Road)	19,085 SF	5,638 SF (APN 2061-004-046, 2061-004-049, and 2061-032-025, in part)

Note:
1. Upon Proposed Project buildout, this land would become public ROW.

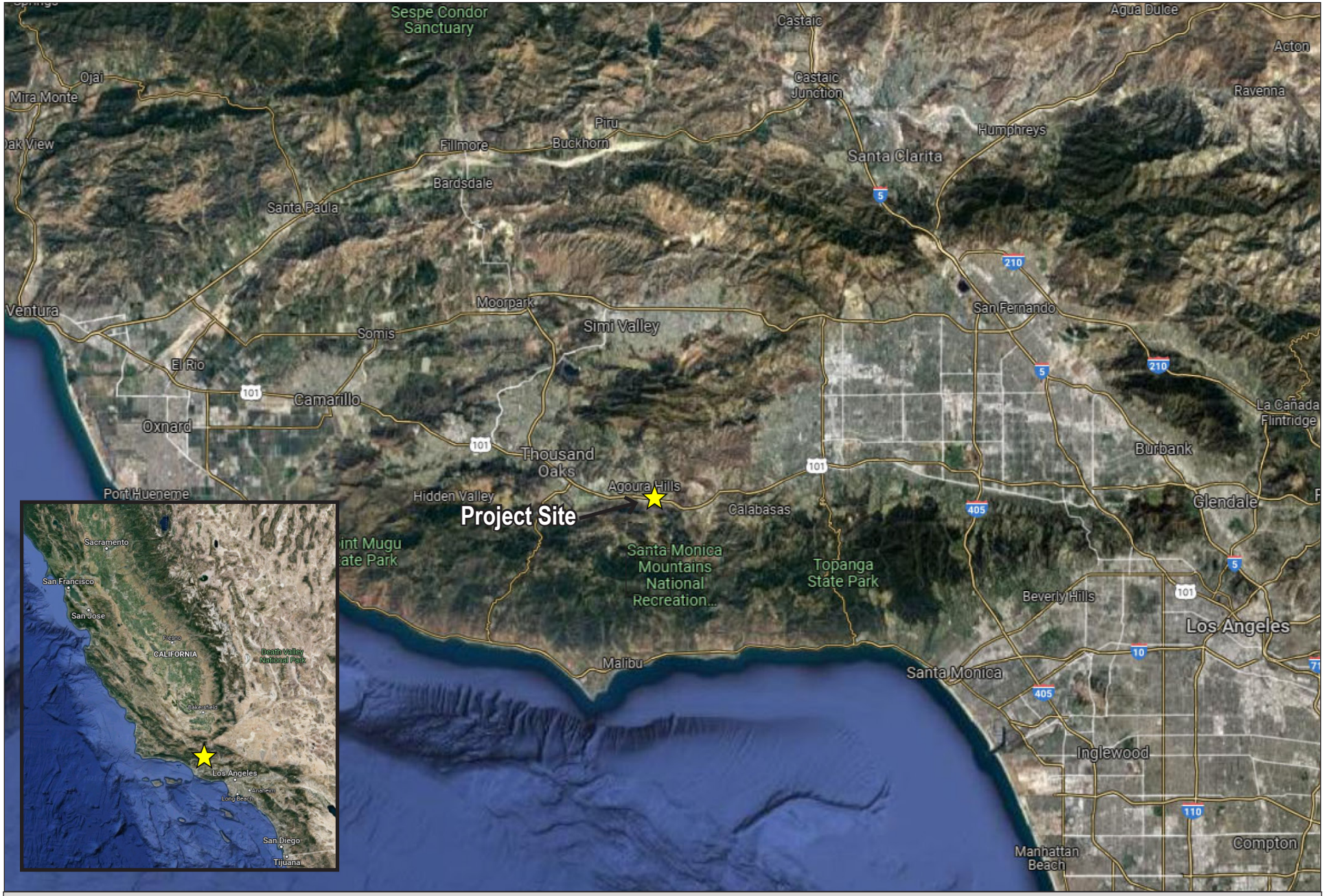

FIGURE 2-1: REGIONAL VICINITY MAP

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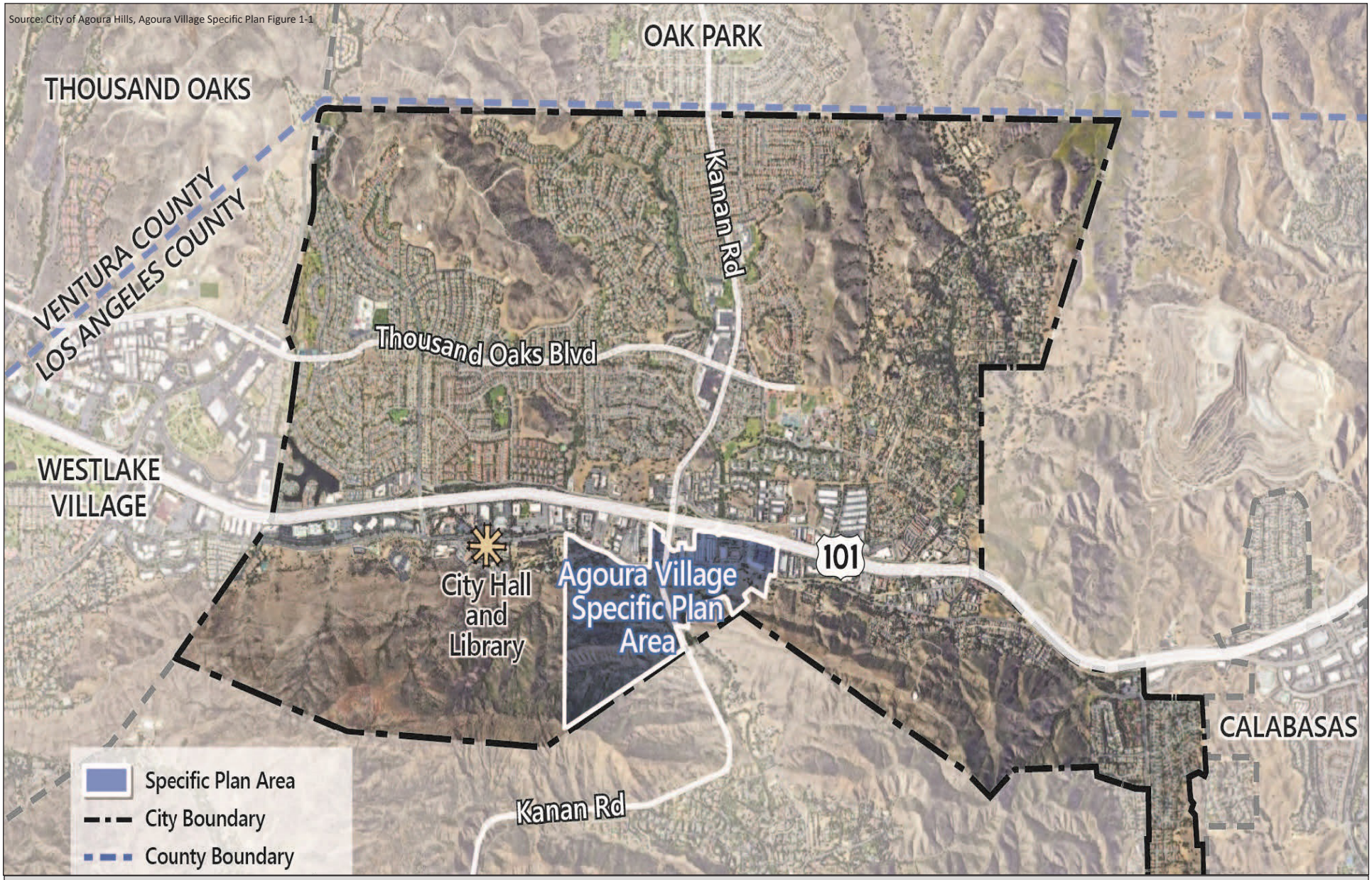

FIGURE 2-2: LOCAL VICINITY MAP
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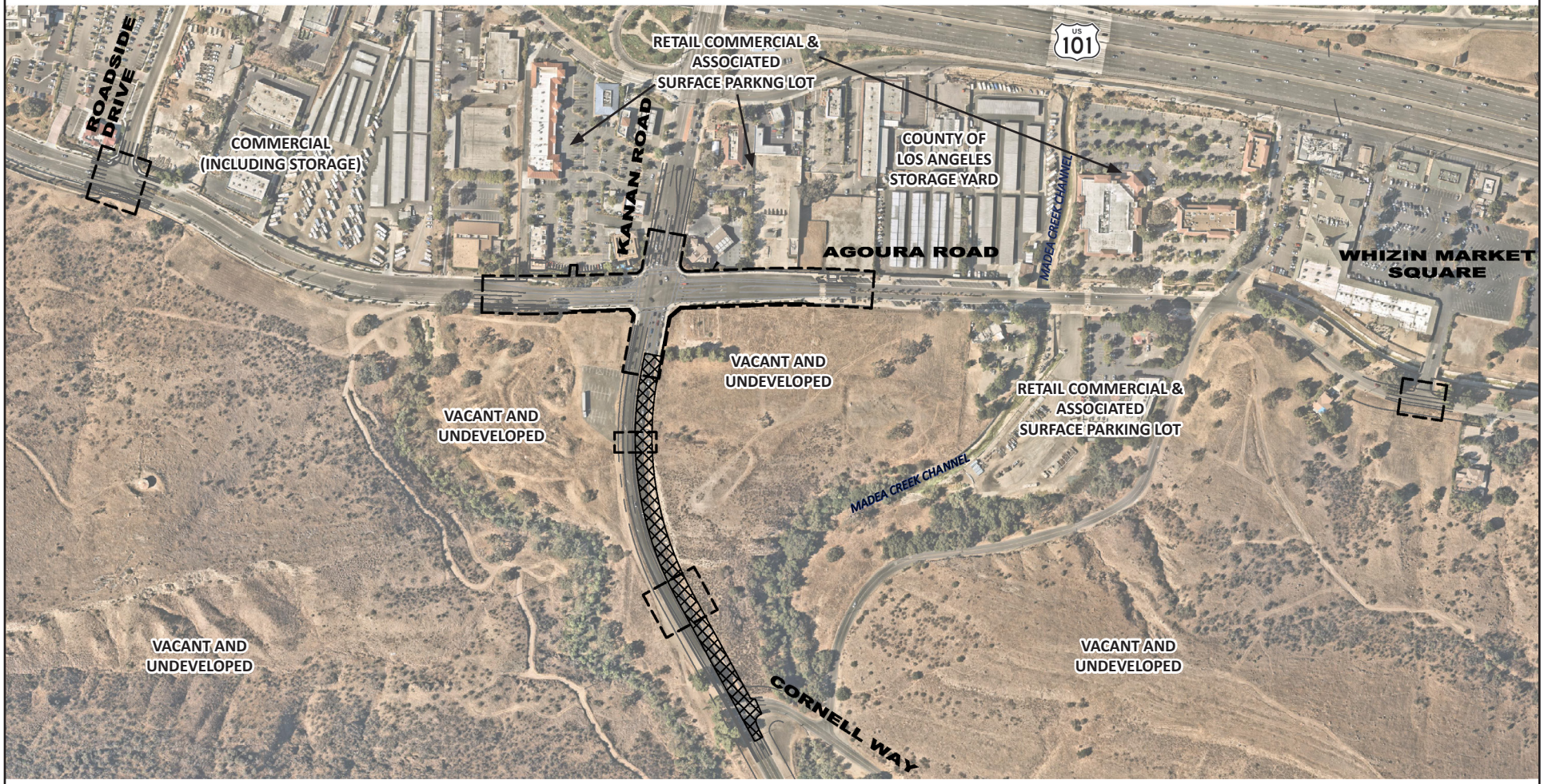

Note: Specific Project features are provided in Figure 2-12: Proposed Kanan Road/Agoura Road Intersection.

FIGURE 2-3: INTERSECTION COMPONENT
Agoura Village Specific Plan Update Project

SCALE: 1" = 300'

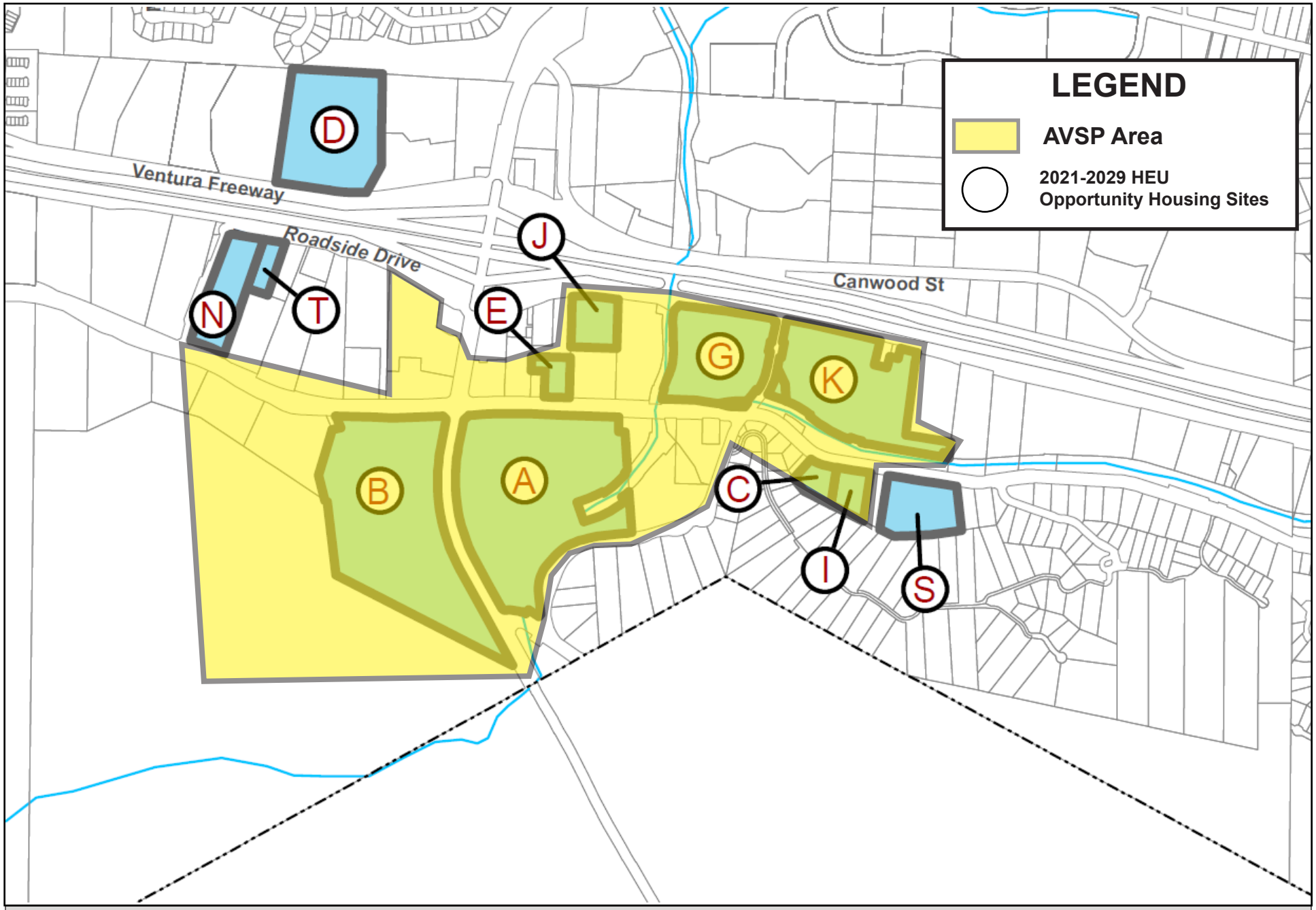

FIGURE 2-4: AVSP HOUSING OPPORTUNITY SITES
Agoura Village Specific Plan Update Project

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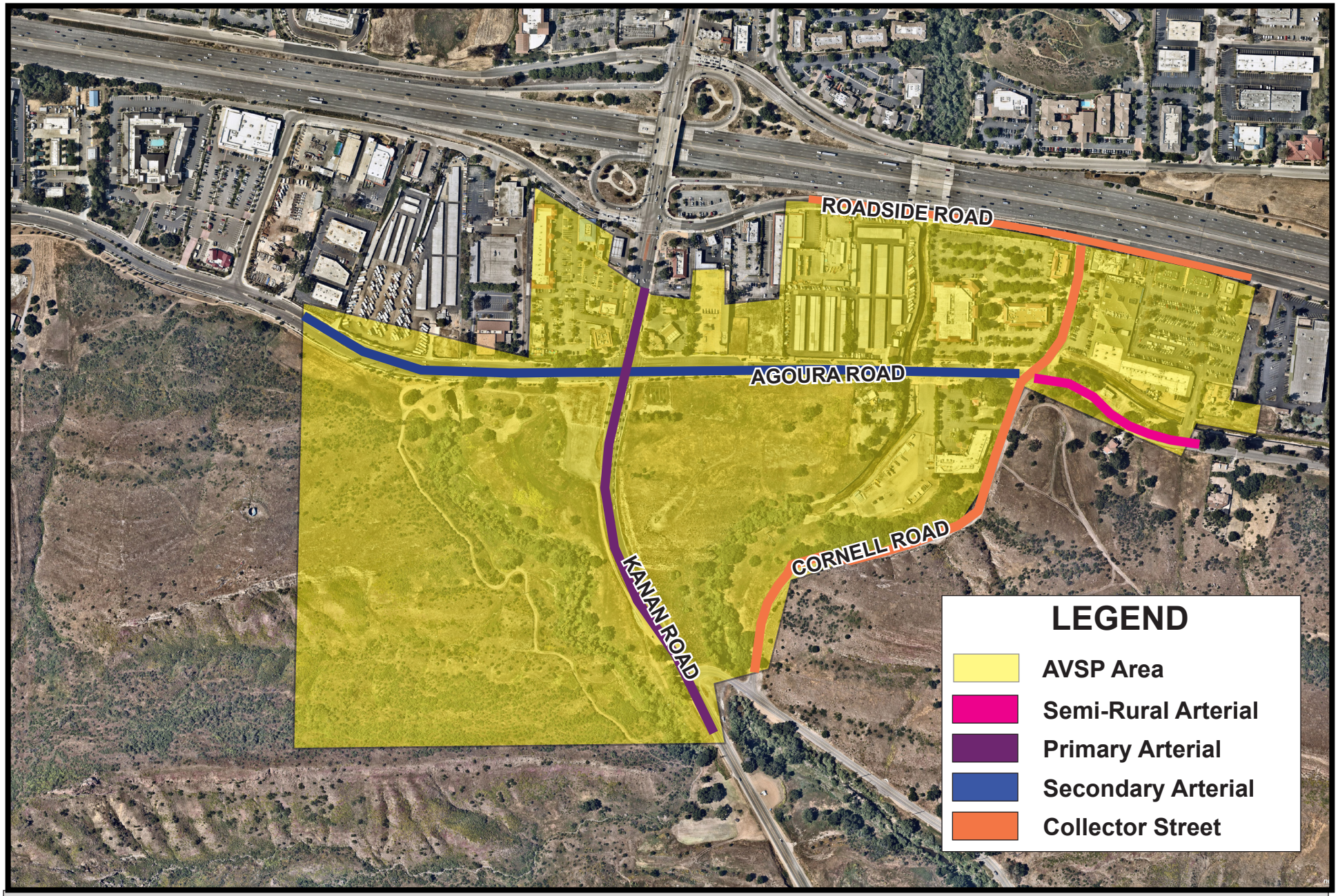

FIGURE 2-5: AVSP ROAD CLASSIFICATIONS
Agoura Village Specific Plan Update Project

NOT TO SCALE

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2.2 Environmental Setting

Specific Plan Update Area

The AVSP area is comprised of approximately 135 acres of developed and undeveloped land and characterized by parcels of various shapes and sizes and a mix of land uses. The AVSP area is bounded to the north by US 101, the south by mostly vacant and undeveloped lands, and the east and west by commercial and retail developments.

The Intersection Component site is situated in a partially urbanized area. Kanan Road bisects the City in a north-south orientation extending to and past the City limits. Agoura Road is oriented east-west extending to and past the City limits. US 101 provides regional access to the Intersection Component site.

The Intersection Component site is located adjacent to Ladyface Mountain, the Santa Monica Mountains, and the surrounding hillsides. The areas north of the Kanan Road/Agoura Road intersection are predominantly developed with commercial and industrial land uses. The areas south of Agoura Road and east and west of Kanan Road are currently vacant. The City's residential communities are further north and beyond US 101.

Intersection Component - Onsite Land Uses

Kanan Road is a well-utilized transportation corridor to Malibu and beach areas from Agoura Hills and surrounding inland areas. The existing Kanan Road/Agoura Road intersection configuration is depicted on **Figure 2-6: Existing Kanan Road/Agoura Road Intersection**, and its characteristics are summarized below:

- **North Leg:** Consists of a 100-foot ROW that includes sidewalks on both sides, two left-turn lanes, four through lanes, one right-turn pocket, and a raised concrete curb divider between the northbound and southbound lanes. See **Figure 2-6A: Existing Kanan Road/Agoura Road Intersection (North Leg)**.
- **South Leg:** Extends from Agoura Road south towards the City limits (approximately 60 feet south of the intersection of Cornell Road and Kanan Road) and includes the vacant "island" owned by the Mountain Recreation Conservation Authority at Cornell Road. The south leg consists of a 100-foot ROW that includes approximately 150 feet of sidewalk with landscaped buffer on the west side of Kanan Road and approximately 100 feet of sidewalk on the east side of Kanan Road, both of which terminate before the City limits. Southbound Kanan Road provides two through lanes and merges into one through lane 700 feet south of the intersection. Northbound Kanan Road is limited to one travel lane and later widens into two through lanes with a left-turn lane at the Kanan Road/Agoura Road intersection. An approximately 260-foot raised landscaped median exists between northbound and southbound Kanan Road towards the Kanan Road/Agoura Road intersection. Overhead power/telecommunication lines are located along Kanan Road. Vacant undeveloped lands are located on both the eastern and western sides of Kanan Road. See **Figure 2-6B: Existing Kanan Road/Agoura Road Intersection (South Leg)**.
- **East Leg:** Consists of a 100-foot ROW with sidewalks on both sides, Class II bike lanes,[4] striped median, and a pedestrian crossing. Vacant undeveloped land is located south of Agoura Road. Eastbound Agoura Road includes two travel lanes and a left-turn pocket into the Speedway gas

[4] City of Agoura Hills. 2022. General Plan Chapter 3, Infrastructure and Community Services Chapter, available at: https://www.agourahillscity.org/department/community-development/planning/general-plan-2035/general-plan-update, accessed August 2023.

station, eventually merging into one travel lane 150 feet east of the Kanan Road/Agoura Road intersection. Westbound Agoura Road begins as one travel lane and widens to a left-turn pocket lane, one travel through lane, and a right-turn pocket lane at the Kanan Road/Agoura Road intersection. See **Figure 2-6C: Existing Kanan Road/Agoura Road Intersection (East Leg)**.

- **West Leg:** Consists of a 100-foot ROW with sidewalks on both sides that contain landscape buffers, Class II bike lanes, and vacant undeveloped land south of Agoura Road. Eastbound Agoura Road contains two through lanes with left-turn pockets into various commercial uses north of the roadway. Eastbound lanes eventually widen to two left-turn lanes with one through lane at the Kanan Road/Agoura Road intersection. Westbound Agoura Road includes one through lane and eventually widens into two through lanes 475 feet west of the Kanan Road/Agoura Road intersection. See **Figure 2-6D: Existing Kanan Road/Agoura Road Intersection (West Leg)**.

As depicted in **Figures 2-6A** through **2-6D**, the existing improvements/uses within the Intersection Component site are asphalt-paved roadway, curbs, sidewalks, drainage elements, landscaping (59 trees including three landmark trees[5]), overhead power/telecommunication lines, and vacant lots.

Intersection Component - Surrounding Land Uses

Land uses north of the Intersection Component area include commercial and light industrial uses, while land uses to the south remain undeveloped and contain natural features. As depicted on **Figures 2-3** and **Figures 2-6A** through **2-6D** and summarized in **Table 2-2: Intersection Component - Existing Land Uses, Land Use Designations, and Zoning**, the land uses surrounding the Intersection Component site generally include a mix of retail commercial, residential, and open space uses.

[5] Landmark trees are trees that have been designated to be of historical or cultural value, and outstanding specimen, an unusual species, and/or of significant community benefit.

Table 2-2: Intersection Component - Existing Land Uses, Land Use Designations, and Zoning

Description	Existing On-the-Ground Land Uses	Existing General Plan Land Use Designation[1]	Existing Zoning[2,3]
Intersection Component site	Portions of the Intersection Component site are existing ROW. Portions of the Intersection Component site extend beyond the existing ROW into undeveloped private properties planned for residential and commercial uses (i.e., Specific Plan), including 0.14 and 0.04 acres of opportunity housing Sites A and B, respectively.	ROW not designated. Planned Development District (PD)	ROW not zoned. AVSP-Planned Development (PD) , Business Park-Office Retail (BP-OR) at east pilasters location; Planned Office and Manufacturing-Freeway Corridor (POM-FC) and Planned Office and Manufacturing-Mixed Use-Freeway Corridor (POM-MXD-FC) at west pilasters location. Zone A north, Zone A south, Zone B, Zone D east, Zone D west, Zone E, Zone F, and Zone G.
North of Intersection Component	Retail Commercial (Agoura Pointe Shopping Center), Church, US 101	PD and Commercial Retail Service (CRS)	AVSP-PD, Commercial Retail Service – Freeway Corridor (CRS-FC) and Planned Office and Manufacturing-Freeway Corridor (POM-FC) Zone A north, Zone D west
North of Agoura Village Gateway Monuments East Location	Retail Commercial (Whizin Market Square), US 101	PD and CRS	AVSP-PD Zone D east
North of Agoura Village Gateway Monuments West Location	Retail Commercial, Office, US 101	Planned Office and Manufacturing (POM)	POM-FC Not Applicable (outside the AVSP area)
South of Intersection Component	Vacant lands	PD	Commercial Retail Service – Drainage Way, Floodplain, Watercourse (CRS-D) Not Applicable (outside the AVSP area)
South of Agoura Village Gateway Monuments East Location	Vacant lands planned for future non-residential/mixed use (retail, offices, lodging) and residential uses under the AVSP.	PD and BP-OR	AVSP-PD and BP-OR Zone E
South of Agoura Village Gateway Monuments West Location	Vacant lands planned for future non-residential (professional office or lodging) uses under the AVSP.	PD	AVSP-PD Zone F
East	Medea Creek Channel	PD, CRS, and BP-OR	AVSP-PD and BP-OR

Description	Existing On-the-Ground Land Uses	Existing General Plan Land Use Designation[1]	Existing Zoning[2,3]
	North of Agoura Road: Self-storage facility, County of Los Angeles storage yard, and restaurants. South of Agoura Road: Restaurant, facilities yard, and vacant lands planned for future commercial uses (i.e., AVSP).		Zone A north, Zone A south, Zone D east, Zone E, Zone G
West	North of Agoura Road: Retail commercial, self-storage, light industrial (printing and light manufacturing), and restaurant. South of Agoura Road: Vacant and undeveloped lands planned for future non-residential/ mixed-use (retail, office, lodging, restaurants, cinema) and residential uses under the AVSP.	PD and POM	AVSP-PD, POM-FC, POM-MXD-FC Zone B, Zone D west, Zone F, Zone G

Sources:
See **Figure 2-4**. Source: City of Agoura Hills, General Plan Land Use Diagram, July 18, 2022.
See **Figure 2-5**. Source: City of Agoura Hills, Zoning Map, July 8, 2022.
See **Figure 2-6** and **Section 2.4: Zoning**, below. Source: City of Agoura Hills, AVSP, Development Zones and Affordable Housing Overlay, July 6, 2022.

FIGURE 2-6: EXISTING KANAN ROAD/AGOURA ROAD INTERSECTION

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FIGURE 2-6A: EXISTING KANAN ROAD/AGOURA ROAD INTERSECTION (NORTH LEG)

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FIGURE 2-6B: EXISTING KANAN ROAD/AGOURA ROAD INTERSECTION (SOUTH LEG)

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FIGURE 2-6C: EXISTING KANAN ROAD/AGOURA ROAD INTERSECTION (EAST LEG)

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FIGURE 2-6D: EXISTING KANAN ROAD/AGOURA ROAD INTERSECTION (WEST LEG)

Agoura Village Specific Plan Update Project

NOT TO SCALE

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2.3 Existing General Plan Designations

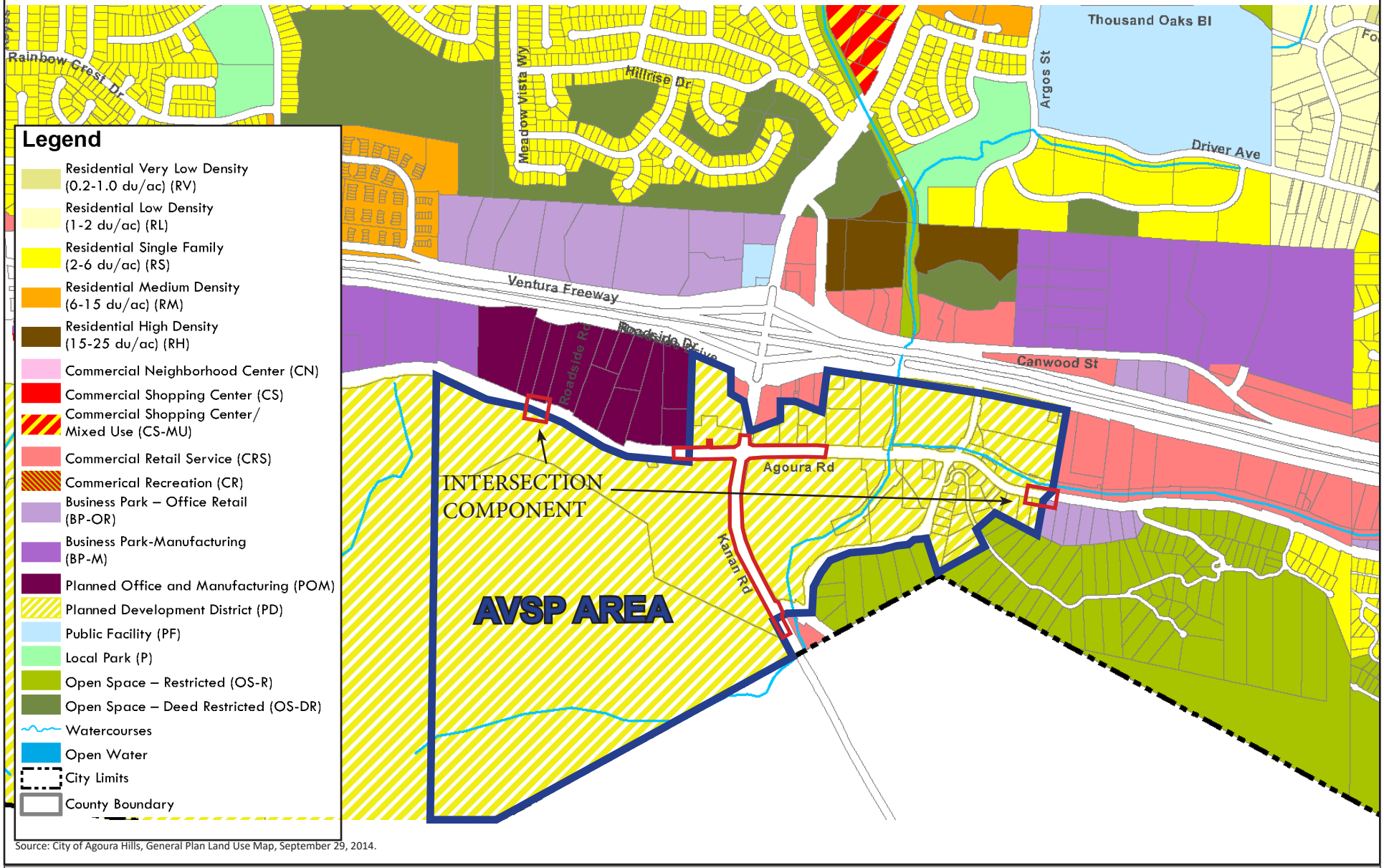
The AVSP area's existing land use designations are depicted on **Figure 2-7: General Plan Land Use Designations Map**. As depicted on **Figure 2-7**, the private properties within the Intersection Component site, as well as the adjacent lands are designated PD; see also **Table 2-2**. The location of the Agoura Village Gateway Monument East and the adjacent lands are designated PD, CRS, and BP-OR. The location of the Agoura Village Gateway Monument West and adjacent lands are designated PD and POM.

2021-2029 HEU Figure 1: Housing Opportunity depicts the 2021-2029 HEU's 20 opportunity housing sites and indicates eight sites (Sites A, B, C, E, G, I, J, and K) are within the AVSP area. 2021-2029 HEU Figure 1 also indicates that the Intersection Component footprint extends into small portions of two sites (0.14 acre in Site A and 0.04 acre in Site B).

General Plan Infrastructure and Community Services Chapter Figure M-1: Circulation Plan and Street Classification depicts the City's circulation plan and street classifications and indicates Kanan Road as a primary arterial and Agoura Road as a secondary arterial. Primary arterials are defined as streets and highways that are designed to move relatively high volumes of traffic between the freeway and local circulation system.[6] Secondary arterials are defined as streets that are similar to primary arterials, but serving a more localized function. Generally, they have less access and parking restrictions and a narrower ROW than primary arterials.[7]

[6] City of Agoura Hills, General Plan Chapter 3: Infrastructure and Community Services, page 3-2.

[7] Ibid.



Source: City of Agoura Hills, General Plan Land Use Map, September 29, 2014.

FIGURE 2-7: GENERAL PLAN LAND USE DESIGNATIONS MAP

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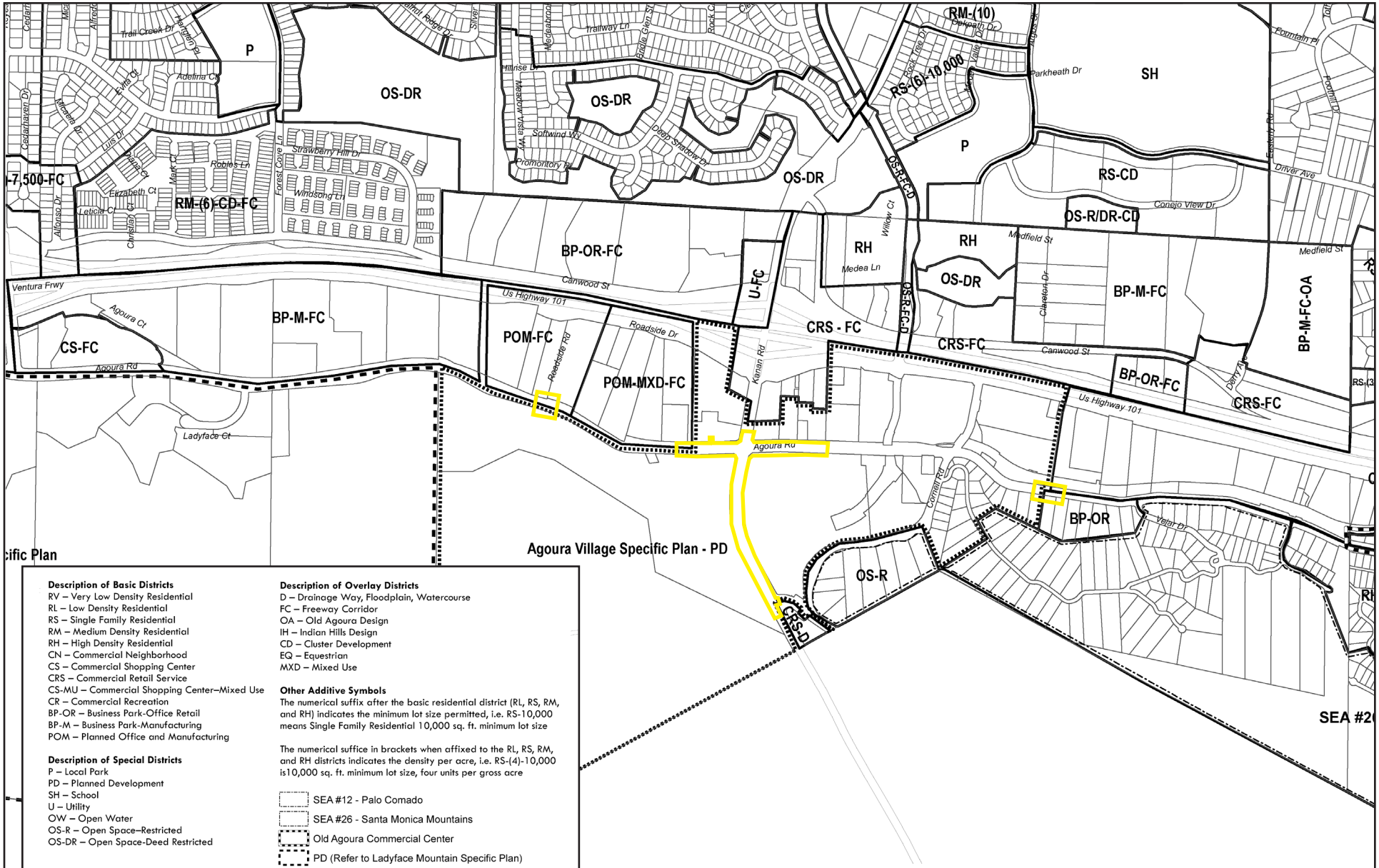
2.4 Existing Zoning

The AVSP area's existing zoning and land use are depicted on **Figure 2-8: Existing Zoning Map** and **Figure 2-9: AVSP Existing Land Use Zone Map**, respectively, and summarized in **Table 2-2**. As depicted on **Figure 2-8**, the Intersection Component site is zoned AVSP-Planned Development (PD) and partially Planned Office and Manufacturing-Mixed Use-Freeway Corridor (POM-MXD-FC) on the west leg. The Agoura Village Gateway Monument East location and adjacent land are zoned AVSP-PD and Business Park-Office Retail (BP-OR). The Agoura Village Gateway Monument West location and adjacent land are zoned AVSP-PD and Planned Office and Manufacturing-Freeway Corridor (POM-FC).

The 2008 AVSP applies village zoning plates that range from Zone A through Zone G. The AVSP's zoning for the Intersection Component site's private properties and adjacent land is Zones A north, Zone A south, Zone B, Zone D east, Zone D west, Zone E, Zone F, and Zone G; see **Table 2-2**. The 2008 AVSP has also established development standards and permitted uses for each zone.[8] The permitted uses for the adjacent vacant land south of the Kanan Road/Agoura Road intersection are summarized below:

- Zone A south permits standalone attached residential uses.
- Zone B permits non-residential and mixed-use developments, including retail, offices, lodging, restaurants, cinema, mixed-uses, and standalone attached residential uses.
- Zone G permits Open Space District (OS) uses.

[8] City of Agoura Hills, Agoura Village Specific Plan, October 22, 2008, pages 4-49 through 4-61. Available at https://www.agourahillscity.org/home/showpublisheddocument/13167/635169016910200000. Accessed June 13, 2023.



Description of Basic Districts
RV – Very Low Density Residential
RL – Low Density Residential
RS – Single Family Residential
RM – Medium Density Residential
RH – High Density Residential
CN – Commercial Neighborhood
CS – Commercial Shopping Center
CRS – Commercial Retail Service
CS-MU – Commercial Shopping Center–Mixed Use
CR – Commercial Recreation
BP-OR – Business Park-Office Retail
BP-M – Business Park-Manufacturing
POM – Planned Office and Manufacturing

Description of Special Districts
P – Local Park
PD – Planned Development
SH – School
U – Utility
OW – Open Water
OS-R – Open Space–Restricted
OS-DR – Open Space-Deed Restricted

Description of Overlay Districts
D – Drainage Way, Floodplain, Watercourse
FC – Freeway Corridor
OA – Old Agoura Design
IH – Indian Hills Design
CD – Cluster Development
EQ – Equestrian
MXD – Mixed Use

Other Additive Symbols
The numerical suffix after the basic residential district (RL, RS, RM, and RH) indicates the minimum lot size permitted, i.e. RS-10,000 means Single Family Residential 10,000 sq. ft. minimum lot size

The numerical suffice in brackets when affixed to the RL, RS, RM, and RH districts indicates the density per acre, i.e. RS-(4)-10,000 is10,000 sq. ft. minimum lot size, four units per gross acre

SEA #12 - Palo Comado
SEA #26 - Santa Monica Mountains
Old Agoura Commercial Center
PD (Refer to Ladyface Mountain Specific Plan)
PD (Refer to Agoura Village Specific Plan)

Source: City of Agoura Hills, Zoning Map, October 14, 2014.

Note: The yellow outline depicts the Intersection Component

FIGURE 2-8: ZONING MAP
Agoura Village Specific Plan Update Project

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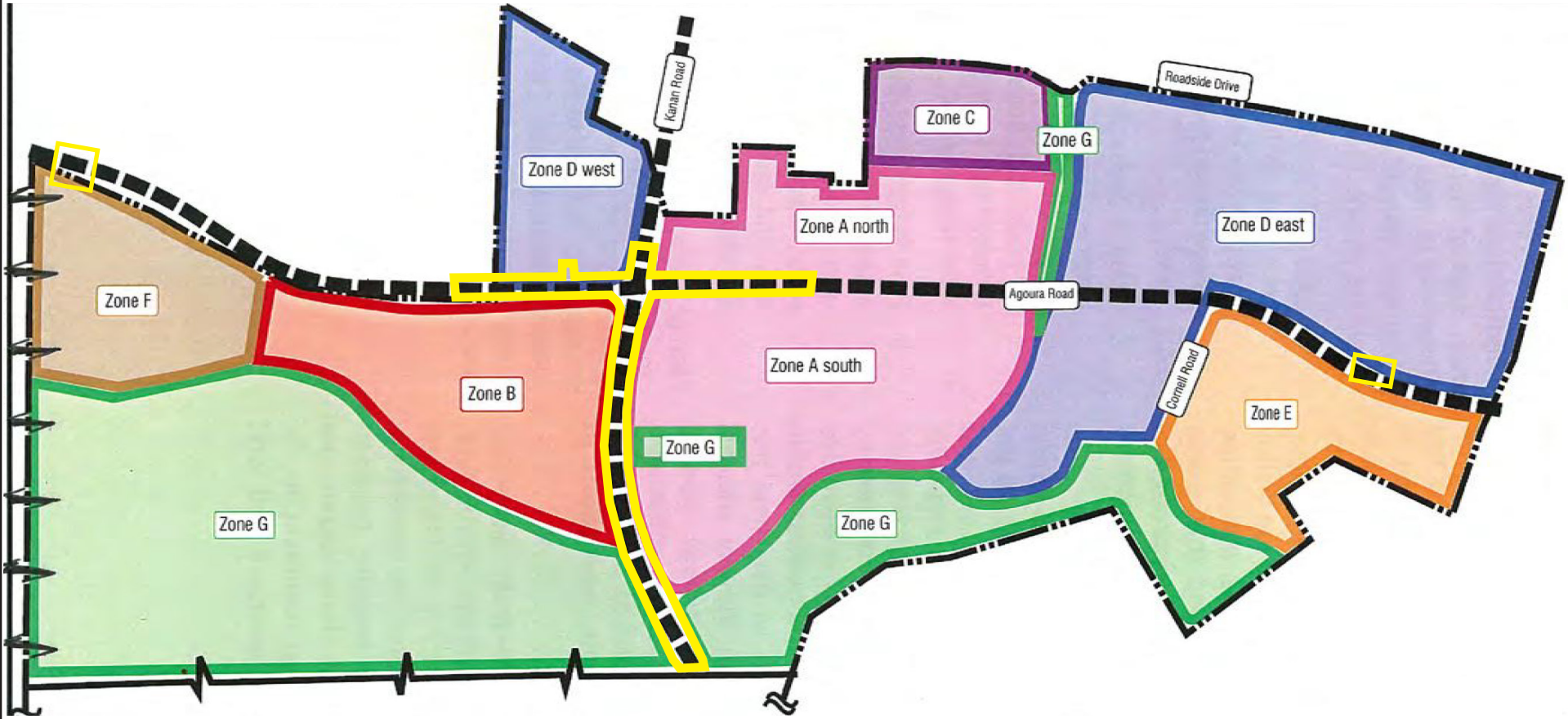

Note: The yellow outline depicts the Intersection Component

Source: City of Agoura Hills, Agoura Village Specific Plan, Figure 4.2: Development Zone Map, October 22, 2008.

FIGURE 2-9: AGOURA VILLAGE SPECIFIC PLAN LAND USE ZONING MAP

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2.5 Project Characteristics

Project Overview

The Proposed Project is a comprehensive update to the 2008 AVSP, which reorganizes the 2008 AVSP for consistency with current planning practices, reduces duplicative content, and allows for concise location of information. The 2023 AVSP considers the 2021-2029 HEU, includes the Intersection Component as a key element, and includes the Street Frontage Objective Design Standards Checklist ("Street Frontage Standards"). The proposed AVSPU includes updates to regulations and guidelines, and various Kanan Road/Agoura Road intersection improvements (e.g., streetscape beautification and public improvements, mobility improvements, and infrastructure improvements, and public services) that reflect a standard intersection design. The proposed AVSPU also updates 2008 AVSP Appendix I: Mitigation Monitoring and Reporting Program (MMRP) to exclude any Mitigation Measures (MM), which are no longer applicable, such as those pertaining to the roundabout.

An accompanying GPA is included as part of the Proposed Project to ensure consistency between the City's General Plan and the proposed 2023 AVSP. The accompanying GPA is comprised of minor amendments to the General Plan Infrastructure and Community Services Chapter, Mobility Section, which are summarized below and detailed in **Appendix 2-1: General Plan Infrastructure and Community Services Chapter Amendments**.

1. Revise General Plan Section text to add to the City's roadway network the new "Semi-Rural Secondary Arterial" roadway classification as a sub-classification under the Secondary Arterial classification. This new sub-classification would apply only to Agoura Road between Cornell Road and AVSP's eastern boundary just west of Vejar Drive;
2. Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to include the new Semi-Rural Secondary Arterial roadway sub-classification's cross-section (see **Figure 2-10: Typical Roadway Classification Cross Streets** below); and
3. Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to reduce the minimum roadway width range from 40 feet to 36 feet for only specified portions of select Collector Streets within the AVSP (i.e., Roadside Drive and Cornell Road); see **Figure 2-10** below.

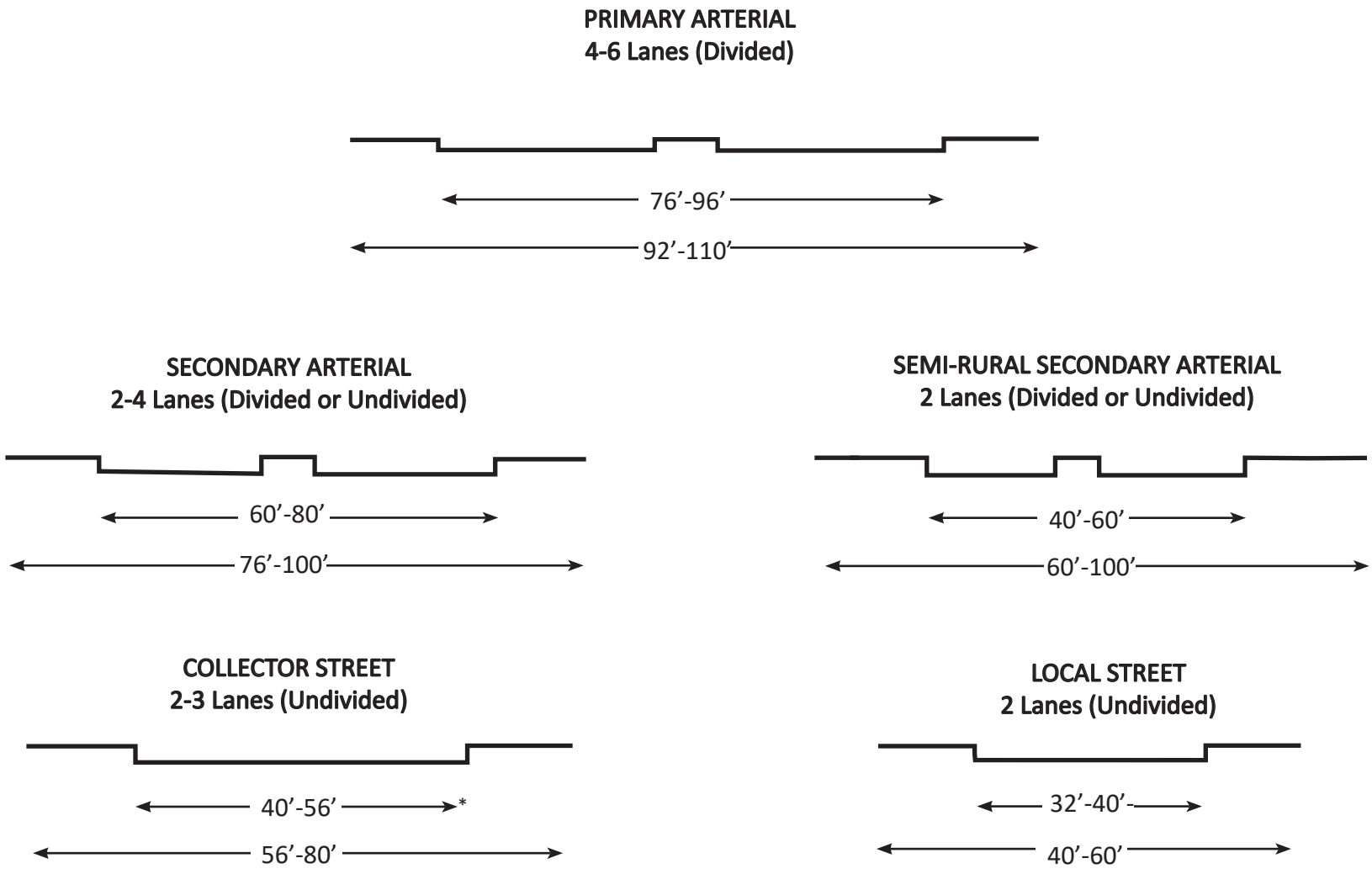

FIGURE 2-10: TYPICAL ROADWAY CLASSIFICATION CROSS SECTIONS

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2023 Agoura Village Specific Plan

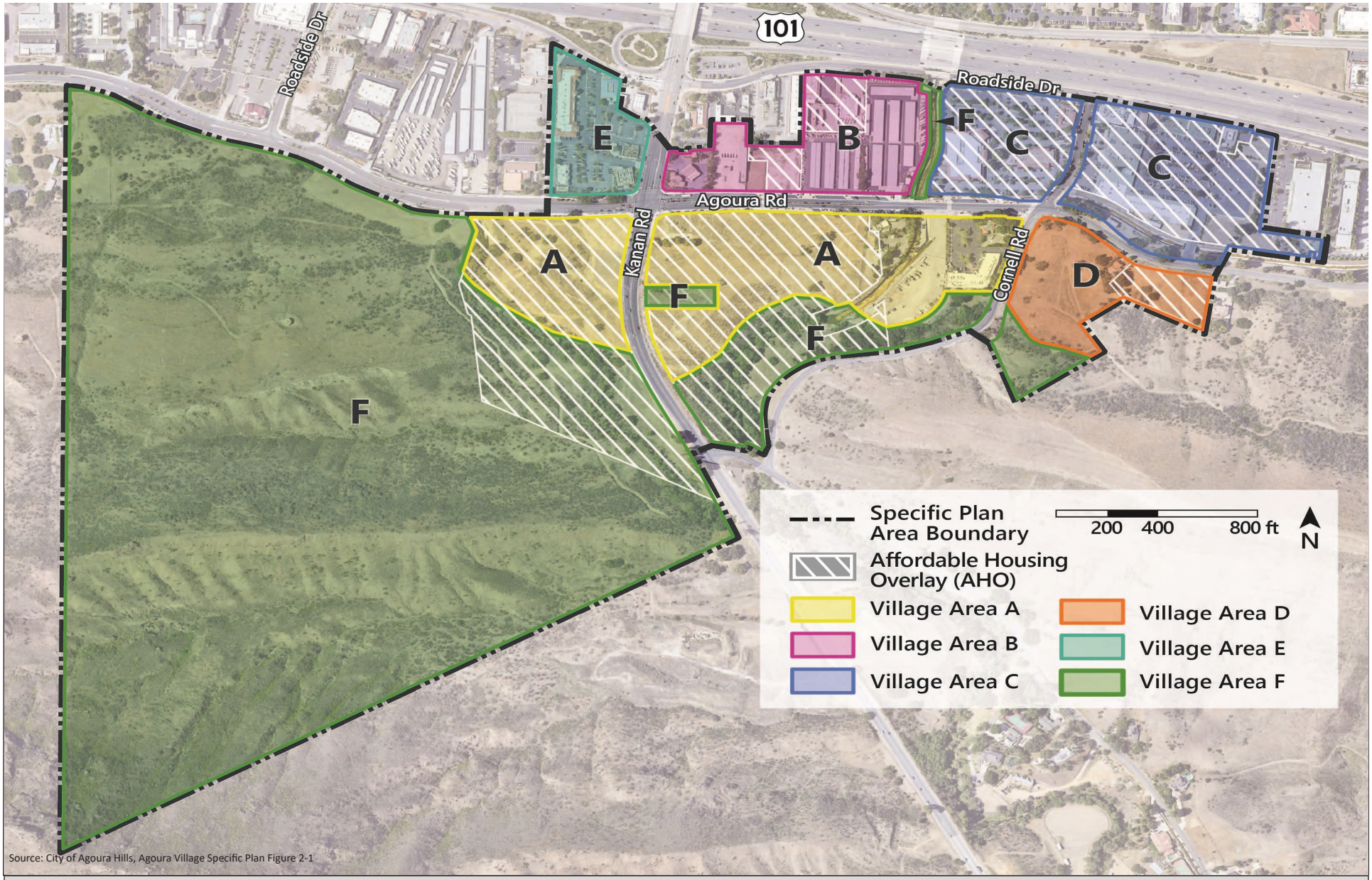
The proposed 2023 AVSP is a comprehensive document that clearly identifies the vision for the AVSP planning area, articulates economic goals, and provides regulations and guidelines for new development and redevelopment, streetscape beautification, and mobility improvements. The 2023 AVSP contents are summarized below.

2023 AVSP Chapter 1: Introduction includes AVSP background, including prior work efforts that lay the foundation for this plan. Also included in this chapter is a description of the vision for the AVSP area and the data gathering process.

2023 AVSP Chapter 2: Land Use, Regulations, & Guidelines provides direction on the land use and development standards, depicting the overall layout of land uses within the Village, which are contained in six different Village Areas. This chapter also includes a detailed description of development standards, allowable uses, objective design standards, and design guidelines.

Figure 2-11: Village Areas below depicts the locations of the AVSP's six Village Areas and **Table 2-3: 2023 AVSP Buildout Summary** presents the full allowable buildout capacities for each Village Area. As indicated in **Table 2-3**, the 2023 AVSP's allowable buildout capacity is 851 DU and 633,290 SF of non-residential land uses (i.e., commercial and mixed-use, and office). The proposed residential uses are attached multi-family residential, such as townhouses, apartments, and condominiums. Single-family residential units are not permitted within the Village. Assuming 851 DU and 2.76 persons per household, the population growth associated with the 2023 AVSP is approximately 2,349 persons.[9] The proposed non-residential uses are commercial uses (e.g., retail, services, hotel, and office), and visitor services. **Table 2-3** also compares the 2023 AVSP's allowable buildout capacity to the 2008 AVSP's allowable buildout capacity of up to 293 DU and up to 948,500 SF of non-residential land uses. As shown in **Table 2-3**, the 2023 AVSP proposes up to 851 DU and up to 633,290 SF of non-residential land uses, which is 558 more DU, but 315,210 less SF of non-residential land uses, when compared to the 2008 AVSP. Because the GPU FEIR analyzed the environmental impacts associated with development of up to 1,016 DU (on opportunity Sites A, B, C, E, G, I, J, and K), with a resultant population growth of approximately 2,804 persons, within the AVSP area, the GPU FEIR conservatively analyzes much more residential development and population growth than the 2023 AVSP's net increase in residential development (i.e., 558 additional DU) and population growth (i.e., 2,349 persons). As such, while the 2008 AVSP's residential development analyzed in the GPU FEIR is greater than the proposed 2023 AVSP's allowable buildout capacity of 851 DU, this additional residential development and associated population growth was considered in the GPU FEIR consistent with HCD's recommendation to include a buffer to avoid violating the No Net Loss provisions per Government Code § 65869. Since the 2023 AVSP's net increase in residential development and associated population growth were previously evaluated for environmental impacts in the GPU FEIR, no further environmental analysis for 2023 AVSP buildout development and population is required.

[9] Current 2023 Department of Finance (DOF) data (i.e., State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State – January 1, 2013-2023. Sacramento, California, May 2023) indicates the City's average household size is 2.64 persons per household. However, as indicated in GPU FEIR Page IV.J-14, the GPU FEIR assumed 2.76 persons per household to estimate the population increase using the then most current 2021 DOF data (i.e., State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State – January 1, 2011-2021. Sacramento, California, May 2021). Therefore, to provide a conservative analysis, this analysis also assumes 2.76 persons per household for the AVSPU.



Source: City of Agoura Hills, Agoura Village Specific Plan Figure 2-1

FIGURE 2-11: VILLAGE AREAS

Agoura Village Specific Plan Update Project

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Table 2-3: 2023 AVSP Buildout Summary

Description	Dwelling Units	Square Feet
2023 AVSP[1]		
2023 AVSP Village Area A	224,687	353
2023 AVSP Village Area B	102,438	119
2023 AVSP Village Area C	173,414	284
2023 AVSP Village Area D	79,241	95
2023 AVSP Village Area E	53,510	851
2023 AVSP Total	**851**	**633,290**
2008 AVSP Total[2]	293	948,500
Change between 2008 AVSP and 2023 AVSP	*+558*	*-315, 210*
Residential Development within the AVSP area analyzed in GPU FEIR[3]	1,016	-

Source:
1. RRM Design Group. Agoura Village Specific Plan page 16, November 2023 Draft.
2. RRM Design Group Agoura Village Specific Plan page 4-43, October 22, 2008.
3. City of Agoura Hills. GPU FEIR, August 2022.

2023 AVSP Chapter 3: Streetscape Beautification & Public Improvements focuses on streetscape beautification, gateways and monument signage, and streetscape furnishings to create a unified and cohesive village.

See the *Intersection Component* section below for a discussion of the streetscape beautification, gateways and monument signage, and streetscape furnishings proposed at the Kanan Road/Agoura Road Intersection.

2023 AVSP Chapter 4: Mobility focuses on mobility, illustrating the preferred circulation pattern throughout the Village. The 2023 AVSP places emphasis on pedestrian circulation, consolidated parking, and a connection to surrounding open spaces via a trail system.

See the *Intersection Component* section below for a discussion of the circulation pattern proposed at the Kanan Road/Agoura Road Intersection.

See the *Street Frontage Standards* section below for a discussion of the street frontage standards proposed at the various roadway classifications.

See the *General Plan Amendment – Infrastructure and Community Services Chapter* section below for a discussion of the proposed roadway classification updates intended to ensure consistency between the General Plan and the proposed 2023 AVSP.

2023 AVSP Chapter 5: Infrastructure and Public Services addresses water, wastewater, solid waste, public safety, and educational facilities within the AVSP area.

2023 AVSP Chapter 6: Implementation is intended to serve as an action plan to guide the City in initiating many of the AVSP's recommendations.

2023 AVSP Chapter 7: Plan Administration describes the AVSP's adoption process, environmental document, and administrative procedures required for AVSP amendments/modifications, as well as review requirements for development applications within the AVSP area.

2023 AVSP Appendix A: 2008 Agoura Village Specific Plan Background Information includes a section from the 2008 AVSP titled "Public Involvement and Workshops," which describes the public outreach efforts conducted as part of preparation of the 2008 AVSP.

2023 AVSP Appendix B: Market Assessment contains the Agoura Village Market Assessment, which was prepared for the City by The Natelson Dale Group on March 16, 2021.

2023 AVSP Appendix C: Agoura Village Specific Plan Update Citizens Advisory Group includes a summary of the feedback received between 2021 and 2022, which informed the preparation of the 2023 AVSP.

2023 AVSP Appendix D: 2023 Agoura Village Specific Plan Mitigation Monitoring and Reporting Program includes the 2023 AVSP's Mitigation Monitoring and Reporting Program, which updates the 2008 AVSP's Mitigation Monitoring and Reporting Program (adopted as part of the Certified PEIR), based on this Recirculated IS/MND.

Intersection Component

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The intersection's high use and visibility make the Intersection Component a challenging and sensitive priority for the City.

The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines, among others, as depicted on **Figure 2-12: Proposed Kanan Road/Agoura Road Intersection**, and described below. **Figure 2-13: Proposed Kanan Road/Agoura Road Intersection Improvements** provides a close-up view of the proposed improvements by segment. Although the Agoura Village Gateway Monuments would be constructed at a later date by others, the environmental impacts from the City Gateway Entry Monuments and Agoura Village Gateway Monuments are analyzed herein, including construction effects, to provide a conservative analysis.

Intersection and Roadway Improvements

Modified road alignments, including road elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional queuing capacity at all intersection approaches. The through lanes would vary between 10 and 13 feet in width. The proposed widened pavement improvements would generally match the existing Kanan Road and Agoura Road pavement structural sections, as further detailed below.

a. **North Leg:** Improvements on the north leg would occur within the 100-foot ROW and would extend from the Kanan Road/Agoura Road intersection to approximately 50 to 60 feet north. Improvements would be limited to new pedestrian curb ramps, relocation of traffic signals, landscape buffers, full-depth asphalt replacement, and a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection. The existing lane geometry would remain, with two northbound through lanes and five southbound lanes including two left-turn pockets, two through lanes, and one right turn pocket lane.

b. **South Leg:** Improvements on the south leg would extend from the Kanan Road/Agoura Road intersection to approximately 250 feet south. Improvements include full depth asphalt replacement, asphalt milling[10] and overlay, creation of a new right-turn pocket lane, relocation of existing utilities and traffic signals, and new pedestrian curb ramps and 12-foot sidewalk along northbound lanes. The northbound geometry would include a 12-foot left-turn lane, two through lanes ranging from 12 to 13 feet, and a new right-turn pocket lane measuring 13 feet. The existing ROW would be relocated further east to accommodate the proposed improvements. The two existing southbound through lanes ranging from 12 to 15 feet wide would remain. The south leg would also include utility undergrounding; see *Underground Utility Improvements*, below.

[10] Asphalt milling (also called pavement milling) refers to grinding and removing the topmost layer of asphalt pavement. This is often done to keep pavement from getting too high from years of asphalt resurfacing and also prevents drainage problems.

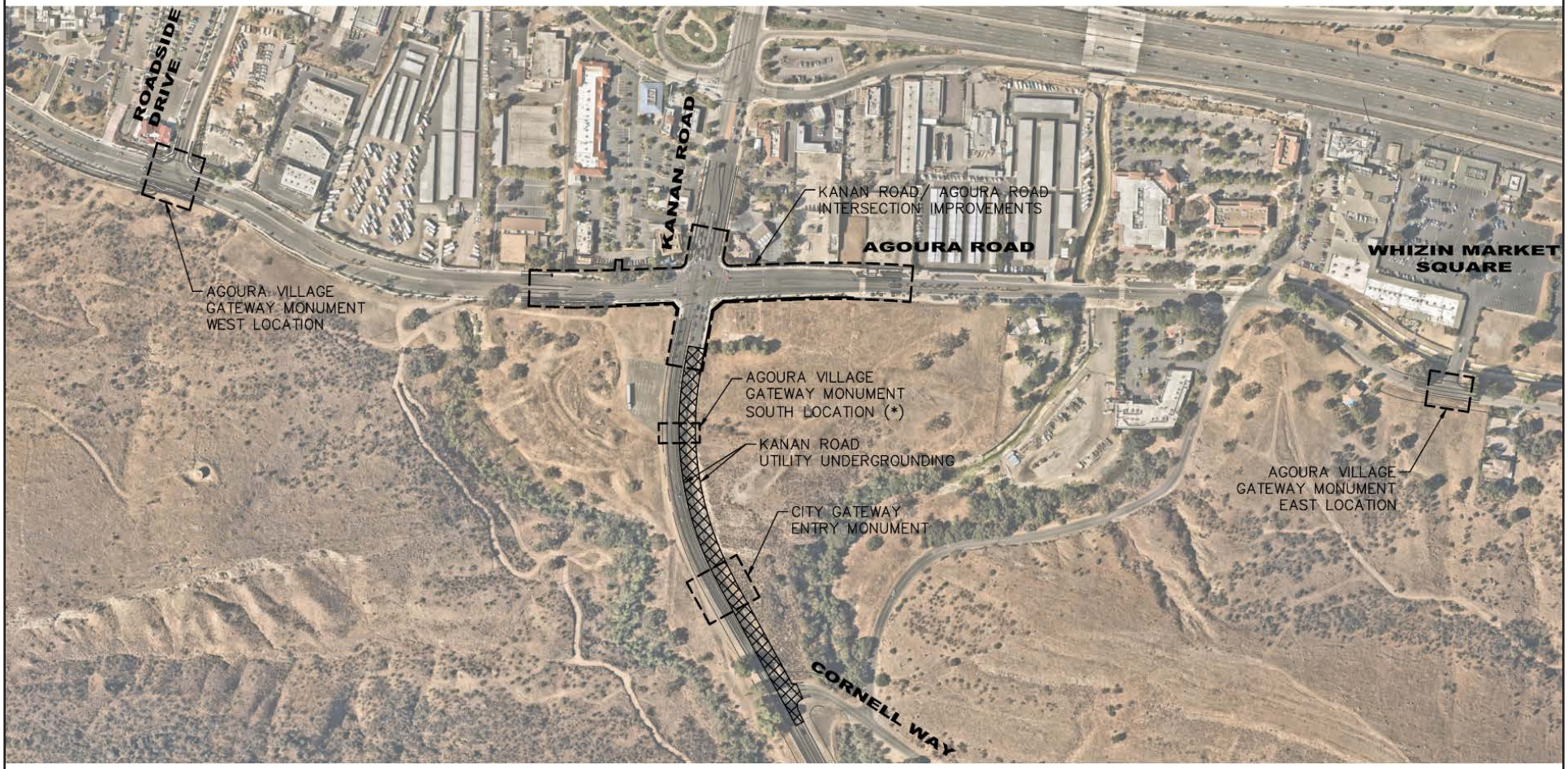

FIGURE 2-12: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION

Agoura Village Specific Plan Update Project

Kimley»Horn

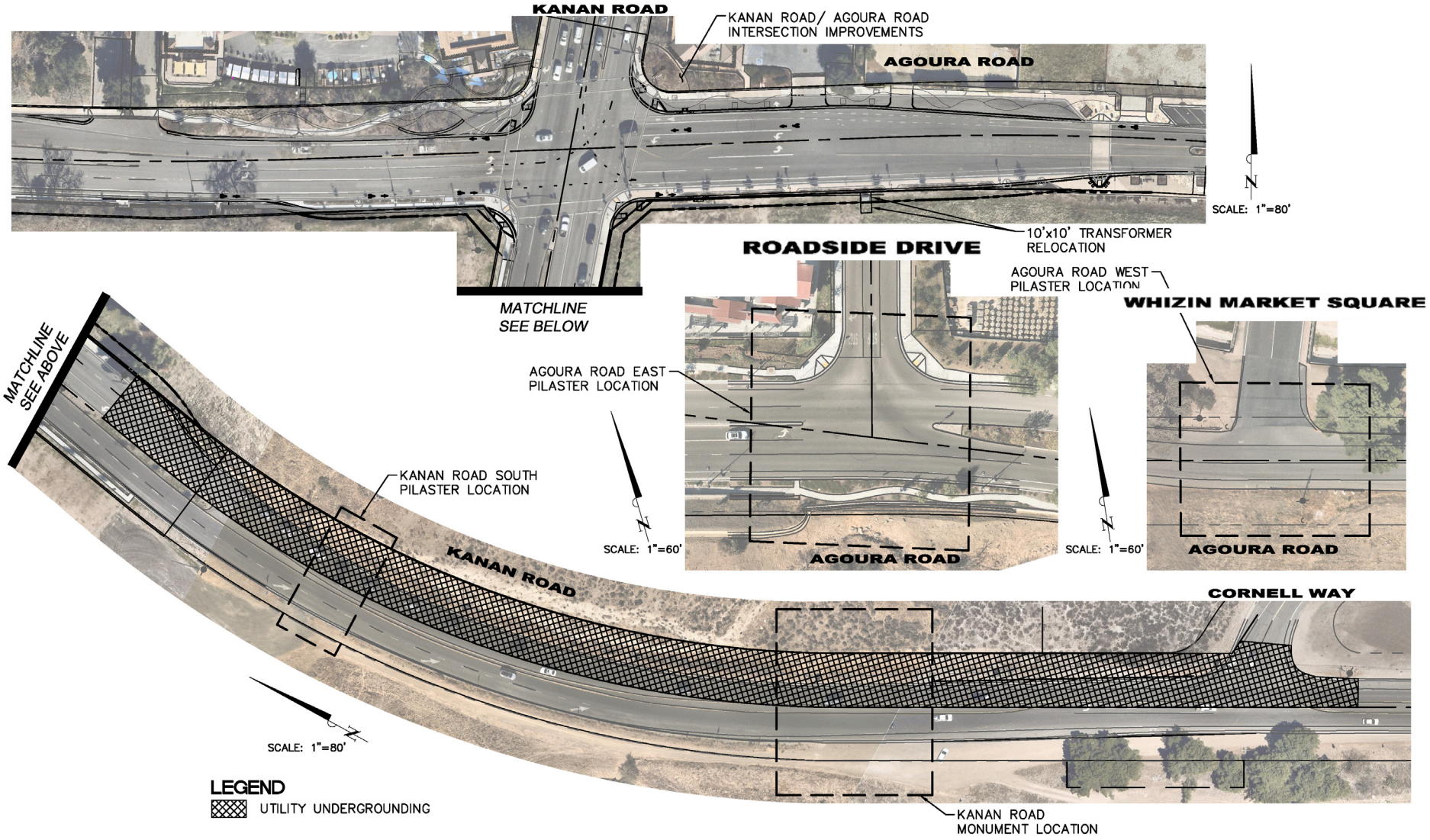

FIGURE 2-13: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION IMPROVEMENTS

Agoura Village Specific Plan Update Project

Kimley»Horn

c. **East Leg:** Improvements on the east leg would extend from the Kanan Road/Agoura Road intersection to approximately 530 feet east, terminating at the existing landscaped median on Agoura Road, near the vacant lot at 29125 Agoura Road. The existing eastbound and westbound 6.0-foot Class II bike lane[11] would remain. Improvements include full depth asphalt replacement, asphalt milling and overlay, new green conflict striping,[12] relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 10 feet to the south to allow for the bike lane and sidewalk to each be widened by 1.0 foot, and new landscape buffers. A Southern California Edison ("SCE") transformer would need to be relocated to the south to avoid the newly widened sidewalk. A striped median ranging in width from 10 to 21 feet is also proposed. Left-turn access to the Speedway Gas Station would be maintained. Eastbound lanes would retain two 11-foot through lanes, eventually merging into one through lane to the Intersection Component terminus. Westbound lanes geometry would remain the same. One westbound through lane would expand to provide one 14-foot right-turn pocket lane and one 11-foot through lane, with the existing 6.0-foot bike lane with new green conflict striping in between. The westbound lane would terminate at the Kanan Road/Agoura Road intersection with the 14-foot right-turn pocket lane, the existing 6.0-foot bike lane with new green conflict striping, the existing 11-foot through lane, and the existing 11-foot left-turn pocket at the Kanan Road/Agoura Road intersection.

d. **West Leg:** Improvements on the west leg would extend from the Kanan Road/Agoura Road intersection to approximately 400 feet west, terminating just west of the existing AT&T driveway located west of 29281 Agoura Road (i.e., the Tavern Tomoko & Ladyface Brewery) and the existing driveways for the Agoura Pointe Shopping Center. Improvements include full depth asphalt replacement, asphalt mill and overlay, new green conflict striping for existing eastbound bike lane, relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 7.0 feet to the south to accommodate new 12-foot right-turn pocket lane. Eastbound lanes would feature two 11-foot left-turn pocket lanes, one 11-foot through lane, 6.0-foot Class II bike lane, and new 12-foot right-turn pocket lane. Westbound lanes would feature an 11-foot through lane with 7.0-foot Class II bike lane. Approximately 190 feet west of the Kanan Road/Agoura Road intersection, a set of stairs would be created to connect the westbound sidewalk to the Agoura Pointe Shopping Center parking lot. The development of the stairway connection would remove the existing parking spot and would open into the parking lot. The parking spot would be replaced with a landing zone and would be surrounded by the existing island with an oak tree to the east and a landscape buffer to the west. Three mature oak trees, two of which are located north of Agoura Road and one which is located south of Agoura Road, would be protected and remain in place as part of the Intersection Component.

Ancillary improvements such as minor utility modifications/relocations would be required to accommodate the above improvements; see also the *Underground Utility Improvements* section below. Existing pedestrian and street lighting would also be relocated; however, no new pedestrian or street lighting would be added.

Signage Improvements

The Intersection Component includes entryway and statement signage (i.e., the City Gateway Entry Monuments and Agoura Village Gateway Monuments) on Kanan and Agoura Roads. The new signage

[11] Class II bike lanes are one-way facilities that dedicate some of the roadway ROW to bicyclists.

[12] A conflict zone is an area where the bicycle path and vehicle path intersect. The green colored pavement within a bicycle lane is meant to increase the visibility of the facility, identify potential areas of conflict between bicycle, vehicle, and pedestrian, and reinforces priority to bicyclists in conflict areas.

would adhere to 2023 AVSP Chapter 2: Land Use, Regulations, and Guidelines, Section F: Design Guidelines, as applicable. The signage improvements are comprised of the City Gateway Entry Monuments and Agoura Village Gateway Monuments.

In total, six Agoura Village Gateway Monuments and two City Gateway Entry Monuments are proposed, as described below. The Agoura Village Gateway Monuments would be up to approximately 10 feet tall, and up to approximately 10 feet wide by 10 feet long. A 15-foot-wide landscaped buffer would be provided surrounding the base of the Agoura Village Gateway Monuments. Thus, the total base footprint of the Agoura Village Gateway Monuments with the landscaped buffer would be approximately 1,600 square feet ("SF") each.

The City Gateway Entry Monuments would be up to 15 feet tall, and up to 24 feet wide by 24 feet long. A 5.0-foot landscaped buffer would be provided surrounding the base of the City Gateway Entry Monuments. Thus, the total base footprint of the City Gateway Entry Monuments with the landscaped buffer would be approximately 1,156 SF each.

- Agoura Village Gateway Monument East and West Locations: Four monuments are proposed on Agoura Road at the two locations depicted on **Figure 2-3** (two for each location, offset from each other on either side of the road). These are intended to establish the character of the AVSP area;
- Agoura Village Gateway Monument South Locations: Two monuments are proposed on Kanan Road at the location depicted on **Figure 2-3** (two for this location, offset from each other on either side of the road) to establish the AVSP area's southern boundary. The proposed locations would be approximate with the conceptual driveway locations of the proposed developments east and west of Kanan Road; and
- City Gateway Entry Monument Locations: Two monuments are proposed on Kanan Road at the locations depicted on **Figure 2-3,** near the Kanan Road/Cornell Road intersection. These are intended to approximately establish the City's southern limit.

The new signage, along with other aesthetic improvements from new landscaping islands, activated pedestrian corners, and street furnishings are intended to contribute and define a unique "gateway for the City." Minor lighting would be provided at the pilasters and monuments for illumination and safety purposes.

Underground Utility Improvements

The Intersection Component proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see **Figure 2-3** and **Figure 2-12**.

The lighting poles that include luminaires would remain in place, and all other utility poles, excluding one located on northbound Kanan Road, would also remain in place. Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations would be determined during final engineering design.

The Intersection Component would require modifications/relocations of existing water facilities (e.g., curb inlets, drain lines, and one hydrant), but would not require construction of new facilities.

Further detail concerning undergrounding the utilities is provided under the *Construction and Phasing* Section below.

Drainage and Water Quality

Under existing conditions within the Intersection Component area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under Intersection Component conditions, these inlets would be relocated to accommodate the widening of Agoura Road. The associated drain lines would be extended; however, flows would remain generally unchanged.

Construction and Phasing

The Intersection Component improvements are proposed to occur in a single phase, except the Agoura Village Gateway Monuments, which would be constructed at a later date by others.[13] Prior to the start of construction, the City would need to purchase the ROW and coordinate temporary construction easements. This process would be approximately six to nine months. After purchase and receipt of the easements, construction would start and is anticipated to occur over approximately 12 months, beginning as early as November 2024 and ending as early as November 2025. The proposed Intersection Component improvements would be located mostly within existing City ROW but would require partial permanent acquisitions and temporary construction easements ("TCE") from adjacent properties; see **Table 2-4: Intersection Component – Proposed Right-of-Way**. As indicated in **Table 2-4**, approximately 0.18-acre of permanent property acquisitions and approximately 6.04 acres of temporary construction easements are required for the Intersection Component. The Agoura Village Gateway Monuments and City Gateway Entry Monuments would be located in approximate areas within the marked areas in **Figure 2-3**; therefore, the areas for improvements are approximate. It should be noted that the Intersection Component would not result in acquisitions or TCE for the Agoura Village Gateway Monuments; if and when the properties that are identified for the Agoura Village Gateway Monuments are developed, then the ROW take/easements would occur.

Table 2-4: Intersection Component – Proposed Right-of-Way

Parcel	Required Permanent Property Acquisitions	Required Temporary Construction Easements (TCE)
City Right-of-Way	--	5.33
2061-032-021	0.04	--
2061-031-020	0.14	0.16
2061-004-034	--	0.20
2061-032-022	--	0.02
2061-032-028	--	0.11
2061-007-905	--	0.07
2061-029-004	--	0.02
2061-004-046	--	0.04
2061-032-025	--	0.09
Source: Kimley-Horn, 2022.		

To underground the two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, the Intersection Component would require approximately 1,105 linear feet of trenching approximately 4.5 feet deep and 2.5 feet wide, generally between Agoura Road and Cornell Road. The light poles that include luminaires would remain in place, and all other utility poles, excluding one located on northbound Kanan Road, would also remain in place. Undergrounding the power lines would involve removing the existing overhead utility lines and one pole located on northbound Kanan

[13] For purposes of the analysis, it is conservatively assumed that the construction activities would occur in a single phase to present the most conservative (e.g., highest) daily maximum construction emissions.

Road approximately 150 feet south of the Kanan Road/Agoura Road intersection, installing conduit and substructures (e.g., transformers on concrete pads), installing cable through the conduits, and backfilling.

Street Frontage Objective Design Standards Checklist

As discussed in **Section 1.2: Proposed Project Background and History** and **Section 1.5: Incorporated by Reference**, the 2021-2029 HEU created an AHO District that allows ministerial approval with no additional project-specific CEQA review if a certain number of affordable housing units were proposed. Under a typical development review, the City would condition an applicant to construct half-width street frontage improvements. In response to the anticipated ministerial approvals within the AHO District the City developed the Objective Standards to facilitate quality development that can be approved ministerially, which are provided in GPU FEIR Section III: Project Description and summarized in **Section 1.5: Incorporation by Reference**. However, because the City recognized that the Objective Standards did not include specific details related to street frontage improvements within the AVSP, the 2023 AVSP proposes the Street frontage Objective Design Standards Checklist ("Street Frontage Standards"), which would apply to ministerial, as well as all other projects within the AVSP area (excluding those with frontage along the Intersection Component site). The Street Frontage Standards are intended to provide clarity regarding required street frontage improvements (see **Section 2.5: Project Characteristics**) and shorten review and processing times for projects. As such, the Street Frontage Standards would apply to the street frontages for all projects within the AVSP, excluding those with frontage along the Intersection Component site.

As previously noted in **Section 1.5: Incorporation by Reference**, the 2008 AVSP included various future roadway improvements and land use and development standards, design guidelines, and a street beautification program. The 2008 AVSP proposed future road conditions within the AVSP area and anticipated that projects would be designed and constructed to accommodate those proposed future road conditions. These proposed improvements were previously evaluated for environmental impacts in the Certified PEIR as part of the assumed street improvements; see **Table 2-5: Summary of AVSP Street Frontage Improvement Environmental Analysis**.

Ministerial projects are approved by meeting a series of objective standards that leave no room for interpretation. Under a typical development review, the City would condition a developer to construct their half-street frontage improvement. The City has developed the Street Frontage Standards, which would be included as part of the City's objective standards within the AVSP area.

The Street Frontage Standards, would not in and of themselves result in physical impacts within the AVSP area, however, would facilitate future street frontage improvements within the AVSP. The Street Frontage Standards would provide standards related to, among other features, roadway width and contents (i.e., median, number of travel and bike lanes), street, sidewalk, curb and gutter improvements, accessibility ramps and paths of travel, driveways, intersections, landscaping, fire hydrant placement, utility pole relocation, and lighting; see 2023 AVSP Chapter 4: Mobility. The improvements facilitated by the Street Frontage Standards would occur within existing assumed ROWs. Since the AVSP Street Frontage Standards would occur within the 2008 AVSP's and 2022 GPU's proposed future ROW's and contain standards that are based on the existing regulatory framework and the AVSP's Objective Standards and development standards/design guidelines that were previously evaluated for environmental impacts in the Certified PEIR and GPU FEIR as part of the assumed street improvements, no further environmental analysis for the AVSP Street Frontage Standards is required

Table 2-5: Summary of AVSP Street Frontage Improvement Environmental Analysis

Location/ Roadway[1]	Previously Analyzed				Proposed Project Roadway System		Are Proposed Project ROW/ Improvements within previously analyzed ROW?
	Proposed 2008 AVSP Roadway System		Proposed 2022 GPU Roadway System				
	Roadway Classi-fication[2]	Proposed ROW[3] (Feet)	Roadway Classi-fication	Proposed ROW (Feet)	Roadway Classi-fication	Proposed ROW (Feet)	
Agoura Road east of Cornell Road	Secondary Arterial	76-100	Secondary Arterial	76-100	Semi-Rural Secondary Arterial	60-100	Yes
Kanan Road	Primary Arterial	92-110	Primary Arterial	92-110	Primary Arterial	92-110	Yes
Cornell Road[5]	Collector Road	56-80	Collector Road	56-80	Collector Road	56-80	Yes
Roadside Drive[5]	Collector Road	56-80	Collector Road	56-80	Collector Road	56-80	Yes

Notes
1. As depicted on **Figure 2-5: AVSP Road Classification**.
2. Source: General Plan Figure M-1: Circulation Plan and Street Classification.
3. Source: General Plan Figure M-2: Typical Roadway Classification Cross Sections.
4. New road classification.
5. Only within the AVSP area.

General Plan Amendment – Infrastructure and Community Services Chapter

The Proposed Project includes a GPA to ensure consistency between the City's General Plan and the proposed 2023 AVSP. The GPA is comprised of minor amendments to the General Plan Infrastructure and Community Services Chapter, Mobility Section, which are summarized below and detailed **Table 2-6: Summary of Proposed General Plan Amendments (Within the AVSP)** and **Appendix 2-1: General Plan Infrastructure and Community Services Chapter Amendments**.

1) Revise text to add to the City's roadway network the new "Semi-Rural Secondary Arterial" roadway classification as a sub-classification under the Secondary Arterial classification. This new sub-classification would apply only to Agoura Road between Cornell Road and AVSP's eastern boundary just west of Vejar Drive;

2) Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to include the new Semi-Rural Secondary Arterial roadway sub-classification's cross-section (see **Figure 2-10: Typical Roadway Classification Cross Streets**); and

3) Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to reduce the minimum roadway width range from 40 feet to 36 feet for only specified portions of select Collector Streets within the AVSP (i.e., Roadside Drive and Cornell Road); see **Figure 2-10**.

Table 2-6: Summary of Proposed General Plan Amendments

	Current General Plan Roadway System			Proposed General Plan Amended Roadway System[6]			Change		
Location/ Roadway[1]	**Roadway Classification[2]**	**Proposed ROW[3] (Feet)**	**Proposed Roadway[3] (Feet)**	**Roadway Classification**	**Proposed ROW (Feet)**	**Proposed Roadway (Feet)**	**Roadway Classification**	**ROW (Feet)**	**Roadway (Feet)**
Secondary Arterial									
Agoura Road east of Cornell Road[5]	Secondary Arterial	76-100	60-80	Semi-Rural Arterial[4]	60-100	40-60	Secondary Arterial to Semi-Rural	None	-20
Collector Roads									
Cornell Road[5]	Collector Road	56-80	40-56	Collector Road	56-80	36-56	None	None	-4
Roadside Drive[5]	Collector Road	56-80	40-56	Collector Road	56-80	36-56	None	None	-4

Notes:
1. This table presents only the roadways that would be modified as a result of the proposed GPA; see **Figure 2-5: AVSP Road Classifications**.
2. Source: General Plan Figure M-1: Circulation Plan and Street Classification.
3. Source: General Plan Figure M-2: Typical Roadway Classification Cross Sections.
4. New road classification.
5. Only within the AVSP area.

As shown in **Tables 2-5** and **2-6**, the GPA would occur within the current General Plan's proposed ROW's depicted in the General Plan Figure M-2: Typical Roadway Classification Cross Sections that were previously evaluated for environmental impacts in the General Plan FEIR as part of the assumed street improvements, thus, no further environmental analysis for the GPA is required.

2.6 Agreements, Permits, And Approvals

The City, as Lead Agency for the Proposed Project, has discretionary authority over the Proposed Project. To implement the Proposed Project, the discretionary permits/approvals/entitlements listed below would be required:

City of Agoura Hills

- General Plan Amendment: An amendment to General Plan Chapter 3 Section A: Mobility, to ensure consistency between the General Plan and the 2023 AVSP, which includes the following minor modifications:
    - Revise text to add to the City's roadway network the new "Semi-Rural Secondary Arterial" roadway classification as a sub-classification under the Secondary Arterial classification. This new sub-classification would apply only to Agoura Road between Cornell Road and AVSP's eastern boundary just west of Vejar Drive;
    - Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to include the new Semi-Rural Secondary Arterial roadway sub-classification's cross-section (see **Figure 2-10: Typical Roadway Classification Cross Streets**); and
    - Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to reduce the minimum roadway width range from 40 feet to 36 feet for only specified portions of select AVSP Collector Streets (i.e., Roadside Drive and Cornell Road); see **Figure 2-10**.

- Agoura Village Specific Plan Amendment: To approve the proposed 2023 AVSP, which is a comprehensive update to the 2008 AVSP that reorganizes the Specific Plan for consistency with current planning practices, reduces duplicative content, allows for concise location of information, and includes changing the Kanan Road/Agoura Road intersection's design from a roundabout to a standard intersection (i.e., Intersection Component) and adding the Street Frontage Standards. Specific Plan amendments are legislative actions that require Planning Commission review and City Council recommendation for approval.
- Oak Tree Permit: For compliance with the City's Oak Tree Ordinance (City Council Resolution No. 374) to allow removal of twelve smaller oak trees located south of Agoura Road and surrounding the Kanan Road/Agoura Road intersection.
- Building and Safety Permit: For construction of the pilasters and towers

Regional Water Quality Control Board

- National Pollution Discharge Elimination System (NPDES) Construction General Permit

Los Angeles County Flood Control District

- Construction Permit

Los Angeles County Department of Public Health

- Permit to install reclaimed water meter for irrigation

Southern California Edison

- Service Request for Design
- License Agreement
- Right-of-Way Easement or Placement Agreement
- During final design, coordination and plan check for compliance with Southern California Edison standards.
- Construction Bid Documents Approval

Las Virgenes Municipal Water District

- Approval of Construction Plan
- Easement from affected property owners for fire connections
- Right-of-Way Agreement

Private Property Owners

- Temporary construction easements, permanent easements, and property takes/dedications.

3.0 Environmental Checklist Form

3.1 Background

1.	**Project Title:** Agoura Village Specific Plan Update Project
2.	**Lead Agency Name and Address:** City of Agoura Hills, Community Development Department 30001 Ladyface Court Agoura Hills, CA 91301
3.	**Contact Person and Phone Number:** Denice Thomas, AICP, Community Development Director Tel: 818.597.7311 Email: DThomas@agourahillscity.org
4.	**Project Location:** See **Section 2.1: Project Location**.
5.	**Project Sponsor's Name and Address:** City of Agoura Hills 30001 Ladyface Court Agoura Hills, California 91301
6.	**General Plan Designation:** See **Section 2.3: Existing General Plan Designation**.
7.	**Zoning:** See **Section 2.4: Existing Zoning**.
8.	**Description of Project:** See **Section 2.5: Project Characteristics**.
9.	**Surrounding Land Uses and Setting:** See **Section 2.2: Environmental Setting**.
10.	**Other public agencies whose approval is required (e.g., permits):** See **Section 2.6: Agreements, Permits, and Approvals**.
11.	**Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of the significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?** Consultation was initiated on March 31, 2022 and September 27, 2023; see also **Section 4.18: Tribal Cultural Resources**.

3.2 Environmental Factors Potentially Affected

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

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

3.3 Lead Agency Determination

On the basis of this initial evaluation:

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

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

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

□ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT is required to augment and update the analysis contained in the Agoura Village Specific Plan EIR, but the Supplemental EIR must analyze only the effects that remain to be addressed.

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

Signature	Date
Printed Name	Title

4.0 Evaluation of Environmental Impacts

The following environmental analysis is patterned after State CEQA Guidelines Appendix G**.** An explanation is provided for all responses except "No Impact" responses, which are supported by the cited information sources. The responses consider the whole action involved with the Proposed Project: on site and off site, Project- and cumulative-level, direct and indirect, and short-term construction and long-term operational. The explanation of each issue also identifies the significance criteria or threshold, if any, used to evaluate each question, and the mitigation identified, if any, to avoid or reduce the impact to less than significant. To each question, there are four possible responses:

- **No Impact.** The Proposed Project would not have any measurable environmental impact.
- **Less Than Significant Impact.** The Proposed Project would have the potential to impact the environment, although this impact would be below-established thresholds that are considered to be significant.
- **Less Than Significant With Mitigation Incorporated.** The Proposed Project would have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the Proposed Project's physical or operational characteristics could reduce these impacts to a less than significant level.
- **Potentially Significant Impact.** The Proposed Project could have impacts, which may be considered significant, and therefore additional analysis is required to identify mitigation. A determination that there is a potential for significant effects indicates the need to more fully analyze the Proposed Project's impacts and identify mitigation.

As discussed above in **Sections 1.0** and **2.0**, except for the Intersection Component, the proposed AVSPU includes policy updates, which either do not have the potential for causing a significant effect on the environment or result in a net increase in residential development that was previously evaluated for environmental impacts in the GPU FEIR, or which include street improvements consistent with the future road conditions previously evaluated for environmental impacts in the Certified PEIR and GPU FEIR. As such, this Initial Study primarily focuses on the Intersection Component.

4.1 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code § 21099, would the Project:				
1. Have substantial adverse effect on a scenic vista?	□	□	■	□
2. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	□	□	■	□
3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	■	□	□
4. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	□	■	□	□

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.1-15 through 4.1-18)

The Certified PEIR concluded the AVSP area is among the most visually sensitive subareas within Agoura Hills. Development of the Approved Project would impact the viewsheds from Kanan and Agoura Roads. The Approved Project includes several development standards to reduce potential impacts to the foothills' foreground views and the expansive views to Ladyface Mountain and the surrounding hillsides. The Approved Project would be required to comply with the AVSP development standards and incorporate Certified PEIR MM AES-1 to reduce impacts to less than significant.

Less Than Significant Impact. The Intersection Component is located adjacent to Ladyface Mountain, the Santa Monica Mountains, and surrounding hillsides that the City of Agoura Hills General Plan designates as visual resources. The Approved Project is located along Kanan and Agoura Roads, both of which are local valuable scenic resources and General Plan-recognized scenic roadways.[14] The Intersection Component would install Agoura Village Gateway Monuments and City Gateway Entry Monuments along these roadways, but they would not detract or block the scenic resources or roadways from public view. Further, the Agoura Village Gateway Monuments and City Gateway Entry Monuments would serve as entryway and statement signage to establish the character of the AVSP area. Lastly, the Intersection Component is an intersection improvement that would not impact views of the mountains and surrounding hillsides beyond those identified in the Certified PEIR. Therefore, the Intersection Component's impacts would be less than significant concerning a substantial adverse effect on a scenic vista.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.1-15 through 4.1-18)

The Certified PEIR stated that Agoura Road is designated as a Local Scenic Highway and that Kanan Road is designated as both a Local Scenic Highway and a Primary County Scenic Highway. The US 101 is both a local scenic corridor and an element of the Los Angeles County scenic corridor system. The views from travelers along these roads would be altered due to the AVSP. The Kanan Road/Agoura Road intersection would be redesigned, which would also affect views along the roads. Therefore, impacts would be potentially significant. Compliance with AVSP development standards and incorporation of Certified PEIR MM AES-1 would reduce impacts to less than significant.

Less Than Significant Impact. Kanan and Agoura Roads are not State-designated scenic highways.[15] However, the City's Scenic Highways Element designates both Kanan Road and Agoura Road as Local Scenic Highways because the Ladyface Mountain and surrounding hillsides are scenic corridors and are visible from these roadways. The Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along these scenic highways. There are no rock outcroppings within the Intersection Component. There are trees present along Kanan and Agoura Roads, but they are scenic resources that contribute to the scenic corridor. Therefore, while trees are located within the proposed locations for the City Gateway Entry Monument on Kanan Road, the final placement of the City Gateway Entry Monuments will be determined such that the sign would not impact the rocks and trees. Furthermore, for any future development not associated with this Intersection Component, but as part of the AVSP, that may impact the trees, City staff would work to relocate the oak trees adjacent to the City Gateway Entry Monuments on the western side of Kanan Road. The Intersection Component would include a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection, as well as additional landscape buffers along the East Leg of the Intersection Component, all of which would improve views when traveling along Agoura Road. The Intersection Component also includes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see **Figures 2-12** and **2-13**. This would improve views along Kanan Road. Further, the Intersection Component would implement the following 2023 AVSP development standards to reduce impacts to views along Kanan and Agoura Roads:

[14] City of Agoura Hills, General Plan, March 2010, page 4-7.

[15] California Department of Transportation (Caltrans), California State Scenic Highway System Map. Available at https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed December 30, 2021.

- Development South of Agoura Road shall relate to the natural surroundings and grading should be minimized by following the natural contours as much as possible.
    - Graded slopes shall be rounded and contoured to blend with the existing terrain.
    - The natural contours of the land shall be respected when developing on sloped properties.
    - Terraced parking lots and stepped building pads shall be used to preserve the general shape of natural landforms.
    - Minimize grade differentials with adjacent streets and with adjoining properties.

The Agoura Village Gateway Monuments and City Gateway Entry Monuments would include a landscape buffer to soften the transition of the signage into the natural hillside and landscaping existing along Kanan and Agoura Roads. The Intersection Component does not include a retaining wall, therefore Certified PEIR MM AES-1 is not required. Therefore, the Intersection Component's impacts would be less than significant concerning scenic resources.

c. *Would the Project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.1-19 through 4.1-21)

The Certified PEIR concluded, based on an analysis of the area's visual character, that the Approved Project would convert the AVSP area into a more urban environment. The Approved Project would result in a built environment, roadways, landscaping, and building design features that facilitate pedestrian, residential, commercial, professional office, and entertainment uses. The grading proposed at the knolls located in the AVSP area, would be a significant impact. The analysis concluded Certified PEIR MM AES-3 would reduce impacts related to removal of the knolls to less than significant.

Less Than Significant With Mitigation Incorporated. The Intersection Component site and its vicinity are partially urbanized, and the Kanan Road/Agoura Road intersection is surrounded by retail commercial, office, and light industrial uses. The Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along Kanan Roads and Agoura Roads that deviate from the improvements proposed by the Approved Project.

The General Plan and Ladyface Mountain Specific Plan Design Guidelines include regulations governing scenic quality. The General Plan Community Conservation and Development Chapter, Land Use and Community Form Section includes the following policies to preserve open space lands to maintain the City's visual quality.

- Policy LU-3.1: **Scenic and Natural Areas.** Provides for the preservation of significant scenic areas and corridors, significant plant and animal habitat and riparian areas, and physiographic features within the City.
- Policy LU-3.2: **Hillsides.** Preserve ridgelines, natural slopes, and bluffs as open space, minimize hillside erosion, and complement natural landforms through sensitive grading techniques in hillside areas.
- Policy LU-3.6: **Development Respect for Environmental Setting.** Encourage development to be located and designed to respect Agoura Hills' natural environmental setting and preserve public

views, including scenic hillside areas. Regulate building height and location to avoid obtrusive breaks in the natural skyline.

- Policy LU-3.7: **Public Viewsheds.** Whenever possible, preserve vistas of the community from public use areas.

The Intersection Component's south leg would be located adjacent to Ladyface Mountain and would include two City Gateway Entry Monuments at the City's southern limit. The AVSP includes policies to guide site layout that should take advantage of the natural environmental setting and provide a view of Ladyface Mountain and the Santa Monica Mountains. As noted in the Certified PEIR, there are two knolls located in the AVSP area: one knoll is located north of the intersection of Kanan and Cornell Road, and a second knoll is located at the southeast corner of Cornell and Agoura Road. The first knoll would be located adjacent to the Intersection Component. The AVSP includes development standards to reduce the visual impact related to site grading, site design, and building design on viewsheds from the roadways. As described in the Certified PEIR, the most dramatic impact on public views would be the altered foreground views of the foothills and the more expansive views to Ladyface Mountain and the surrounding hillsides. Incorporation of Certified PEIR MM AES-3 and compliance with AVSP development standards would reduce the Intersection Component's visual impacts associated with the alteration of natural topography due to grading activities. The City Gateway Entry Monuments would be placed to ensure proper setback from the knoll, specifically such that the knoll would be avoided, and Ladyface Mountain. Therefore, with Certified PEIR MM AES-3 incorporated, the Intersection Component's impacts would be less than significant concerning a conflict with applicable zoning and other regulations governing scenic quality.

Certified PEIR Mitigation Measures

MM AES-3 **Avoidance of Knolls.** The applicant shall avoid development, removal, or reduction (to include grading or blasting) of that knoll located south and east of the intersection of Agoura and Kanan Road. Although development of the knoll is unlikely, given that the Specific Plan would identify this area as Zone "G," the applicant shall minimize earthwork in this area in order to avoid substantially modifying a scenic resource. Additionally, the applicant shall minimize grading (subject to approval of City Community Planning and Development Department) of the knoll located south and east of the intersection of Agoura and Cornell Road. Although development and minor modifications would be allowed on the knoll, the majority of the knoll shall be preserved.

d. Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.1-21 through 4.1-24)

The Certified PEIR concluded the Approved Project would require site illumination, pole lights, spotlights, wall mounted sconces, parking lighting, and landscape lighting. The Approved Project would include exterior building materials and surface paving materials that would increase glare. The analysis concluded Certified PEIR MM AES-4 would reduce glare impacts to a less than significant level.

Less Than Significant with Mitigation Incorporated. The Intersection Component site is currently developed with an existing intersection with a high volume of existing traffic. Streetlights, as well as vehicle headlights in the area are existing sources of light and glare. The lighting poles that include luminaires will remain in place. The Intersection Component would relocate existing pedestrian and street lighting, but no new pedestrian or street lighting would be added. Minor lighting would be provided at the Agoura Village Gateway Monuments and City Gateway Entry Monuments for illumination and safety

purposes. The Agoura Village Gateway Monuments and City Gateway Entry Monuments lighting would be subject to the following 2023 AVSP development standards:

- Outdoor light fixtures, including pole lights, wall-mounted lights and bollards shall be fully shielded and downward-facing in order to minimize glare and light trespass within and beyond the site.
- Spotlighting or glare from any site lighting shall not intrude on adjacent properties or be directed at a specific object or target area. Exposed bulbs shall not be used.
- Accent lighting that is downlit and focused on key architectural elements and trees can be effective and attractive, however, light sources shall be screened from view.
- Project design and architectural treatments shall incorporate additional techniques to reduce glare, such as use of low reflectivity glass, use of plant material along the perimeter of structures, brush-polishing metal surfaces, etc.
- Outdoor bulbs shall provide soft white to warm white lighting in the evenings (temperatures shall be less than 3000 Kelvin).
- Lighting of all exterior signs shall be directional to illuminate the sign without producing glare on pedestrians, autos, or adjacent residential units.
- Spotlighting or glare from any site lighting should be shielded from adjacent properties and directed at a specific object or target area. Exposed bulbs should not be used.
- Low-voltage lighting conserves energy and should be used in the landscape whenever possible.
- Landscape lighting can be used to accent walkways and entries and/or seating areas and specimen plants/trees. Landscape lighting should be done with low-level, unobtrusive fixtures and limited to areas of significant landscape resources such as oak trees and mature trees.
- Lighting of all exterior signs should be directed to illuminate the sign without producing glare on pedestrians, autos, or adjacent residential units.

The Intersection Component would not create a new source of substantial light compared to existing conditions. The new signage could potentially result in glare and could create a new source of substantial glare compared to existing conditions. The Intersection Component would incorporate Certified PEIR MM AES-4 to reduce impacts from glare. Therefore, with Certified PEIR MM AES-4 incorporated, the Intersection Component's impacts would be less than significant.

Certified PEIR Mitigation Measures

MM AES-4 **Glare Reduction.** Project design and architectural treatments shall incorporate additional techniques to reduce glare, such as:

- Use of low reflectivity glass;
- Use of plant material along the perimeter of structures to soften views; and,
- Brush-polishing metal surfaces and/or use of metal surfaces that are not highly reflective.

Plans for new development shall indicate the architectural treatments and/or landscaping to be used in order to reduce glare that could be generated by new development. Plans shall be reviewed by City staff and the Architectural Review Panel, for compliance with this standard prior to issuance of a Grading Permit or Building Permit.

4.2 Agriculture and Forest Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
2. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
3. Conflict with existing zoning for or cause rezoning of forest land (as defined in Public Resources Code § 12220(g)); timberland (as defined by Public Resources Code § 4526); or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?	☐	☐	☐	■
4. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the Project convert Prime Farmland, Unique Farmland, 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. Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

c. Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

d. Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the Project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

No Impact. The Intersection Component site is currently developed with existing roads and the Kanan Road/Agoura Road intersection. There are no existing farmlands, forested areas, or other agricultural lands in the AVSP. There is no Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland) in the Intersection Component area. The lands adjacent to the intersection are not zoned for agricultural or timberland use, or under a Williamson Act contract. The Intersection Component would not result in the loss of agricultural or forest lands or conversion of these lands to other uses. Therefore, there would be no impact concerning agriculture and forest resources.

4.3 Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
3. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
4. Result in other emissions (such as those leasing to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

An air quality analysis was prepared for the Intersection Component by Kimley-Horn and Associates, Inc. (Kimley-Horn). The air quality modeling outputs and results are included in **Appendix 4.3-1: Air Quality Assessment**.

Air Quality Background

South Coast AQMD Thresholds

The significance criteria established by the South Coast Air Quality Management District (AQMD) may be relied upon to make the above determinations. According to the South Coast AQMD, an air quality impact is considered significant if the Intersection Component would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The South Coast AQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 4.3-1: South Coast Air Quality Management District Emissions Thresholds.**

Table 4.3-1: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors (Regional)	Maximum Pounds Per Day (lbs./day)	
	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55
Source: South Coast Air Quality Management District. (2019). *South Coast AQMD Air Quality Significance Thresholds.*		

Localized Carbon Monoxide

In addition to the daily thresholds listed above, the Intersection Component would also be subject to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Intersection Component site are above CAAQS and NAAQS for CO (the more stringent CAAQS are 20 ppm for 1-hour and 9 ppm for 8-hour). The South Coast Air Basin (SCAB) has been designated as attainment under the 1-hour and 8-hour CAAQS and NAAQS.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the South Coast AQMD developed localized significance thresholds (LSTs) for emissions of nitrogen dioxide (NO_2), CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the South Coast AQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Agoura Hills is located within South Coast AQMD SRA 6 (West San Fernando Valley). **Table 4.3-2: Local Significance Thresholds (Construction/Operations)** provides the LSTs for a 1.0-acre, 2.0-acre, and 5.0-acre project site in SRA 6 with sensitive receptors located within 25 meters of a project site.

Table 4.3-2: Local Significance Thresholds (Construction/Operations)

Project Size	Nitrogen Oxide (NO_X): pounds per day	Carbon Monoxide (CO): pounds per day	Coarse Particulates (PM_{10}): pounds per day	Fine Particulates ($PM_{2.5}$): pounds per day
1.0 Acre:				
Construction	103	426	4	3
Operations	103	426	1	1
2.0 Acres:				
Construction	147	644	6	4
Operations	147	644	2	1
5.0 Acres:				
Construction	221	1,158	11	6
Operations	221	1,158	4	2
Source: South Coast Air Quality Management District. (2008). *Localized Significance Threshold Methodology.*				

LSTs associated with all acreage categories are provided in **Table 4.3-2** for informational purposes. **Table 4.3-2** shows that the LSTs increase as acreages increase. It is noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based on the daily acreage disturbed.

a. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.2-7 through 4.2-18)

The South Coast AQMD Guidelines specify that to be consistent with the Air Quality Management Plan (AQMP), a project must conform to the local General Plan and must not result in or contribute to an exceedance of the City's projected population growth forecast. The Certified PEIR concluded that the Approved Project's development would be generally envisioned and accounted for in the AQMP for the region, but that increased emissions associated with the development would potentially hinder the attainment of State and federal air quality standards.

Less Than Significant Impact. Similar to a State implementation Plan described above, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the CAAQS and NAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Intersection Component is located within the SCAB, which is under the jurisdiction of the South Coast AQMD. The South Coast AQMD is required, pursuant to the FCAA, to reduce criteria pollutant emissions for which the SCAB is in nonattainment. To reduce such emissions, the South Coast AQMD adopted the 2016 and 2022 AQMPs (the AQMPs). The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving CAAQS and NAAQS. The AQMPs are a regional and multi-agency effort including the South Coast AQMD, the California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and the Environmental Protection Agency . The AQMPs pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Intersection Component is subject to the AQMPs.

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

- **Consistency Criterion No. 1:** The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the South Coast AQMD's CEQA Air Quality Handbook, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in Table 9: Construction-Related Emissions below, the Intersection Component construction emissions would not exceed South Coast AQMD thresholds. Therefore, the Intersection Component would not have the potential to violate or contribute to a CAAQS or NAAQS violation. Further, the Intersection Component would not include new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational criteria emissions. The Intersection Component does not propose any buildings and therefore no permanent source or stationary source emissions would result. Therefore, the Intersection Component would not contribute to an existing air quality violation and is consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMPs contains air pollutant reduction strategies based on SCAG's latest growth forecasts, which were defined in consultation with local governments and with reference to local general plans. The General Plan references the AVSP, which analyzes a proposed roundabout at the intersection of Kanan Road and Agoura Road. The Intersection Component would amend the AVSP to replace the roundabout with a widened standard four-leg signalized intersection to accommodate expected traffic flows upon future 2035 buildout of the AVSP. The Intersection Component includes improvements to the Kanan Road/Agoura Road intersection and roadways. The Intersection Component does not include any improvements that would result in a change to the City's projected population growth forecast and/or induce population growth. Therefore, the Intersection Component would not exceed the population or job growth projections used by the South Coast AQMD to develop the AQMPs. Thus, a less than significant impact would occur, as the Intersection Component is also consistent with the second criterion.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.2-7 through 4.2-18)

The Certified PEIR concluded that the Approved Project would result in temporary significant and unavoidable construction impacts related to NO_X and fugitive dust. The Approved Project would also result in significant and unavoidable operational impacts related to volatile organic compounds (VOC), NO_X, and CO.

Less Than Significant Impact. Intersection Component construction activities would involve site preparation, grading, and paving, which would introduce construction-related emissions that have the potential to exceed South Coast AQMD construction thresholds. Intersection Component operations would provide improvements to the Kanan Road/Agoura Road intersection would not, on its own, generate additional traffic or alter overall traffic levels. The analysis below is based on the results of the

Air Quality Assessment (see **Appendix 4.3-1**) to determine the level of impact the Intersection Component would have on the environment.

Construction Emissions

The Intersection Component's construction would generate short-term criteria pollutant emissions. Construction-related emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the South Coast AQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Airborne particulate matter emissions are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The Intersection Component's construction activities (e.g., activities requiring construction equipment) are estimated to be completed within approximately seven months. Construction-generated emissions were calculated using the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model version 9.0.0 (RCEM) computer program, which is designed to model emissions for road construction projects, based on typical construction requirements. Compliance with South Coast AQMD Rules 402 and 403, which prohibit nuisances, require dust control measures, and limit VOC content in paints, respectively, would further reduce construction-related emissions; however, compliance with South Coast AQMD Rules 402 and 403 have not been assumed in the analysis. Predicted maximum daily Intersection Component construction-generated emissions are summarized in **Table 4.3-3: Intersection Component Construction-Related Emissions**, which shows that unmitigated construction emissions would not exceed the established South Coast AQMD thresholds for criteria pollutants. Therefore, Intersection Component construction impacts would be less than significant, and no mitigation is required.

Table 4.3-3: Intersection Component Construction-Related Emissions

Construction Year	Maximum Pounds Per Day (lbs./day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Emissions[1]						
Total Emissions	8.64	90.09	83.95	0.21	4.15	3.45
South Coast AQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

1. This analysis assumes the use of water trucks to minimize fugitive dust impacts. South Coast AQMD Rules 402 and 403 were not applied. No mitigation was applied to construction equipment.

Source: RCEM version 9.0.0. See Appendix A of **Appendix 4.3-1: Air Quality Assessment** for model outputs.

Operational Emissions

The Intersection Component would not include new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational criteria emissions. The

Intersection Component does not propose any buildings and therefore no permanent source or stationary source emissions would result. Intersection improvements do not directly generate vehicle trips, a predominant source of air pollutant emissions. Vehicle trips are typically generated by land use changes that may be indirectly influenced by transportation improvements. The Intersection Component would not result in increases in the rate of vehicle trips. Rather, the proposed traffic facility improvements provide improved circulation through an area with existing and forecast traffic congestion and are considered necessary to enhance traffic capacity and improve mobility, safety, and access within the City. In addition, the Intersection Component would reduce idle time of vehicles at the Kanan Road/Agoura Road intersection. The longer a vehicle idles in a single location, the more air pollutant emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling; thus, vehicle idle emissions would decrease as a result of the Intersection Component. Therefore, Intersection Component operational impacts would be less than significant, and no mitigation is required.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for CAAQS for ozone (O_3), PM_{10}, and $PM_{2.5}$ and nonattainment for NAAQS O_3 and $PM_{2.5}$. South Coast AQMD *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution Appendix D* (2003)[16] notes that projects that result in emissions that do not exceed the project-specific South Coast AQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in **Table 4.3-3**, Intersection Component construction-related emissions by themselves would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the Intersection Component would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The South Coast AQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal Clean Air Act mandates. The analysis assumed one water truck would be utilized during construction to implement frequent water applications. South Coast AQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with South Coast AQMD rules and regulations would further reduce construction-related Intersection Component impacts. Therefore, Intersection Component-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Intersection Component would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The South Coast AQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's

[16] South Coast Air Quality Management District, *Air Quality Analysis Handbook*, *Cumulative Impacts Emissions Analysis*, https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

existing air quality conditions. Therefore, a project that exceeds the South Coast AQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As discussed previously, the Intersection Component's operational emissions would not include permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable criteria emissions from project emissions. As a result, Intersection Component operational emissions would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Additionally, adherence to South Coast AQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. As a result, the Intersection Component would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the Intersection Component would be less than significant.

c. Would the Project expose sensitive receptors to substantial pollutant concentrations?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.2-7 through 4.2-18)

The Certified PEIR concluded the Approved Project would result in temporary significant and unavoidable construction impacts related to NO_X and fugitive dust. The Approved Project would also result in significant and unavoidable operational impacts related to VOC, NO_X, and CO.

Less Than Significant Impact. The Intersection Component's construction activities would involve site preparation, grading, and paving that would introduce construction-related emissions with potential to exceed South Coast AQMD LSTs. Construction activities would also potentially expose sensitive receptors to substantial pollutant concentrations.

Construction Localized Significance Analysis

LSTs were developed in response to South Coast AQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The South Coast AQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Intersection Component-specific emissions. The South Coast AQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. The appropriate SRA for the localized significance thresholds is the West San Fernando Valley (SRA 6) since this area includes the Intersection Component site.

The South Coast AQMD's methodology states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." However, this analysis considers total construction emissions, inclusive of both on-site and off-site construction emissions, to provide a more conservative estimate of potential construction emissions.

The nearest sensitive receptors are the single-family residences located approximately 1,800 feet (549 meters) southeast of the Intersection Component site. Therefore, LSTs for receptors located at 500 meters were utilized in this analysis. **Table 4.3-4: Intersection Component Localized Significance of Construction Emissions** presents the results of localized construction emissions and shows that criteria pollutant emissions on the peak day of construction would not exceed thresholds or result in significant concentrations of pollutants at nearby sensitive receptors. A less than significant impact would occur, and no mitigation is required.

Table 4.3-4: Intersection Component Localized Significance of Construction Emissions

Construction Activity	Maximum Pounds Per Day (lbs/day)			
	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Grubbing/Land Clearing	9.31	10.05	0.52	0.39
Grading/Excavation	53.42	45.08	2.34	1.95
Drainage/Utilities/Sub-Grade	27.37	28.82	1.30	1.11
Paving	14.00	19.44	0.74	0.66
Maximum[1]	90.09	83.95	4.15	3.45
South Coast AQMD Localized Screening Threshold 5 acres at 500 meters)	*313*	*9,271*	*181*	*96*
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**

1. Maximum emissions account for overlapping construction phases.
Source: RCEM version 9.0.0. See **Appendix 4.3-1: Air Quality Assessment** for model outputs.

Localized Operational Significance Analysis

According to the South Coast AQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend prolonged periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Intersection Component is an intersection improvement, which does not include such land uses. Therefore, no long-term localized significance threshold analysis is needed. The Intersection Component would result in no operational LST emissions. No impact would occur, and no mitigation is required.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502). The South Coast AQMD has set its CEQA significance thresholds based on the federal Clean Air Act, which defines a major stationary source (in extreme O_3 nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and South Coast AQMD Rule 1303 for new or modified sources. The NSR Program[17] was created by the federal Clean Air Act to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the South Coast AQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

As previously discussed, localized effects on nearby receptors resulting from the Intersection Component emissions would be less than significant; see **Table 4.3-4**. The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable CAAQS or NAAQS. The LSTs were developed by the South Coast AQMD based on the ambient

[17] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The CAAQS and NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations. However, as discussed above, neither the South Coast AQMD nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a project's mass emissions.

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the NAAQS and CAAQS, none of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single project. It should also be noted that this analysis identifies health concerns related to particulate matter, CO, O_3, and NO_2. Table 2 in the Air Quality Assessment (see **Appendix 4.3-1**) includes a list of criteria pollutants and summarizes common sources and effects. Thus, this analysis is reasonable and intended to foster informed decision making. As shown above, Intersection Component-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service (LOS) of an intersection resulting from the Intersection Component would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

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

Construction-Related Diesel Particulate Matter

The Intersection Component's construction would result in the generation of diesel particulate matter (DPM) emissions from the use of required off-road diesel equipment required. The amount to which the

receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminants [TAC] emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The California Office of Environmental Health Hazard Assessment (OEHHA) has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the Intersection Component site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time which would limit the exposure of any proximate individual sensitive receptor to TACs.

Additionally, construction is subject to and would comply with California regulations (e.g., CCR, Title 13, §§ 2485 and 2449), which reduce DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur at specific locations within the Intersection Component site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM of any one receptor is exposed to would be limited. Therefore, considering the relatively short duration of DPM-emitting construction activity at any one location, and the highly dispersive properties of DPM, sensitive receptors would not be exposed to substantial concentrations of construction-related TAC emissions. Impacts would be less than significant.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.2-17 through 4.2-18)

The Certified PEIR concluded that the Approved Project would result in potentially significant impacts due to the equestrian center and trail near Medea Creek, which could create nuisance odors. The analysis concluded Certified PEIR MM AQ-4(a) would reduce equestrian trail extension odor emissions to a less than significant level.

Less Than Significant Impact. During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g., diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. Given the nature and duration of construction-related odors, the Intersection Component would result in a less than significant impact concerning the creation of objectionable odors during construction.

The South Coast AQMD CEQA Air Quality Handbook identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project involves intersection improvements and would not include any of the land uses that have been identified by the South Coast AQMD as odor sources. Therefore, no impact concerning the creation of objectionable odors during operations would occur.

4.4 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
3. 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?	☐	☐	☐	■
4. 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?	☐	■	☐	☐
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	■	☐	☐
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

A biological and aquatic resources analysis was prepared for the Intersection Component by Rocks Biological Consulting (Rocks). The memorandum is included in **Appendix 4.4-1: Biological and Aquatic Resources Assessment Memo**.

a. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.3-46 through 4.3-57)

The Certified PEIR concluded that the Approved Project would result in potentially significant impacts to sensitive species, including nesting raptors and migratory birds. Incorporated of Certified PEIR MMs BIO-1(a) through BIO-1(c) would reduce impacts to sensitive species to a less than significant level. The Approved Project could also adversely affect sensitive onsite species. Incorporation of Certified PEIR MMs BIO-2(a) through BIO-2(c), BIO-4(f), and BIO-6(a) through BIO-6(b) would reduce direct and indirect impacts to sensitive communities to a less than significant level.

Less Than Significant Impact With Mitigation Incorporated. Various special status plant and wildlife species are located in the AVSP area. As stated in the Biological and Aquatics Resources Assessment Memo (see **Appendix 4.4-1**), the majority of the Intersection Component site consists of developed land, including ornamental vegetation. The Intersection Component site also supports California buckwheat (*Eriogonum fasciculatum)* scrub, California buckwheat scrub – disturbed, non-native grassland, and disturbed habitat. Native and naturalized vegetation, including California buckwheat scrub, California buckwheat scrub – disturbed, and non-native grassland, occur in the areas adjacent to Kanan Road where the utility undergrounding is proposed. The disturbed habitat along Kanan and Agoura Roads, as well as the roadsides for the Whizin Road and Roadside Road portions of the Intersection Component site, receive frequent direct and indirect disturbance from traffic and other human-related activities.

No federally or State-listed as threatened or endangered plants were observed within the Intersection Component site during the field survey. Four federally or State-listed as threatened or endangered plants have been documented within three miles of the Intersection Component site:

- Agoura Hills dudleya (*Dudleya cymosa ssp. agourensis*; federally threatened [FT]),
- Braunton's milk-vetch (*Astragalus brauntonii*; federally endangered [FE]),
- California Orcutt grass (*Orcuttia californica*; FE), and
- Lyon's pentachaeta (*Pentachaeta lyonia*; FE and State-endangered).

Due to the lack of suitable habitat and disturbed nature of the Intersection Component site, no federally or State-listed plant species have a moderate or high potential to occur. Agoura Hills dudleya and Braunton's milk-vetch have low potential to occur. The Intersection Component site is not within any United States Fish and Wildlife Service (USFWS) Critical Habitat for listed plant species. No other special-status plant species were observed during the field survey.

Five additional plant species with a California Rare Plant Rank (CRPR) were listed on California Natural Diversity Database (CNDDB) within three miles of the Intersection Component site and include:

- chaparral nolina (*Nolina cismontana*; CRPR 1B.2),
- mesa horkelia (*Horkelia cuneata* var. *puberula*; CRPR 1B.1),
- Ojai navarretia (*Navarretia ojaiensis*; CRPR 1B.1),

- Santa Susana tarplant (*Deinandra minthornii*; CRPR 1B.2), and
- slender mariposa-lily (*Calochortus clavatus* var. *gracilis*; CRPR 1B.2).

Due to lack of suitable habitat, none of these plant species with a CRPR rank have moderate or high potential to occur within the Intersection Component site.

No special-status wildlife species were observed within the Intersection Component site during the field survey, and none have moderate or high potential to occur. Coast whiptail (*Aspidoscelis tigris stejnegeri*; a California Species of Special Concern [SSC]) and coastal California gnatcatcher (*Polioptila californica;* FT and SSC) have low potential to occur within the Intersection Component site. The Intersection Component site does not occur within any USFWS Critical Habitat for listed wildlife species.

During the Intersection Component's construction, particularly the utility undergrounding along Kanan Road, trenching activities could result in potential temporary impacts if any areas within California buckwheat scrub or California buckwheat scrub – disturbed is affected. The utility company would implement best management practices (BMP's) during construction to avoid and minimize impacts to habitat. If natural habitat areas cannot be avoided, the Intersection Component would incorporate MM BIO-1 to reduce impacts to sensitive species to a less than significant level.

Mitigation Measures

MM BIO-1 **Vegetation Mapping.** Prior to the start of Intersection Component construction, vegetation mapping should be updated and permanent and temporary impacts to vegetation communities and land covers should be calculated. Affected areas shall be restored to pre-construction conditions at minimum. Restoration activities could include active revegetation of impacted areas within native habitat if those areas are not able to recover naturally following trenching activities. Should any new structures be installed within native habitat as a part of the underground utility component, depending on the size of the potential permanent impact resulting from the structure(s) and quality of habitat, those impacts could be considered negligible on native habitat. Larger permanent potential impacts on native habitat could require the restoration of similar habitat in the Intersection Component vicinity or even the purchase of mitigation credits for the conservation of similar habitat.

c. Would the Project 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.3-61 through 4.3-64)

The Certified PEIR concluded that the Approved Project would potentially disturb wetlands and areas under the jurisdiction of the California Department of Fish and Game (CDFG) and United States Army Corps of Engineers (USACE). Incorporation of Certified PEIR MMs BIO-4(a) through BIO-4(e) would reduce impacts to protected wetland areas to less than significant.

No Impact. Medea and Lindero Canyon Creeks are freshwater wetland areas adjacent to the Intersection Component site. The Intersection Component site, although nearby, would not have any construction or operation activity within these wetland areas. The slight extension of the drainage structures under the roadways would not affect the wetland areas. Based on the lack of hydrophytic vegetation and wetland hydrology indicators in the concrete ditches along the southern portion of Agoura Road and west of Kanan Road, the features are not anticipated to meet the appropriate wetland parameters to qualify as wetland waters of the United States or State per the United States Army Corps of Engineers and the Regional Water

Quality Control Board or associated wetland potentially jurisdictional by the CDFW. There would be no impact beyond that identified in the Certified PEIR that would occur.

d. Would the Project 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.3-64 through 4.3-66)

The Certified PEIR concluded that the Approved Project would not disrupt regional movement of wildlife because the AVSP's undeveloped southern half would be adjacent to existing urban and developed uses and is bordered directly to the north by a heavily traveled arterial roadway (Agoura Road). Most of the land has been previously disturbed and utilized for stockpiling of soils and machinery. The Approved Project would continue maintenance of the area west of Lindero Canyon Creek as open space to maintain connectivity between Lindero Canyon Creek and the wildlife habitat to the west. Medea Creek provides an undercrossing of US 101, but because the creek is channelized, it is not conducive to the movement of most mammals, reptiles, or amphibians. Therefore, the Certified PEIR concluded impacts would be less than significant.

Less Than Significant Impact with Mitigation Incorporated. The Intersection Component does not occur within any of the four City-identified wildlife corridors and linkages (i.e., Madea Creek, Palo Comado Canyon, Chesebro Canyon, and Liberty Canyon). The Intersection Component occurs along existing roads and adjacent to existing development within the City. The AVSP area is not located in a Regional Wildlife Corridor nor identified as a wildlife corridor in the General Plan. The Intersection Component site is mostly developed as an intersection except for the minor widening onto adjacent vacant lands. As determined in the Certified PEIR, the adjacent vacant land surrounding the Kanan Road/Agoura Road intersection would not be suitable as a wildlife corridor.

Nonetheless, the Intersection Component would be required to comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), which would further protect migratory birds. Under MBTA provisions, it is unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest or egg of any migratory bird covered by the conventions, or to attempt those activities. In addition, the CFGC extends protection to non-migratory birds identified as resident game birds (CFGC § 3500) and any birds in the orders Falconiformes or Strigiformes (birds-of-prey) (CFGC § 3503). To address potential impacts to migratory birds, the Intersection Component would incorporate Certified PEIR MM BIO-1(c), which addresses construction activities during the nesting season. Therefore, following compliance with the relevant regulatory framework and with Certified PEIR MM BIO-1(c) incorporated, the Intersection Component's potential impacts to nesting migratory birds would be less than significant.

Certified PEIR Mitigation Measures

MM BIO-1(c) If vegetation clearing (including tree pruning and removal) or other project construction is to be initiated during the bird breeding season (February 1 through August 31), preconstruction/grading surveys shall be conducted by a qualified ornithologist (a person with a biology degree and/or established skills in bird recognition). Surveys shall begin 30 days prior to initial disturbance activities and shall continue weekly, with the last survey being conducted no more than three days prior to the initiation of clearance/construction work. If bird species are observed nesting within 500 feet of construction/grading areas, all construction or grading activities will be postponed or

halted at the discretion of the biologist until the nest is vacated and the juveniles have fledged.

Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. This distance shall be at least 300 feet for raptors and at least 100 feet for all other bird species. Construction personnel should be instructed on the sensitivity of the area. The applicant should record the results of the recommended protective measures described above to document compliance with applicable State and federal laws pertaining to the protection of native birds.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.3-57 through 4.3-61)

The Certified PEIR concluded that the Approved Project may require removal of oak trees and indirectly affect additional oaks, resulting in a potentially significant impact. Incorporation of Certified PEIR MMs BIO-3(a) through BIO-3(d) would reduce impacts to oak trees to a less than significant level.

Less Than Significant Impact with Mitigation Incorporated. The Intersection Component site contains both valley oak and coast live oak trees along the roadsides and landscaped medians of Kanan and Agoura Roads. Oak trees (*Quercus* sp.) within the City are protected by the City's Oak Tree Ordinance (City Council Resolution No. 374). The Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along Kanan and Agoura Roads that deviate from the improvements proposed in the Approved Project. Three mature oak trees, two of which are located north of Agoura Road and one which is located south of Agoura Road, would be protected and remain in place as part of the Intersection Component. However, twelve smaller oak trees located south of Agoura Road and surrounding the Kanan Road/Agoura Road intersection would be removed. The Intersection Component would require an Oak Tree Permit and would be required to incorporate Certified PEIR MMs BIO-3(a) through BIO-3(d) to reduce impacts to oak trees to less than significant.

Certified PEIR Mitigation Measures

MM BIO-3(a) **Oak Tree Protection and Preservation.** Individual project applicant shall submit the results of an oak tree survey and an Oak Tree Report, including an Oak Tree Preservation Program, for review and approval by the City's oak tree consultant as part of the project application. Individual projects shall be developed and operated in compliance with the approved Oak Tree Preservation Program and any other conditions determined to be necessary by the City oak tree consultant. The program shall include, but not be limited to, the following components:

- No grading or development shall occur within 5 feet from the driplines of oak trees that occur in the construction area.
- All specimen oak trees within 25 feet of proposed ground disturbances shall be temporarily fenced with chain-link or other material satisfactory to the City throughout all grading and construction activities. The fencing shall be installed six feet outside the dripline of each specimen oak tree, and shall be staked every six feet.
- No construction equipment shall be parked, stored or operated within six feet of any specimen oak tree dripline.

- No fill soil, rocks, or construction materials shall be stored or placed within six feet of the dripline of a specimen oak tree (pervious paving and other materials are allowed, as approved by the City).
- No artificial surface, pervious or impervious, shall be placed within six feet of the dripline of any specimen oak tree, except for project access roads.
- Any roots encountered that are one inch in diameter or greater shall be cleanly cut. This shall be done under the direction of a City approved arborist/oak tree consultant.
- Any trenching required within the dripline or sensitive root zone of any specimen tree shall be done by hand. In addition, trenching n the protected zone needs to preserve roots over 1 inch by tunneling.
- No permanent irrigation shall occur within the dripline of any existing oak tree.
- Any construction activity required within three feet of a specimen oak tree's dripline shall be done with hand tools.

MM BIO-3(b) **Grading Plan.** The number of oak trees requiring removal and the number of trees that will be encroached upon by grading and project development shall be confirmed by the City's oak tree consultant with the final grading plan. The plan shall also indicate requirements for retaining walls, tree wells, tree drainage requirements, and pruning as part of the plan.

MM BIO-3(c) **Oak Tree Replacement.** For impacts involving 10 percent or less of oak tree removal resulting from grading and project development, each oak tree shall be replaced with specimen oak trees of the same species as the tree that was removed at a ratio and dimension specified in the City's Zoning Ordinance. This mitigation is to occur onsite. For impacts involving greater than 10 percent of oak tree removal resulting from grading and project development, mitigation shall either be onsite with the requirements as listed above, or an in-lieu fee may be paid to the City to be used to acquire land and/or install oak trees on another site, preferably in as close proximity to the area of removal as possible.

The sum of the calipers of all oak trees planted must be at least equal to that removed. The locations of the replanted trees shall be indicated on the project plans submitted to the City for review by the City's oak tree consultant. Trees shall be planted so that mature trees will have a continuous canopy. Every attempt shall be made to plant oak trees according to species-specific habitat requirements: valley oaks at lower elevations in alluvial soils; and coast live oaks on mesic north facing slope locations. Each oak tree removed by grading and project development shall be replaced with two 36-inch box and two 24-inch box specimen oak trees of the same species as the tree that was removed. Additionally, all naturally occurring native vegetation in the areas proposed for oak tree mitigation shall be identified. This includes surveys for ephemeral plants and bulbs. Oak tree planting shall not cause the removal or destruction of existing native vegetation without replacement in the same locations.

MM BIO-3(d) **Oak Planting Arrangements.** Where appropriate pursuant to the recommendations of the City's oak tree consultant, replacement oaks for the removal of individual oak trees shall be clustered in an attempt to replace oak woodland habitat removed. Trees shall be

planted so that mature trees will have a continuous canopy. Every attempt shall be made to plant oak trees according to species-specific habitat requirements: valley oaks at lower elevations in alluvial soils and coast live oaks on mesic north facing slope locations.

f. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

No Impact. The City is not located within any adopted Habitat Conservation Plans, Natural Community Conservation Plans, or any other approved local, regional, or State habitat conservation plans.[18] Therefore, the Intersection Component would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

[18] City of Agoura Hills, General Plan 2035 EIR, Volume I: Final EIR, February 2010, page 4.3-23. Available at https://www.agourahillscity.org/home/showpublisheddocument/8007/635045247851600000. Accessed January 3, 2022.

4.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Cause a substantial adverse change in the significance of a historical resource as pursuant to § 15064.5?	☐	☐	☐	■
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	■	☐	☐
3. Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

BCR Consulting LLC (BCR) prepared a cultural resources assessment for the Intersection Component, which is included in **Appendix 4.5-1: Cultural Resources Assessment**.

a. Would the Project cause a substantial adverse change in the significance of a historical resource as pursuant to § 15064.5?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.6-7 through 4.6-9)

The Certified PEIR did not identify any environmental impacts concerning historic resources.

No Impact. The Intersection Component site includes an existing intersection that is currently paved and developed, and there are no additional structures located within the Intersection Component site. Therefore, the Intersection Component would not cause an adverse change in the significance of a historical resource. No impact would occur, and no mitigation is required.

b. Would the Project cause a substantial adverse change in the significance of an archaeological resource as pursuant to § 15064.5?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.6-7 through 4.6-9)

As noted above, the Certified PEIR concluded that Ladyface Mountain is one of the most important prehistoric lithic resource areas in the Santa Monica Mountains, and that many recorded prehistoric sites found within the Approved Project area are on the northern side of Ladyface Mountain. The Certified PEIR concluded that the Approved Project could potentially impact the prehistoric archaeological resources located within the Approved Project boundaries. Incorporation of Certified PEIR MMs HA-1(a) and HA-1(b) would reduce impacts to a less than significant level.

Less Than Significant Impact With Mitigation Incorporated. The Intersection Component site includes an existing intersection that is currently paved and developed. However, the Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along Kanan and Agoura Roads that deviate from the improvements proposed in the Approved Project. The Intersection Component's construction would involve ground disturbing activities and require earthwork, such as excavation and grading. Any ground disturbing activity could uncover potential archaeological resources.

Although the areas that surround Kanan and Agoura Roads, including the intersection, have mostly been previously disturbed, there is potential to uncover and disturb additional resources.

The South-Central Coastal Information Center (SCCIC) record search conducted as part of the Intersection Component's Cultural Resources Assessment (see **Appendix 4.5-1**) revealed that ten cultural resource studies have taken place, resulting in 19 cultural resources recorded within 0.5 mile of the Intersection Component site. Of the previous studies, eight assessed the Intersection Component site for cultural resources, and two prehistoric archaeological habitation sites (P-19-41 and P-19-467) have been recorded within the Intersection Component site boundaries. The most recent previous studies attempted to relocate the two prehistoric archaeological habitation sites but were not successful. During the field survey, archaeologists did not identify any cultural resources (including prehistoric or historic-period archaeological sites or historic-period buildings) within the Intersection Component site boundaries. The record search results indicate that the two prehistoric habitation sites would be crossed by portions of the Intersection Component's alignment, but no trace of either resource was identified. Further, the Intersection Component's potential impacts with the site locations are in small areas of existing road frontage that had been subject to severe disturbances from road construction and utility installation and maintenance. Therefore, further evaluation of those two prehistoric sites is not recommended. However, the Cultural Resources Assessment found the two prehistoric archaeological habitation sites indicate sensitivity for buried cultural resources within the Intersection Component site, and impacts during ground disturbing activities could be potentially significant. To address potential impacts to archaeological resources, the Intersection Component would incorporate MMs CUL-1 through CUL-4. Therefore, with MMs CUL-1 through CUL-4 incorporated, the Intersection Component's impacts to archaeological resources would be less than significant.

Mitigation Measures

MM CUL-1 Prior to issuance of demolition permit for the Intersection Component, the City shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (Qualified Archaeologist) to oversee an archaeological monitor who shall be present during construction excavations such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the Project. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils and older versus younger soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered, as determined by the Qualified Archaeologist. The frequency of monitoring shall be determined based on the factors presented above, and can be reduced to part-time inspections or ceased entirely if determined appropriate by the Qualified Archaeologist. Prior to commencement of excavation activities, a Worker's Environmental Awareness Program (WEAP) training shall be given for construction personnel to alert field personnel to the possibility of buried prehistoric or historic cultural deposits. The training shall be carried out by the Qualified Archaeologist and shall focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event.

MM CUL-2: Prior to issuance of demolition permit for the Intersection Component, the City shall retain a Native American tribal monitor from a consulting Tribe. The appropriate Native American tribal monitor shall be selected based on ongoing consultation under AB 52 and shall be identified on the most recent contact list provided by the Native American Heritage Commission. The Native American monitor shall be present during construction

excavations such as clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the Project. The frequency of monitoring shall take into account the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils and older versus younger soils), and the depth of excavation, and if found, the abundance and type of prehistoric archaeological resources encountered. The frequency of monitoring shall be determined based on the factors presented above, and can be reduced to part-time inspections or ceased entirely if determined appropriate by the consulting Tribe.

MM CUL-3: In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed during Intersection Component construction, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer within which construction activities shall not be allowed to continue shall be established by the qualified Archaeologist around the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the Qualified Archaeologist and the consulting Tribe.

If the resources are Native American in origin, the consulting Tribe shall consult with the City and Qualified Archaeologist regarding the treatment and curation of any prehistoric archaeological resources. If a resource is determined by the Qualified Archaeologist to constitute a "historical resource" pursuant to State CEQA Guidelines § 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code § 21083.2(g), the Qualified Archaeologist shall coordinate with the City to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with State CEQA Guidelines § 15064.5(f) for historical resources and Public Resources Code §§ 21083.2(b) for unique archaeological resources. The treatment plan shall incorporate the consulting Tribe's treatment and curation recommendations. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If in coordination with the City, it is determined that preservation in place is not feasible, appropriate treatment of the resource shall be developed by the Qualified Archaeologist in coordination with the City and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school, Tribe, or historical society in the area for educational purposes.

MM CUL-4: The Qualified Archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of archaeological monitoring for the Intersection Component. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources and CEQA. The report and the Site Forms shall be submitted to the City, the South-Central Coastal Information Center, and representatives

of other appropriate or concerned agencies to signify the satisfactory completion of the development and required MM.

c. Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Summary of Previous Environmental Analysis

This threshold was not addressed in the Certified PEIR. However, the Certified PEIR MM HA-1(c) was included to reduce potential impacts to human remains to less than significant.

Less Than Significant with Mitigation Incorporated. The Intersection Component site includes an existing intersection that is currently paved and developed. However, the Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along Kanan and Agoura Roads that deviate from the improvements proposed in the Approved Project. The Intersection Component's construction would involve ground disturbing activities and would require earthwork, such as excavation and grading. Any ground disturbing activity could uncover potential human remains. Therefore, impacts would be potentially significant. The Intersection Component would incorporate Certified PEIR MM HA-1(c) to reduce potential impacts to human remains. Therefore, with Certified PEIR MM HA-1(c) incorporated, the Intersection Component's impacts would be less than significant.

Certified PEIR Mitigation Measures

MM HA-1(c) **Archaeological Discovery.** If human remains are unearthed, State Health and Safety Code § 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code § 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains.

4.6 Energy

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

a. Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

b. Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Summary of Previous Environmental Analysis (See Certified PEIR page 4.2-16)

The Certified PEIR did not address energy as a separate threshold but concluded that the Approved Project would incorporate Certified PEIR MM AQ-3(a) to reduce energy consumption from onsite structures by at least 20 percent below current Federal guidelines as specified in Code of Federal Regulations Title 24. The analysis concluded that with Certified PEIR MM AQ-3(a) incorporated, impacts concerning energy would be less than significant.

Less Than Significant Impact. The Intersection Component involves the construction of and improvements to the Kanan Road/Agoura Road intersection and roadways. The Intersection Component would not result in the development of any structures (e.g., commercial or residential uses) that would increase energy consumption. The existing lighting poles that include luminaires will remain in place. The Intersection Component would relocate existing pedestrian and street lighting, but no new pedestrian or street lighting would be added. Minor lighting would be provided at the Agoura Village Gateway Monuments and City Gateway Entry Monuments for illumination and safety purposes. The lighting would be subject to applicable AVSP development standards to utilize low-voltage lighting. Therefore, the Intersection Component would not result in potentially significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts would be less than significant.

4.7 Geology and Soils

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

A Geotechnical Investigation Report (Kleinfelder West, Inc., May 2012) and a Geotechnical Recommendation Memorandum (Twining Inc., April 2016) were prepared for the Intersection Component; see **Appendix 4.7-1: Geotechnical Investigation Report and Geotechnical Recommendation Memorandum**.

a.i. Would the Project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-15 through 4.4-)

The Certified PEIR concluded that no known active faults cross through the AVSP area; therefore, the potential for fault rupture is minimal. No Alquist Priolo Earthquake Fault Zones have been identified within the City. There would be no impact.

No Impact. The Intersection Component site is not within any mapped Alquist Priolo Earthquake Fault Zones, nor have any Alquist Priolo Earthquake Fault Zones been identified in the City.[19] Therefore, the Intersection Component would not cause adverse effects involving rupture of a known earthquake fault.

a.ii. Would the Project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-15 through 4.4-)

The Certified PEIR concluded that no known active faults cross through the AVSP area; therefore, the potential for fault rupture is minimal. While there is potential for ground-shaking from other faults in the area and from blind thrust faults, and impacts may be potentially significant. Incorporation of Certified PEIR MMs GEO-1(a) and GEO-1(b) would reduce impacts to less than significant.

Less Than Significant With Mitigation Incorporated. The Intersection Component site is not within any mapped Alquist Priolo Earthquake Fault Zones, nor have any Alquist Priolo Earthquake Fault Zones been identified in the City.[20] The roadway widenings on Kanan and Agoura Roads would be constructed in the existing public ROW as well as within private, vacant lands adjacent to the intersection and roadway. The Proposed Project would not introduce structures for human occupancy that would result in potential risks. However, the City is subject to strong ground shaking due to regionally active faults or blind thrust faults, and impacts would be potentially significant. Certified PEIR MM GEO-1(b), included below for reference, requires future development to comply with recommendations related to seismically induced hazards. It is noted that in compliance with Certified PEIR MM GEO-1(b), the Proposed Project prepared a Geotechnical Investigation Report and Geotechnical Recommendations Memorandum (see **Appendix 4.7-**

[19] City of Agoura Hills, General Plan 2035 EIR, February 2010, pages 4.5-2 and 4.5-3.

[20] City of Agoura Hills, General Plan 2035 EIR, February 2010, pages 4.5-2 and 4.5-3.

1). There are no mapped active or potentially active fault traces known to transect the Intersection Component site.[21] Roadway design and pavement construction would be subject to recommendations provided in the Geotechnical Recommendations Memorandum and Geotechnical Investigation Report (see **Appendix 4.7-1**), as well as the Caltrans Highway Design Manual. The proposed Agoura Village Gateway Monuments and City Gateway Entry Monuments would be subject to compliance with applicable Uniform Building Code (UBC) requirements. Additionally, the Intersection Component would be subject to compliance with the seismic design considerations and recommendations provided in Geotechnical Investigation Report Section 4, and the Geotechnical Recommendation Memorandum, pursuant to Certified PEIR MM GEO-1(b) requirements. Therefore, with Certified PEIR MM GEO-1(b) incorporated, the Intersection Component's potential adverse effects involving strong seismic ground shaking would be less than significant.

Certified PEIR Mitigation Measures

MM GEO-1(b) **Geotechnical Recommendations**. Future development shall require, and comply with, all recommendations contained in site-specific geologic, geotechnical, and structural design studies prepared for subsequent development activities. Subsequent subsurface investigations shall determine the possible presence of seismically induced hazards and appropriate means of mitigating such hazards. Recommendations contained in these site-specific studies shall be reviewed and approved by the City Building Official and incorporated into final grading and structural design plans, as deemed appropriate by the City Building Official. At a minimum, any buildings considered essential facilities, as defined in the Uniform or California building codes, shall be designed to withstand upper bound earthquake ground motion. All on-site structures shall comply with applicable provisions of the ~~1997~~ current Uniform Building Code and ~~the 1998~~ current California Building Code. The calculated design base ground motion for the site shall take into consideration the soil type, potential for liquefaction, and the most current and applicable seismic attenuation methods that are available.

a.iii. Would the Project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-17 through 4.4-18)

The Certified PEIR concluded that the AVSP area east of Cornell Road is potentially subject to liquefaction; therefore, the Approved Project would have a potentially significant impact related to liquefaction. Incorporation of Certified PEIR MM GEO-2 would reduce impacts related to seismically induced liquefaction to less than significant.

No Impact. The Intersection Component would involve construction and improvements to the Kanan Road/Agoura Road intersection and roadways. The Intersection Component would not include any improvements located in areas east of Cornell Road where the Certified PEIR identified the potential for liquefaction. Therefore, the Intersection Component would not cause substantial adverse effects concerning seismically-induced liquefaction. No impact would occur, and no mitigation is required.

a.iv. *Would the Project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

b. Would the Project result in substantial soil erosion or the loss of topsoil?

[21] Kleinfelder, Geotechnical Investigation Report for Agoura Road and Kanan Road Widening Project, May 25, 2012, pages 10 and 11.

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-20 through 4.4-24)

The Certified PEIR concluded erosion would potentially occur along manufactured slopes that are improperly designed or not adequately revegetated. The analysis concluded incorporation of Certified PEIR MM GEO-3(b), which requires a site-specific erosion control plan, would reduce impacts from erosion to less than significant.

Less Than Significant with Mitigation Incorporated. Grading and earthwork activities during construction would expose soils to potential short-term erosion by wind and water. Construction of the Intersection Component would be subject to compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, and all subsequent amendments) (Construction General Permit); see **Section 4.10: Hydrology and Water Quality**, which specifies that no Grading Permit shall be issued to construction projects that disturb 1.0 or more acres of soil without obtaining a General Construction Activity Stormwater Permit (GCASWP) from the State Water Resources Control Board. Following compliance with the established regulatory framework (i.e., the Construction General Permit), the Intersection Component's potential impacts concerning soil erosion and loss of topsoil would be less than significant. Certified PEIR MM GEO-3(b) would further reduce impacts related to soil erosion to a less than significant level.

Certified PEIR Mitigation Measures

See Certified PEIR MM GEO-3(b) below.

c. Would the Project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-18 through 4.4-19)

The Certified PEIR concluded that the topography across the AVSP area is variable and could require relatively substantial topographic modification. If grading were to occur along the banks of waterways, retaining walls may be needed, as well as along the base of Ladyface Mountain. If not properly engineered, the modifications would potentially create slope stability problems and could expose new development to slope failures, such as landslides, soil settlements, rock falls, etc. Impacts would be potentially significant. Compliance with applicable UBC and California Building Code (CBC) requirements, as well as incorporation of Certified PEIR MMs GEO-3(a) through GEO-3(c) would reduce impacts to less than significant. Further, the Approved Project would incorporate Certified PEIR MM GEO-4(a) to reduce any impacts related to blasting in areas underlain by Conejo Volcanics (e.g., Zone B) to a less than significant level.

Less Than Significant with Mitigation Incorporated. The Intersection Component would involve construction and improvements to the Kanan Road/Agoura Road intersection and roadways. The Intersection Component would not develop any structures for human occupancy. However, the Intersection Component may require retaining walls, and impacts would be potentially significant. Certified PEIR MMs GEO-3(a) through GEO-3(c), included below for reference, require a geotechnical evaluation, erosion control plan, and City oversight and approval after a final grading report has been filed. It is noted the Intersection Component complied with Certified PEIR MM GEO-3(a) and prepared a Geotechnical Investigation Report and Geotechnical Recommendations Memorandum (see **Appendix 4.7-1**). The Intersection Component would be subject to compliance with the site preparation and earthwork operation recommendations provided in Geotechnical Investigation Report Section 4 and Geotechnical Recommendation Memorandum, as it relates to the Intersection Component. With MM GEO-3(a)

incorporated, the Intersection Component's potential adverse effects would be minimized. Additionally, the Intersection Component would be located within the existing assumed ROW and would not excavate or require blasting in areas designated as Zone B. Therefore, with MMs GEO-3(a) through GEO-3(c) incorporated, the Intersection Component's potential effects involving landslides, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

Certified PEIR Mitigation Measures

MM GEO-3(a) **Geotechnical Evaluation.** Individual developments shall provide site-specific geotechnical evaluations and geological reports that address onsite soils and slope stability hazards as part of the initial application process. Prior to approval of a specific development plan, these studies shall be submitted to the City Planning and Community Development Department and/or consultants hired by the City for review and approval as part of the initial application process. These evaluations shall determine the potential for adverse soil stability impacts and shall identify appropriate mitigation techniques. All mitigation recommendations identified in site-specific studies shall be implemented as a condition of future development. Such measures may include avoidance of development in areas found to have unmitigable soil or geologic hazards, soil or grading modifications to ensure acceptable slope stability on manufactured slopes, structural measures to ensure slope stability, drainage control facilities to collect and direct water off of slopes, removal of loose cobbles and boulders from adjacent slopes, and/or other measures deemed appropriate to ensure proper slope stability. If site-specific geologic mitigation measures are found to cause secondary environmental effects not addressed herein (excessive import or export of soil material, retaining walls, blasting, etc.), subsequent environmental analysis, may be required.

MM GEO-3(b) **Erosion Control Plan.** A site-specific erosion control plan that incorporates best management practices shall be prepared by individual applicants and approved by the City prior to the granting of any grading permits for an individual development within the project area. Measures identified in such plans shall be implemented. Such measures may include slope protection measures, netting and sandbagging, landscaping and possibly hydroseeding, temporary drainage control facilities such as retention areas, etc. Landscaping shall be designed by a licensed landscape architect with final landscaping plans to be reviewed and approved by the City Building Official prior to project approval.

MM GEO-3(c) **City Oversight and Approval.** The City Engineer or equivalent shall inspect a project after the final grading report has been filed. The project shall not be approved for construction by the City Engineer or equivalent until all hazards either caused by project grading or associated with adjoining geologic and soils conditions, such as erosion and slope instability, are mitigated to the City's specifications.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-20 through 4.4-24)

The Certified PEIR concluded the Approved Project would be underlain by clayey materials, which can have a relatively high shrink-swell potential. Shrinking and swelling of soil beneath structures could result in cracking of foundations and other structural damage. Impacts would be potentially significant. Incorporation of Certified PEIR MMs GEO-5(a), GEO-5(b), GEO-6(a), and GEO-6(b) would reduce impacts related to soil expansion and soil settlement to a less than significant level.

Less Than Significant with Mitigation Incorporated. Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade. As discussed in Appendix 4.7-1, like the Approved Project, the Intersection Component would be underlain by soils identified as moderately to highly expansive. Certified PEIR MMs GEO-5(a), GEO-5(b), GEO-6(a), and GEO-6(b), included below for reference, requires the foundations and infrastructure to be designed by a structural engineer to withstand the existing conditions or for the site to be graded in such a manner to address the expansive soil condition, a project-specific soils/foundation report to be prepared, and City oversight and approval of a final grading and structural design plan has been filed. It is noted that the Intersection Component complied with Certified PEIR MM GEO-5(s) and GEO-5(b) and prepared a Geotechnical Investigation Report and Geotechnical Recommendations Memorandum (see **Appendix 4.7-1**), which outlines various design recommendations due to the presence of expansive soils, stability of proposed slope cuts, and stability of proposed embankment fills that have been incorporated into the Intersection Component's design in compliance with MM GEO-6(a). Therefore, with Certified PEIR MMs GEO-5(a), GEO-5(b), GEO-6(a), and GEO-6(b), incorporated, the Intersection Component would result in a less than significant impact concerning expansive soils.

Certified PEIR Mitigation Measures

MM GEO-5(a) **Foundations and Project Infrastructure Design.** As provided in mitigation measure GEO-3(a), a site-specific geotechnical evaluation shall be conducted for individual projects and submitted to the City Planning and Community Development Department for review and approval as part of the initial application. If the project site is identified to be in a high expansive soil zone based on the site-specific Geotechnical Investigation, the foundations and project infrastructure shall be designed by a structural engineer to withstand the existing conditions or the site shall be graded in such a manner as to address the condition.

Suitable measures to reduce impacts from expansive soils could include one or more of the following techniques, as determined by a qualified geotechnical engineer:

- excavation of existing soils and importation of non-expansive soils; and
- foundation design to accommodate certain amounts of differential expansion such as post-tensional slab and/or ribbed foundations designed in accordance with Chapter 18, Division III of the UBC;
- imported fill shall be tested to ensure it is suitable to be used as fill.

MM GEO-5(b) **Soils and Foundation Report.** To avoid soil-related hazards, the individual project applicants shall provide a soils/foundation report as part of the initial project application to the City Planning and Community Development Department (standard requirement).

Plan Requirements: The required report shall be provided with building plans and shall evaluate soil engineering properties and provide foundation design recommendations. If site-specific measures are found to cause secondary environmental effects not addressed herein, subsequent environmental analysis may be required. Timing: The soils/foundation report shall be provided to the Building Division for review and approval prior to issuance of Building Permits. Monitoring: Building Division staff shall review and approve the required report (and the foundation design) prior to issuance of the Building Permit.

Building inspectors shall make site inspections to assure implementation of approved plans.

MM GEO-6(a) **Settlement Related Mitigation.** Future development shall comply with all recommendations contained in site-specific geologic, geotechnical, and structural design studies as required to be prepared for subsequent development activities. Subsequent subsurface investigations shall determine the required degree of compaction and the proper moisture content and appropriate means of mitigating settlement related hazards. Recommendations contained in these site-specific studies shall be reviewed and approved by the City Planning and Community Development Department and City Building Official and incorporated into final grading and structural design plans, as deemed appropriate by the City Building Official prior to issuance of a Grading Permit and/or Building Permit. At a minimum, suitable measures to reduce settlement impacts shall include, but not be limited to:

- Removal of organic material in the area of the proposed grading
- Removal of non-engineered artificial fill in areas to receive engineered fill or in areas where structural support is required.
- Placement of a keyway at the bottom of all fill slopes a minimum depth of 3 feet and down to the bedrock with the keyway a minimum of 10 feet wide (unless otherwise determined by the site-specific geological study)
- Fill soils shall be benched into the hillside.
- Removal of upper soils to the bedrock

After excavation:

- All bottoms of the excavations and areas to receive slabs shall be scarified and compacted to 90%
- All fills and backfills should be placed in horizontal layers less than 8 inches in loose thickness.
- Soils shall be compacted to a minimum of 90% of the maximum density rendered by the latest ASTM version.
- Moisture content should not vary more than 2% from the optimum moisture content, although the grading process will be more easily accomplished with the soils being 1 – 2 % wetter than optimum moisture content.
- Any utility trenches will need to be properly backfilled as detailed above.
- Any import soils should be approved by a qualified geologist.
- Slope faces shall be compacted to at least 90% of maximum compaction.

MM GEO-6(b) **Additional Environmental Review.** If individual developers are unable to find a disposal site for construction cut within 12.5 miles of the Specific Plan area, or if processed soil is not suitable for fill, then individual projects may require additional environmental analysis. Individual developers must demonstrate a means for disposal of excess cut materials, within 12.5 miles of the project site, prior to approval by the City.

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

Summary of Previous Environmental Analysis (See Certified PEIR page 4.10-2)

The Certified PEIR did not identify the use of septic tanks or alternative wastewater disposal systems for the Approved Project. The Approved Project would be served by three Las Virgenes Municipal Water District Trunk Sewer lines, all located within the AVSP area. Therefore, sewers are available for disposal of wastewater, and the Approved Project would not result in impacts related to the use of septic tanks or alternative wastewater disposal systems.

No Impact. The Intersection Component would involve construction and improvements to the Kanan Road intersection and roadways and would not utilize septic tanks or alternative wastewater disposal systems. The Intersection Component would have no impacts related to septic tanks or alternative wastewater disposal system.

f. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Summary of Previous Environmental Analysis (See Certified PEIR page 4.6-1)

The Certified PEIR concluded that the soil in the AVSP area is largely alluvial, and formations within the area are generally not fossiliferous. Therefore, there is little potential for encountering paleontological resources within the AVSP area. However, the Certified PEIR did not address paleontological resources.

Less Than Significant with Mitigation Incorporated. Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. These resources are valued for the information they yield about the Earth's history and its past ecological settings. The potential for fossil occurrence depends on the rock type exposed at the surface in a given area. Western Science Center presented a paleontological resources record search (see Appendix D of **Appendix 4.5-1**). The Intersection Component site is located in a non-sectioned area of Township 1 North and Range 18 West on the Thousand Oaks, California (1981) USGS 7.5-minute topographic quadrangle. The geologic units underlying the Intersection Component site are mapped as Quaternary alluvium dating to the Pliocene-Holocene and Miocene marine rocks, both of which are potentially fossiliferous, as well as Tertiary volcanic flow rocks, which have no fossil potential. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the Intersection Component site area, but does have numerous localities within similarly mapped alluvial sediments throughout the southern California region. Based on the presence of Quaternary alluvial units, there is potential for unanticipated discovery of paleontological resources.

To address potential impacts to paleontological resources, the Intersection Component would incorporate MM GEO-1, which requires a qualified paleontological monitor to be on site during grading within sensitive alluvial material. Therefore, with MM GEO-1 incorporated, the Intersection Component's potential impacts to paleontological resources would be less than significant.

Mitigation Measures

MM GEO-1 **Paleontology.** Prior to issuance of grading permit for the Intersection Component, the Applicant shall retain a qualified paleontologist who meets the Society of Vertebrate Paleontology guidelines to oversee a paleontological monitor who shall be present during grading activities within sensitive older alluvial material and the Topanga Bedrock Formation. The monitor does not have to be present if recent alluvial material or volcanic material is being encountered. The paleontological monitor shall be approved by the City

of Agoura Hills and retained and paid for by the Applicant. The paleontological monitor will also be able to halt construction within a 50-foot radius of a fossil discovery until the fossil can either be removed off site or the City is notified of the need to further assess the discovery. If the find is large enough to warrant further evaluation and/or extraction, then the following fossil "discovery" protocol shall be followed:

- The paleontologist shall assess the discovered material(s) and prepare a survey, study or report evaluating the impact. The paleontologist's survey, study, or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource.
- The Applicant shall comply with the recommendations of the evaluating paleontologist, as contained in the survey, study, or report.
- Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.
- Prior to the issuance of any building permit, the Applicant shall submit a letter to the City for the case file indicating what, if any, paleontological reports have been submitted, or a statement indicating that no material was discovered.

4.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
2. Conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases?	☐	☐	■	☐

A greenhouse gas (GHG) emissions analysis was prepared for the Intersection Component (Kimley-Horn, August 2023). The GHG modeling outputs and results are included in **Appendix 4.8-1: Greenhouse Gas Emissions Assessment**.

GHG Emissions Background

The South Coast AQMD formed a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the South Coast AQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency. With the tiered approach, a project is compared with each tier's requirements sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

The South Coast AQMD has adopted a threshold of 10,000 metric tons of CO_2 equivalent ($MTCO_2e$) per year for industrial projects. During Working Group Meeting #7, it was explained that the industrial projects' threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). A threshold of 3,000 $MTCO_2e$ per year for non-industrial projects was proposed but has not been adopted. The South Coast AQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

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

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

Less Than Significant Impact. The Intersection Component's construction activities would generate GHG emissions, which could potentially exceed South Coast AQMD thresholds. By exceeding South Coast

AQMD thresholds, the Intersection Component could have a significant impact on the environment. Generally, the Intersection Component is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component and also with the conditions related to the roundabout proposed under the Certified PEIR. However, Intersection Component-related GHG emissions would include emissions from construction activities. The Intersection Component would result in direct CO_2, N_2O, and CH_4 emissions from construction equipment and the transport of materials and construction workers to and from the Intersection Component site. The GHG emissions only occur during temporary construction activities and would cease once construction is complete. The total GHG emissions generated during construction were combined and are shown in **Table 4.8-1: Intersection Component Construction-Related Greenhouse Gas Emissions**.

Table 4.8-1: Intersection Component Construction Related Greenhouse Gas Emissions

Category	$MTCO_2e$
Total Construction Emissions	548
30-Year Amortized Construction	18
Source: RCEM version 9.0.0. See Appendix 4.8-1: Greenhouse Gas Emissions Assessment.	

As shown, the Intersection Component would result in the generation of approximately 548 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over the lifetime of the Intersection Component (assumed to be 30 years), then added to the operational emissions.[22]

In terms of operational GHG emissions, the Intersection Component involves roadway improvements and does not propose a trip-generating land use. The Intersection Component would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational GHG emissions. The Intersection Component does not propose any buildings and therefore would not generate permanent source or stationary source emissions. In addition, intersection improvements do not directly generate vehicle trips, a predominant source of GHG emissions. Rather, vehicle trips are generated by land use changes that may be indirectly influenced by transportation improvements. The Intersection Component would not result in increases in the rate of vehicle trips.

The Intersection Component would modify road alignments to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional vehicles to wait at all intersection approaches and is considered necessary to reduce future congestion anticipated as approved development builds out. At the same time, the Intersection Component would reduce the amount of time vehicles idle at the Kanan Road/Agoura Road intersection. The longer a vehicle idles in a single location, the more GHG emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling.

The amortized Intersection Component construction emissions would be 18 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease. Therefore, neither construction nor operation of the Intersection Component would generate GHG emissions in excess of the South Coast AQMD's Tier 3 general reference threshold of 3,000 $MTCO_2e$ per year. The Intersection

[22] The Proposed Project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Component would relieve congestion, improve roadway operations, and would not directly generate new trips or GHG emissions. Impacts would be less than significant.

3. b. *Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

Less Than Significant Impact.

City of Agoura Hills Climate Action and Adaptation Plan

The City approved the Climate Action and Adaptation Plan (CAAP) in 2021, which serves as a long-term plan for reducing GHG emissions and enhancing the community's resilience towards vulnerabilities and risks posed by climate change. By using energy more efficiently, harnessing renewable energy to power buildings, recycling waste, and enhancing access to sustainable transportation modes, implementation of the CAAP can keep dollars in local economy, create new green jobs, and improve community quality of life. The goals outlined in the CAAP are shown in **Table 4.8-2: City of Agoura Hills Climate Action and Adaption Plan Consistency**. As shown in **Table 4.8-2**, the Intersection Component would not conflict with the goals in the CAAP.

Table 4.8-2: City of Agoura Hills Climate Action and Adaptation Plan Consistency

CAAP Goals		Consistency	
GOAL 1:	Increase Energy Efficiency in Existing Residential Units	N/A:	This is not a residential project; therefore, this goal is not applicable.
GOAL 2:	Increase Energy Efficiency in New Residential Units	N/A:	This is not a residential project; therefore, this goal is not applicable.
GOAL 3:	Increase Energy Efficiency in Existing Commercial Units.	N/A:	This is not a commercial project; therefore, this goal is not applicable.
GOAL 4:	Increase Energy Efficiency in New Commercial Development.	N/A:	This is not a commercial project; therefore, this goal is not applicable.
GOAL 5:	Increase energy efficiency through water efficiency.	Consistent:	The Intersection Component involves the maintenance and preservation of landscaped medians, which involve irrigation systems that comply with AHMC Division 8 – Guidelines for Landscaping, Planting, and Irrigation Plans.
GOAL 6:	Decrease Energy Demand through Reducing Urban Heat Island Effect.	Consistent:	The Intersection Component will plant new trees, which will help reduce heat absorption.
GOAL 7:	Decrease GHG Emissions Through a Reduction in VMT	Consistent:	The Intersection Component is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component. As stated in **Section 4.17: Transportation**, the Intersection Component would not lead to induced vehicle travel and would result in no impact concerning vehicle miles traveled (VMT).

CAAP Goals		Consistency	
GOAL 8:	Decrease GHG Emissions through Reducing Solid Waste Generation.	N/A:	This is neither a residential nor a commercial project; therefore, this goal is not applicable.
GOAL 9:	Decrease GHG Emissions through Increased Clean Energy Use.	N/A:	The Intersection Component does not propose the construction of any buildings; therefore, this goal is not applicable.
Source: City of Agoura Hills, Approved City of Agoura Hills Climate Action and Adaptation Plan, March 2021.			

Consistency with the CARB 2022 Scoping Plan

As previously noted, CARB's 2022 Scoping Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the State's largest GHG contributors. The 2022 Scoping Plan intends to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions would be achieved through decarbonizing the electricity and industrial sectors.

Statewide strategies to reduce GHG emissions in the latest 2022 Scoping Plan include implementing SB 100, which would achieve 100 percent clean electricity by 2045; achieving 100 percent zero-emission vehicle sales in 2035 through Advanced Clean Cars II; and implementing the Advanced Clean Fleets regulation to deploy zero-emission electric vehicle buses and trucks. Additional transportation policies include the Off-Road Zero-Emission Targeted Manufacturer Rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer Rule, Clean Off-Road Fleet Recognition Program, and Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation. The 2022 Scoping Plan would continue to implement SB 375. GHGs would be further reduced through the Cap-and-Trade Program carbon pricing and SB 905. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon dioxide removal projects and technology.

As shown in **Table 4.8-1**, the Intersection Component would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational GHG emissions. Further, the Intersection Component would relieve congestion, improve roadway operations, and would not directly generate new trips or GHG emissions.

Therefore, the Intersection Component would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Intersection Component would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan.

Consistency with the CARB 2017 Scoping Plan

In December 2017, CARB approved the California's 2017 *Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Scoping Plan). This update focuses on implementation of a 40 percent reduction in GHGs by 2030 compared to 1990 levels. To achieve this, the 2017 Scoping Plan draws on a decade of successful programs that addresses the major sources of climate changing gases in every sector of the economy:

- *More Clean Cars and Trucks:* The plan sets out far-reaching programs to incentivize the sale of millions of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.

- *Increased Renewable Energy:* California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The 2017 Scoping Plan guides utilities to 50 percent renewables, as required under SB 350.
- *Slashing Super-Pollutants:* The plan calls for a significant cut in super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40 percent of global warming.
- *Cleaner Industry and Electricity:* California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions would continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.
- *Cleaner Fuels:* The Low Carbon Fuel Standard drives further development of cleaner, renewable transportation fuels to replace fossil fuels.
- *Smart Community Planning:* Local communities would continue developing plans which would further link transportation and housing policies to create sustainable communities.
- *Improved Agriculture and Forests:* The 2017 Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

Achieving the 2030 target under the 2017 Scoping Plan continues to spur the transformation of the California economy and fix its course securely on achieving an 80 percent reduction in GHG emissions by 2050, consistent with the global consensus of the scale of reductions needed to stabilize atmospheric GHG concentrations at 450 ppm CO_2e and reduce the likelihood of catastrophic climate change.

The Intersection Component includes roadway improvements to the Kanan Road/Agoura Road intersection. These improvements would address queuing deficiencies and improve roadway operations. The Intersection Component would only have short-term GHG emissions from construction and would not create operational GHG emissions. Thus, the Intersection Component would not conflict with the objectives listed in the 2017 Scoping Plan.

SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Consistency

The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The 2020-2045 RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve State GHG emissions reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions, and therefore Intersection Component comparison to the RTP/SCS is an appropriate indicator of whether the Intersection Component would inhibit the post-2020 GHG reduction goals promulgated by the State. The Intersection Component's consistency with the RTP/SCS goals is analyzed in detail in **Table 4.8-3: Regional Transportation Plan/Sustainable Communities Strategy Consistency**.

Table 4.8-3: Regional Transportation Plan/Sustainable Communities Strategy Consistency.

SCAG Goals		Consistency	
GOAL 1:	Encourage regional economic prosperity and global competitiveness.	N/A:	This is not a project-specific policy and is therefore not applicable. However, the Intersection Component would facilitate

SCAG Goals		Consistency	
			travel and freight transport, thus contributing to regional economic prosperity.
GOAL 2:	Improve mobility, accessibility, reliability, and travel safety for people and goods.	Consistent:	This Intersection Component proposes transportation improvements to accommodate a widened intersection that would improve mobility, accessibility, reliability, and travel safety for people and goods. The Intersection Component would also include replacing and improving driveways and sidewalks to enhance accessibility for vehicles and for people.
GOAL 3:	Enhance the preservation, security, and resilience of the regional transportation system.	Consistent:	This Intersection Component proposes transportation improvements to create adequate room for additional vehicles that would help enhance the preservation, security, and resilience of the regional transportation system.
GOAL 4:	Increase person and goods movement and travel choices within the transportation system.	Consistent:	This Intersection Component proposes transportation improvements including roadway widening, the addition of bike lanes, and sidewalk improvements, which would improve mobility and travel choices for both persons and goods.
GOAL 5:	Reduce greenhouse gas emissions and improve air quality.	Consistent:	This Intersection Component is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component and the conditions with the proposed roundabout under the Certified PEIR.
GOAL 6:	Support healthy and equitable communities	Consistent:	The Intersection Component would not exceed regional or localized thresholds for criteria pollutants. Based on the Friant Ranch decision, projects that do not exceed the South Coast AQMD's LSTs would not violate any air quality standards, contribute substantially to an existing or projected air quality violation, nor result in no criteria pollutant health impacts.
GOAL 7:	Adapt to a changing climate and support an integrated regional development pattern and transportation network.	Consistent:	The Intersection Component would replace the existing traffic signal system with a new system pursuant to current City of Agoura Hills and Caltrans standards. Therefore, the Intersection Component would adapt to

SCAG Goals		Consistency	
			support an integrated regional development pattern and transportation network.
GOAL 8:	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	Consistent:	The Intersection Component would replace the existing traffic signal system with a new system pursuant to current City of Agoura Hills and Caltrans standards.
GOAL 9:	Encourage development of diverse housing types in areas that are supported by multiple transportation options.	N/A:	This Intersection Component involves an intersection improvement and does not include housing.
GOAL 10:	Promote conservation of natural and agricultural lands and restoration of habitats.	Consistent:	This Intersection Component involves improvements to an existing intersection and roadways where agricultural lands are not present, thus, would not affect agricultural lands. The Intersection Component also incorporates MM BIO-1 and Certified PEIR MM BIO-1(a) through BIO-1(d) to reduce impacts to natural habitat to less than significant.
Source: Southern California Association of Governments, *Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy,* 2020.			

The goals stated in the RTP/SCS were used to determine consistency with the planning efforts previously stated. The Intersection Component would be consistent with the stated goals of the RTP/SCS. Therefore, the Intersection Component would not result in any significant impacts or interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets.

As discussed above, the Intersection Component would not conflict with an adopted GHG plan, policy, or regulation. Also, the Intersection Component would result in less than significant construction GHG emissions, would not generate operational GHG emissions, and would decrease idling time at the intersection, which would reduce GHG emissions currently experienced at the Intersection Component site. Thus, a less than significant impact would occur, and no mitigation is required.

4.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
2. 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?	☐	☐	■	☐
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
4. Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	■	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

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

b. Would the Project 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.5-6 through 4.5-7)

The Certified PEIR concluded that the Approved Project would involve revitalization and expansion of the commercial/retail areas north of Agoura Road and potential new mixed commercial, retail, hotel, and residential uses south of Agoura Road. The Certified PEIR concluded that existing regulations and hazardous materials management, such as those found in the City of Agoura Hills General Plan and Los Angeles County Hazardous Waste Management Plan, are in place to minimize or avoid potentially significant impacts associated with the routine transport, use, or disposal of hazardous materials. The Certified PEIR also concluded that the Approved Project would not be expected to create a significant hazard to people or the environment. Therefore, impacts would be less than significant.

Less Than Significant Impact. The Intersection Component is a transportation improvement project that consists of roadway improvements and signage. The Intersection Component would not use or store large quantities of hazardous materials. Potentially hazardous materials, such as fuels, lubricants, and solvents would be used during construction on the site for the roadway widenings along with herbicides and pesticides for the maintenance of the landscaping. However, the transport, use, and storage of hazardous materials, herbicides, and pesticides would be conducted in accordance with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Therefore, as concluded in the Certified PEIR, impacts would be less than significant.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.5-6 through 4.5-7, 4.9-2)

The Certified PEIR concluded that existing regulations and hazardous materials management are in place to minimize or avoid potentially significant impacts related to hazardous or acutely hazardous materials. The closest school to the Approved Project is Agoura High School, which is located 0.6 miles northeast of the AVSP area on the northern side of US 101. Therefore, the Approved Project would have no impact related to emitting hazardous materials or handling hazardous or acutely hazardous materials within one-quarter mile of a school.

No Impact. As discussed above, the Intersection Component would not emit hazardous substances or involve handling hazardous materials. The school nearest the Intersection Component site is Agoura High School, located more than 0.5-miles northeast of the Intersection Component site. Therefore, as identified in the Certified PEIR, there would no impact.

d. Would the Project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.5-2 through 4.5-3, 4.5-6 through 4.5-7)

The Certified PEIR concluded that several properties within or adjoining the AVSP area that are listed in environmental databases as currently or previously having involved hazardous materials, use, storage, or a release. Development of the Approved Project could result from existing and future land uses in the AVSP area. The Certified PEIR stated that past uses on currently vacant properties in the AVSP may have resulted in on-site contamination that could adversely affect construction or future occupants of the AVSP area. While unlikely, the impact may be potentially significant. Incorporation of Certified PEIR MM HAZ-3 would reduce impacts to less than significant.

No Impact. The Department of Toxic Substances Control – EnviroStor[23] and the California Regional Water Quality Control Board Database – GeoTracker[24] revealed no hazardous material sites within the Intersection Component site. The U.S. EPA's Superfund Enterprise Management System (SEMS) database[25] was checked for hazardous material facilities and yielded no facilities. Therefore, the Intersection Component site is not included on a list of hazardous materials sites. No impact would occur, and no mitigation is required.

e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

Summary of Previous Environmental Analysis

The Certified PEIR did not identify any environmental impacts concerning a safety hazard or excessive noise related to a public airport.

No Impact. The airport nearest the Project site is the Van Nuys Airport located approximately 15 miles to the east. The Intersection Component site is not within an airport land use plan or within two miles of a public airport or public use airport. The Intersection Component would not result in an airport-related safety hazard or excessive noise for people residing or working in the Intersection Component area. Therefore, no impact would occur.

f. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-14)

The Certified PEIR concluded the Approved Project's proposed roundabout at the Kanan Road/Agoura Road intersection would have the potential to inhibit access to emergency personnel and emergency

[23] California Department of Toxic Substances Control, EnviroStor, Map generated for 29271 Agoura Road, Agoura Hills, CA 91301, USA, http://www.envirostor.dtsc.ca.gov/?surl=96kmq. Accessed January 14, 2021.

[24] California State Water Resources Control Board, GeoTracker, Map generated for 29271 Agoura Road, Agoura Hills, CA 91301, USA, https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=29271+Agoura+Rd%2C+Agoura+Hills%2C+CA+91301#. Accessed January 14, 2021.

[25] United States Environmental Protection Agency, SEMS Search, Search generated for 29271 Agoura Road, Agoura Hills, CA 91301, USA, https://enviro.epa.gov/enviro/efsystemquery.sems?fac_search=primary_name&fac_value=&fac_search_type=Beginning&postal_code=&location_address=29271+Agoura+Road&add_search_type=Beginning2&city_name=Agoura+Hills&county_name=Los+Angeles&state_code=CA&chemical=&program_search=sems&report=basic&page_no=1&output_sql_switch=TRUE&database_type=SEMS. Accessed January 14, 2021.

vehicles, and impacts would be potentially significant. Incorporation of Certified PEIR MMs PS-4(a) and PS-4(b) would reduce impacts to less than significant.

Less Than Significant Impact With Mitigation Incorporated.

An evacuation route is a road used to move an impacted population out of an impacted area. Emergency responders determine at the time of the emergency the evacuation routes that should be used after evaluating the emergency's conditions and location. Thus, determining an evacuation route is situational, context-specific, and subject to change. A disaster route differs from an emergency evacuation route in that a disaster route is a road that emergency responders use to access an area. Kanan Road is designated as a Highway Disaster Route.[26] However, similar to an emergency evacuation route, a disaster route is situational, context-specific, and subject to change. It is also noted an emergency may warrant a road to be used as both a disaster route and an emergency evacuation route.

Emergency Response Plan / Emergency Operations Plan

The City has not adopted an emergency response plan; therefore, the Intersection Component would not conflict with such a plan. Nonetheless, the City prepared an Emergency Operations Plan (EOP), most recently updated in 2022. The EOP addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national emergencies. It provides an overview of operational concepts, identifies components of the City's emergency/disaster management organization within the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS), and describes the overall responsibilities of the federal, State, and county entities and the City for protecting life and property and assuring the overall well-being of the population. Planning for and responding to disasters and emergencies requires many different actions, such as evacuations, among others. All of these activities are coordinated and directed by the Emergency Operations Center (EOP). While the EOP does not specifically identify Kanan or Agoura Roads, it does identify the entities responsible for the City's emergency/disaster management.

The cities of Agoura Hills, Calabasas, Hidden Hills, Malibu, and Westlake Village, which comprise the Las Virgenes–Malibu Council of Governments (LVMCOG), have combined their efforts and prepared one multi-jurisdictional hazard mitigation plan. The LVMCOG Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) includes resources and information to assist with a hazardous materials emergency, including evacuation. The LACFD has primary responsibility for dealing with a hazardous materials incident within Agoura Hills. Concerning Kanan and Agoura Roads, the LVMCOG identifies Kanan Road as an evacuation route.

Emergency Evacuation Plan

The City has not adopted an emergency evacuation plan. As noted above, emergency responders determine at the time of the emergency the evacuation and disaster routes that should be used after evaluating the emergency/disaster's conditions and location. Notwithstanding, General Plan Infrastructure and Community Services Chapter Figure M-1: Circulation Plan and Street Classification depicts the City's roads that are public, paved, and through-ways, which may be used for evacuation if the emergency responder deems them as a viable emergency evacuation route during an emergency. Additionally, General Plan Community Safety Chapter Figure S-5: Streets Lacking Two Emergency Evacuation Routes depicts areas in the City, including the Indian Hills and Liberty Canyon areas, which do not have at least two emergency evacuation routes. All streets in the Indian Hills area would evacuate to

[26] Los Angeles County Public Works. Disaster Route Maps – Agoura Hills, Available at: https://pw.lacounty.gov/dsg/disasterroutes/city.cfm, accessed August 2023.

Agoura Road and one street in the Liberty Canyon area would evacuate to Agoura Road and the U.S. 101 Freeway. As such, Kanan and Agoura Roads could be used/identified as emergency evacuation routes.

Intersection Component construction, temporary lane closures and detours on Kanan and Agoura Roads would be required. As such, if an emergency were to occur during the Intersection Component construction phase, Intersection Component construction activities could physically interfere with an emergency evacuation route/disaster route. However, the Intersection Component would incorporate MM TRANS-1, which requires preparation and implementation of a Traffic Control Plan. Specifically, emergency service providers (e.g., police, fire, and others), as well as owners and administrators of surrounding land uses, would be notified of the timing, location, and duration of Intersection Component construction activities and the locations of detours and lane closures. With MM TRANS-1 incorporated, the potential for Intersection Component construction activities to physically interfere with an emergency evacuation route/disaster route would be minimized, as emergency service providers would've received prior notification of any temporary lane closures and detours on Kanan and Agoura Roads. Therefore, Intersection Component construction activities would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Intersection Component construction activities would result in a less than significant impact with MM TRANS-1 incorporated.

The Intersection Component proposes a widened standard four-leg signalized intersection to accommodate expected traffic flows upon future 2035 AVSP buildout instead of the Approved Project's proposed roundabout. The Intersection Component is a transportation improvement and does not propose land uses that would, as studied in the Certified PEIR. The proposed Intersection Component improvements would be designed to improve roadway and traffic efficiency on Kanan and Agoura Roads, consistent with federal, State, and local standards, as applicable. By improving roadway conditions and traffic flow, the Intersection Component would enhance access should Kanan and Agoura Roads be used as emergency evacuation/disaster routes. The Intersection Component would not impair implementation of or physically interfere with emergency response or evacuation. Therefore, Intersection Component operations would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Intersection Component operations would result in a less than significant impact.

As noted in Response 4.15(a), Certified PEIR MM PS-3(c): Roundabout Engineering and Certified PEIR MM PS-3(d): Emergency Access would not be required, nor are they applicable to the Intersection Component.

Mitigation Measure

MM TRANS-1: To the greatest extent possible, the City shall coordinate the Traffic Control Plan and construction of the Intersection Component with any projects that are scheduled to be constructed concurrently within one mile of the Project's improvements. If related projects are anticipated to be constructed concurrent with the Intersection Component, the City shall provide the Traffic Control Plan to the related project's proponent or other responsible entity and receive additional input from the proponent or responsible entity on potential construction haul routes and timing. The City would coordinate with the appropriate agencies (e.g., County of Los Angeles, Las Virgenes Unified School District, Los Angeles County Fire Department, and Los Angeles County Sheriff's Department), as needed.

g. Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.5-5)

The Certified PEIR concluded most of the AVSP area is an urban/wildfire interface area and that future development of the Approved Project would have the potential to increase the likelihood of wildfire impacts. However, given the implementation of standard fire prevention measures and proper site design, as required by the Los Angeles County Fire Code, Los Angeles County Code Title 32, and Los Angeles County Fire Department requirements, the potential impacts associated with increased wildfire hazards would be less than significant.

Less Than Significant Impact. The Intersection Component site is located in urban/wildfire interface areas and in areas classified as Very High Fire Hazard Severity Zones (VHFHSZ). The Intersection Component does not propose any structures or buildings for occupancy that could be prone or contribute to fire hazards. The proposed improvements would be constructed mostly within the existing public ROW as well as within private, vacant lands adjacent to the Kanan Road/Agoura Road intersection and roadway. The Intersection Component would also underground two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, which would further reduce the potential for downed lines to start a wildfire. New landscaping would be irrigated and would not consist of highly flammable materials. Therefore, the Intersection Component would have a less than significant impact concerning exposure of people or structures to a significant risk involving wildland fires.

4.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	■	☐
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	■
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	■	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
iv. Impede or redirect flows?	☐	☐	☐	■
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

a. Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.7-16 through 4.7-18, 4.7-23 through 4.7-25)

The Certified PEIR concluded that construction of the Approved Project would require grading, which may result in uncontrolled discharges of sediment, which could potentially result in significant impacts on the quality of surface water in Medea Creek and Lindero Canyon Creek. Preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of BMPs for individual parcel construction would reduce temporary water quality impacts and erosion or sedimentation. The Approved Project would also be required to implement a Los Angeles County Standard Urban Storm Water Mitigation Plan (SUSMP) in compliance with NPDES requirements, which would contain design standards for treating stormwater runoff. The Approved Project would also be subject to compliance with development and design standards to maximize pervious surfaces and minimize water runoff, which would effectively reduce pollutant loading from development. Impacts to water quality standards or waste discharge requirements would be less than significant.

Less Than Significant Impact. Construction activities, such as grading and excavation, would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. Construction-related erosion effects would be addressed through compliance with the NPDES program's Construction General Permit (2022-0057-DWQ). Construction activities subject to the Construction General Permit includes any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, excavation, or any other activity resulting in a land disturbance equal to or greater than one acre. To obtain coverage under the Construction General Permit, dischargers are required to file with the State Water Board the Permit Registration Documents, which include a NOI and other compliance-related documents. The Construction General Permit requires development and implementation of a SWPPP and monitoring plan, which must include erosion-control and sediment-control BMPs that would meet or exceed measures required by the Construction General Permit to control potential construction-related pollutants. Erosion-control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. The types of required BMPs would be based on the amount of soil disturbed, the types of pollutants used or stored at the Project site, and proximity to water bodies. Following compliance with NPDES requirements, which include implementation of BMPs, the Intersection Component's construction-related activities would not violate any water quality standards or otherwise substantially degrade surface or groundwater quality. Therefore, the Intersection Component would not violate any water quality standards. A less than significant impact would occur, and no mitigation is required.

During Intersection Component operations, inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection would be relocated to accommodate the Agoura Road widening. The associated drain lines would be extended. Additionally, a hydrant would be relocated due to the shift in the curb line. The Intersection Component is a transportation improvement project and would not include any uses that would violate water quality standards or discharge any waste.

Therefore, the Intersection Component would not result in impacts beyond those identified in the Certified PEIR, and impacts would be less than significant.

b. Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.7-25 through 4.7-26)

The Certified PEIR concluded that the groundwater quantities in the AVSP area are generally low and inconsistent since they occur primarily within the limited alluvium or within the weathered or fractured portions of the underlying bedrock. Groundwater was not encountered within the AVSP area during the geotechnical investigations prepared for specific projects within the AVSP area. Although no groundwater was encountered, there is potential for groundwater levels to reach near surface levels adjacent to Lindero Canyon and Medea Creek. Urban areas where groundwater is greater than ten feet deep generally do not infiltrate urban pollutants into the underlying groundwater. Therefore, the Approved Project would not affect groundwater supplies, and impacts would be less than significant.

No Impact. The Intersection Component is a transportation improvement project, with no structures for human occupancy that would generate a water demand. The Intersection Component would utilize water during construction for dust control, and also recycled water for landscaping. The Las Virgenes Municipal Water District (LVMWD) would be the water purveyor to the Intersection Component site, not local groundwater. Additionally, the Intersection Component site does not involve a groundwater recharge area or significantly change permeable surface areas. The Intersection Component would not interfere substantially with groundwater recharge such that it would impede sustainable groundwater management of a basin. Therefore, the Intersection Component would not deplete groundwater supplies and would have no impact on groundwater management.

c.i. Would the Project substantially alter the existing drainage pattern of the site or area, including by altering the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on or offsite?

c.ii. Would the Project substantially alter the existing drainage pattern of the site or area, including by altering the course of a stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

c.iii. Would the Project substantially alter the existing drainage pattern of the site or area, including by altering the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.7-18 through 4.7-26)

See Threshold 4.10.a above concerning erosion and water quality. The Certified PEIR concluded the AVSP area consists of developed area north of Agoura Road and open space, riparian and aquatic habitats, oak/willow woodlands, and a few small developments south of Agoura Road. The Certified PEIR concluded that the Approved Project would alter existing drainage patterns and redirect sheet flow, as well as contribute to an increase in peak runoff volumes from the AVSP area to Medea Creek. The increase in peak flows in receiving waters would be potentially significant. The Approved Project would implement AVSP development and design standards to maximize pervious surfaces and minimize water runoff. The Approved Project would also incorporate Certified PEIR MM HYD-2 to reduce potential downstream flood impacts to a less than significant level.

Less Than Significant Impact. The Intersection Component would include widening Kanan and Agoura Roads, which would require minimal realignment of the existing drainages to accommodate the widening. In addition, Agoura Road crosses several waterways, including Lindero Creek and Medea Creek, both of which are currently contained within concrete lined channels that pass under the roadway. Several additional drainages are contained in pipes that run under the roadway. Inlets on the northeast and

southeast corners of the Kanan Road/Agoura Road intersection would be relocated to accommodate the Agoura Road widening.

Under existing conditions within the Intersection Component area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under Intersection Component conditions, these inlets would be relocated to accommodate the widening of Agoura Road. The associated drain lines would be extended; however, flows would remain generally unchanged. Any changes in alignment would be minor, and the new drainages would be designed to tie into the existing drainage system and to accommodate existing and expected drainage flows from the roadway, landscaping, and other flows passing through the area. Standard BMP's would be incorporated into the design to ensure that erosion and siltation are minimized and that water quality requirements are achieved during the Intersection Component's operation.

In addition to the drainages, slope cuts would be required along portions of the Intersection Component, including Agoura Road and Canwood Street. This could alter the drainage patterns along the adjacent hillside, and would require temporary vegetation removal, both of which could result in erosion or siltation. While these activities would have potential to result in erosion, the slope cut angle would be designed to comply with existing AHMC standards so that erosion would be minimized, and the slopes would be stabilized through retaining walls or other means along with re-vegetation of disturbed areas. With the incorporation of these design elements, potential erosion would be minimized resulting in a less than significant impact.

The Intersection Component would result in widening and repaving of existing roadways and adding sidewalks, which would result in an increased area of impervious surface. Polluted runoff is commonly associated with roadways due to oils and other chemicals created by motor vehicle use, and chemicals applied to landscaping can runoff into the drainage system. The increase in the amount of surface runoff from the sources could result in increased pollutant runoff. Standard BMPs and compliance with the SUSMP would be incorporated into the Intersection Component's design to ensure that pollutants do not enter the drainage system. The Intersection Component would be required to comply with 2023 AVSP, which requires projects to verify that it's stormwater runoff does not adversely impact the existing system. To accommodate this additional runoff, modified drainages would be designed to accommodate existing and expected drainage flows from the roadway, landscaping, and other flows passing through the area. Therefore, the Intersection Component's impacts would be less than significant concerning alterations of the existing drainage pattern in a manner that would 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.

c.iv. Would the Project substantially alter the existing drainage pattern of the site or area, including by altering the course of a stream or river or through the addition of impervious surfaces, in a manner that would impede or redirect flood flows?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.7-21 through 4.7-23)

The Certified PEIR concluded the areas surrounding Lindero Canyon Creek and Medea Creek are within the 100-year floodplain. The southern portion of the AVSP area and southwestern boundary of the AVSP area are also located within the 100-year floodplain. As the Approved Project would place structures within the 100-year floodplain, impacts are potentially significant. Incorporation of Certified PEIR MMs HYD-3(a) and HYD-3(b) would reduce impacts from flooding to a less than significant level.

No Impact. The Intersection Component site is primarily located in Zone X according to the most recent Federal Emergency Management Agency (FEMA) flood insurance rate maps. Zone X is characterized by an area determined to be outside the 0.2 percent annual chance floodplain. A portion of the Project site lies

within the 100-year floodplain (Lindero Creek and Medea Creek); however, as shown on FEMA map panel 1244F, the portion of the Intersection Component site within the 100-year floodplain is contained within concrete-line channels. There would be no construction within these channels, and the Intersection Component would not impede or re-direct these flows. Therefore, the Intersection Component would not result in flooding. No impact would occur, and no mitigation is required.

d. Would the Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.4-12, 4.7-21 through 4.7-23)

The Certified PEIR concluded that tsunamis and seiches would not affect the AVSP area. See Threshold 10.c.iv above concerning flood hazards. As stated above, impacts related to floodplains, and therefore inundation, would be potentially significant. Incorporation of Certified PEIR MMs HYD-3(a) and HYD-3(b) would reduce impacts to less than significant.

No Impact. The Intersection Component site is not located in an area susceptible to seiches or tsunamis. A portion of the Intersection Component site would be located within the 100-year floodplain, but the floodplains are contained within concrete-line channels. Therefore, the Intersection Component would have no impact concerning flood hazards, tsunamis, or seiches.

e. Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

Less Than Significant Impact. See Response 4.10.a above concerning the Intersection Component's proposed water quality control. See Response 4.10.b above concerning the Intersection Component's sustainable groundwater management plan compliance. Impacts would be less than significant.

4.11 Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Physically divide an established community?	☐	☐	■	☐
2. 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?	☐	☐	■	☐

3. Would the Project physically divide an established community?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.8-6 through 4.8-6)

The Certified PEIR concluded the Approved Project would allow for development of a mix of land uses that includes commercial, retail, services, office, and residential, which currently exists in the surrounding area. Therefore, the Approved Project would not divide an established community, and impacts are less than significant.

Less Than Significant Impact. The Intersection Component's construction and improvements would occur on the existing street network and slightly on adjacent undeveloped lands along Kanan and Agoura Roads. The land uses adjacent to the intersection are a mix of commercial, residential and open space uses. The Intersection Component would not divide or restrict access to the existing street network or community because the roadways are existing transportation facilities. Therefore, impacts would be less than significant.

4. Would the Project 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.8-6 through 4.8-20)

The Certified PEIR concluded the Approved Project would potentially result in impacts related to land use compatibility associated with mixed-uses and would require incorporation of MM's related to aesthetics, air quality, noise, and transportation to reduce impacts to less than significant. The Certified PEIR concluded the Approved Project would require amendments to the General Plan and Zoning Ordinance, which would result in potentially significant impacts related to conflicting with the General Plan and Zoning Ordinance. With the Certified PEIR MM's incorporated, impacts would be less than significant. The Certified PEIR concluded the Approved Project would potentially result in significant impacts related to compliance with SCAG policies. Incorporation of Certified PEIR MM's would reduce impacts to less than significant.

Less Than Significant Impact.

AGOURA HILLS GENERAL PLAN

The Proposed Project is a comprehensive update to the 2008 AVSP, which reorganizes the 2008 AVSP for consistency with current planning practices, reduces duplicative content, and allows for concise location of information. All specific plans must comply with Government Code Sections 65450-65457, which require that a specific plan be consistent with the adopted general plan of the jurisdiction within which it is located. The 2023 AVSP considers the 2021-2029 HEU, includes the Intersection Component as a key component, and includes the Street Frontage Objective Design Standards Checklist ("Street Frontage Standards"). An accompanying GPA is included as part of the Proposed Project to ensure consistency between the City's General Plan and the proposed 2023 AVSP, which includes the Intersection Component. The accompanying GPA is comprised of the minor amendments to General Plan Infrastructure and Community Services Chapter, Mobility Section, which are summarized below and detailed in **Appendix 2-1: General Plan Infrastructure and Community Services Chapter Amendments**.

2023 AVSP Roadway Reclassification and Roadway Width Reduction

General Plan Figure M-2: Typical Roadway Classification Cross Sections currently describes Agoura Road east of Kanan Road as a secondary arterial, which allows for two to four lanes divided or undivided. However, General Plan Policy M-1.3 notes that due to heavy projected volumes and the City's desire to maintain two-lane cross-section with bicycle lanes, and to minimize grading, a semi-rural road appearance is encouraged which would also complement Agoura Village goals.[27] Further, General Plan Figure M-2: Typical Roadway Classification Cross Sections shows the minimum roadway width for Collector Streets as 40 feet, however, the City found that due to existing topography and proximity to the U.S. 101, currently the roadway width along Roadside Drive and Cornell Road within the AVSP is 36 feet. Therefore, to address these inconsistencies, the Proposed Project includes a GPA to ensure consistency between the City's General Plan and the AVSP, which includes the Intersection Component. Specifically, the proposed GPA would include the following minor modifications within General Plan Chapter 3:

1) Revise text to add to the City's roadway network the new "Semi-Rural Secondary Arterial" roadway classification as a sub-classification under the Secondary Arterial classification. This new sub-classification would apply only to Agoura Road between Cornell Road and AVSP's eastern boundary just west of Vejar Drive;

2) Modify General Plan Figure M-2:Typical Roadway Classification Cross Sections to include the new Semi-Rural Secondary Arterial roadway sub-classification's cross-section (see **Figure 2-10: Typical Roadway Classification Cross Streets**); and

3) Modify General Plan Figure M-2: Typical Roadway Classification Cross Sections to reduce the minimum roadway width range from 40 feet to 36 feet for only specified portions of select Collector Streets within the AVSP (i.e., Roadside Drive and Cornell Road); see **Figure 2-10**.

2021-2029 Housing Element Update

The 2021-2029 HEU identified a total of 20 opportunity housing sites, eight of which (Sites A, B, C, E, G, I, J, and K) are within the AVSP area. Of the eight opportunity housing sites within the AVSP area, small portions of two sites (0.14 acres in Site A and 0.04 acres in Site B) are within the Intersection Component footprint. Housing Elements should include the HCD-recommended buffer of 15-30 percent extra capacity in the site inventory to avoid violating the No Net Loss requirement. The 2021-2029 HEU sites inventory

[27] City of Agoura Hills General Plan Chapter 3: Infrastructure and Community Services, page 3-16.

provides for a total lower income (i.e., very low and low) sites capacity (including ADUs) of 281 housing units, a 41 percent buffer (82 units) above the City's RHNA allocation of 199 units. As shown in **Table 4.11-1: Summary of Potential Housing Units After Intersection Component**, although the Intersection Component's construction would reduce Site A's development capacity by four units and Site B's development capacity by one unit, the City would still have a RHNA buffer of 1,260 dwelling units. As such, the Intersection Component would not interfere with the 2021-2029 HEU's intent for Sites A and B as it relates to fulfilling the City's RHNA obligation. Therefore, Proposed Project impacts would be less than significant concerning a significant environmental impact due to a conflict with the 2021-2019 HEU.

Table 4.11-1: Summary of Potential Housing Units After Intersection Component

Areas	Total Units	Income Distribution			
		Very Low	Low	Moderate	Above Moderate
2021-2029 RHNA Targets	**318**	**127**	**72**	**55**	**64**
Vacant Single-Family	102	-	-	-	102
Accessory Dwelling Units (ADUs)	80	14	34	5	27
Capacity with Land Use Designations in Place	**182**	**48**		**5**	**129**
RHNA Surplus/(Shortfall)	**-136**	**-151**		**-50**	**65**
Sites to be Designated with Affordable Housing Overlay					
Agoura Village Specific Plan (AVSP) Sites	660	132		65	463
Site A	*207*	40		21	146
Intersection Component Impact on Site A[1]	*-4*	*-1*		-1	-2
Site B	*124*	*24*		13	87
Intersection Component Impact on Site B[2]	*-1*	*-1*		-	-
AVSP Sites + Intersection Component	655	130		64	461
Mixed-Use Shopping Center Sites	188	38		-	150
RM 15 Rezone Sites (Outside AVSP &LMSP)	523	105		55	363
Ladyface Mountain Specific Plan (LMSP) Sites	30	6		-	24
Total Rezone Sites (with Intersection Component)	**1,396**	**279**		**119**	**998**
Total Site Capacity (with Intersection Component	**1,578**	**327**		**124**	**1,127**
RHNA Buffer After Intersection Component	**1,260**	**128**		**69**	**1,063**

Notes:

1. 0.14 acres at 25 du/ac yields 4 units
2. 0.04 acres at 25 du/ac yields 1 unit

Intersection Component

The Approved Project included a roundabout in the 2008 AVSP. The 2023 AVSP, which includes the Intersection Component, would amend the 2008 AVSP to replace the roundabout with a widened standard four-leg signalized intersection to accommodate expected traffic flows upon AVSP buildout in 2035. However, since the General Plan only references the AVSP, but does not specifically address this intersection, no GPA for the Intersection Component would be required.

Conclusion

2023 AVSP Chapter 1 Section C: Relationship to Other Planning Documents and Overlays demonstrates consistency the 2023 AVSP's consistency with the General Plan through a statement of the relationship of the specific plan to the general plan as required by Government Code Section 65451(b). Further, the Proposed Project includes the necessary GPA to ensure the 2023 AVSP's consistency with the General Plan. As such, following approval of the aforementioned GPA, the Proposed Project would not conflict with the City's General Plan land use plan or policies adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant and no mitigation is required.

AGOURA HILLS MUNICIPAL CODE

AHMC Article IX, Chapter 8 – General Plan and Specific Plans.

The Proposed Project is a comprehensive update to the 2008 AVSP, which reorganizes the 2008 AVSP for consistency with current planning practices, reduces duplicative content, and allows for concise location of information. The proposed AVSPU includes updates to regulations and guidelines, and various improvements (e.g., streetscape beautification and public improvements, mobility improvements, and infrastructure improvements, and public services) that reflect a standard intersection design at the Kanan Road/Agoura Road intersection. The proposed AVSPU also updates 2008 AVSP Appendix I: Mitigation Monitoring and Reporting Program (MMRP) to exclude any MMs, which are no longer applicable, such as those pertaining to the roundabout. An AVSP Amendment is required to approve the proposed AVSPU, which includes changing the Kanan Road/Agoura Road intersection's design from a roundabout to a standard intersection (i.e., Intersection Component) and adding the Street Improvement Checklist (i.e., Street Frontage Standards).

AHMC Article IX, Chapter 8 establishes the procedures for consideration of specific plans as authorized by Government Code § 65450 et seq. and other applicable provisions of law. AHMC § 9821.4 outlines the procedures for amendments to specific plans, including the requirement for Planning Commission review and recommendation and City Council review and approval. Following City Council's approval of the AVSP Amendment, no conflict with AHMC Article IX, Chapter 8 would occur. Impacts would be less than significant and no mitigation is required.

AHMC Article IX, Chapter 6, Part 2, Division 7 – Oak Tree Preservation Guidelines.

The Intersection Component site contains both valley oak and coast live oak trees along the roadsides and landscaped medians of Kanan and Agoura Roads. Oak trees (*Quercus* sp.) within the City are protected by the City's Oak Tree Ordinance (City Council Resolution No. 374). The Intersection Component includes Agoura Village Gateway Monuments and City Gateway Entry Monuments along Kanan and Agoura Roads. Three mature oak trees (two north of Agoura Road and one south of Agoura Road) would be protected and remain in place as part of the Intersection Component. However, 12 smaller oak trees located south of Agoura Road and surrounding the Kanan Road/Agoura Road intersection would be removed. An Oak Tree Permit would be required in compliance with the City's Oak Tree Ordinance to allow removal of the 12 smaller oak trees.

AHMC Article IX, Chapter 6, Division 7 establishes the City's oak tree preservation regulations, which include the requirement to obtain a valid oak tree permit from the Director of Planning and Community

Development or the Planning Commission prior to removing any oak tree on public or private property within the City. Following the Director of Planning and Community Development or the Planning Commission's approval of the aforementioned Oak Tree Permit, no conflict with AHMC Article IX, Chapter 6, Part 2, Division 7 would occur. Impacts would be less than significant and no mitigation is required.

AHMC Article IX, Chapter 6, Part 3, Division 7 – Site Plans/Architectural Review.

Pursuant to AHMC Article IX, Chapter 6, Part 3, Division 7, review of the Intersection Component's physical plan would occur through the City's architectural review process. Accordingly, the Intersection Component would undergo architectural review to ensure that it is compatible with its surrounding uses and the community as a whole prior to receipt of a Building and Safety Permit, which is required for construction of the pilasters and towers. Following approval of the Proposed Project's Building and Safety Permit, no conflict with AHMC Article IX, Chapter 6, Part 3, Division 7 would occur. Impacts would be less than significant and no mitigation is required.

4.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
5. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
6. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

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

b. Would the Project 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?

Summary of Previous Environmental Analysis

The City has no designated uses for mineral resources, such as the collection of mineral resources within City limits, and no known valuable mineral resources or recovery sites exist within the City.[28] Therefore, the Approved Project would have no impact on mineral resources.

No Impact. No mineral resources or recovery sites exist within the City. Therefore, the AVSPU, which includes the Intersection Component, would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. No impact would occur, and no mitigation is required.

[28] City of Agoura Hills, General Plan 2035 EIR, February 2010, page 5-7.

4.13 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project result in:				
1. Generation of substantial 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?	☐	☐	■	☐
2. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
3. 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?	☐	☐	☐	■

An Acoustical Assessment was prepared for the Intersection Component (Kimley-Horn, August 2022). The Acoustical Assessment and modeling outputs are included in **Appendix 4.13: Acoustical Assessment**.

Noise Background

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. In acoustics, the fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of a base of steady background noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person. Additional detail is provided in **Appendix 4.13-1**.

Existing Noise Sources

The Intersection Component area is generally urbanized to the north and undeveloped to the south. The primary sources of stationary noise in the Intersection Component's vicinity are urban-related activities (i.e., mechanical equipment, and pedestrians). The sources of stationary noise nearest the Intersection Component site emanates from retail commercial, self-storage, light industrial (printing and light manufacturing), and restaurant uses to the north. Noise sources from these land uses typically include mechanical equipment such as heating ventilation and air conditioning (HVAC), automobile-related noise such as cars starting and doors slamming, truck activity, and landscaping equipment. The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

Most of the existing noise in the Intersection Component area is generated by traffic along Kanan and Agoura Roads. General Plan Community Safety Chapter Noise Section Figure N-1: Noise Contours – Existing indicates the Intersection Component site lies within the 65-70 dBA CNEL traffic noise contour.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of noise impacts than general population. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Land uses located north of the Intersection Component site include retail commercial, self-storage, light industrial (printing and light manufacturing), and restaurant. South of the Intersection Component site is vacant and undeveloped land. Sensitive land uses nearest to the Intersection Component site are shown in **Table 4.13-1: Intersection Component Sensitive Receptors** and are measured from the closest Intersection Component site boundary to the sensitive receptor. The sensitive receptors nearest to the Intersection Component include church uses approximately 40 feet northwest of the proposed construction boundary.

Table 4.13-1: Intersection Component Sensitive Receptors

Receptor Description	Distance and Direction from the Intersection Component
Church	40 feet to the northwest
Dental Facility	650 feet to the northwest
Veterinary Center	930 feet to the northwest
Single Family Homes	1,800 feet to the southeast
Source: Google Maps, 2022.	

a. Would the Project result in generation of substantial 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?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.9-8 through 4.9-16)

The Certified PEIR concluded the construction of the Approved Project would impact existing sensitive receptors located within the AVSP boundary at Agoura Road. Daytime construction activity is exempt from City Noise Ordinance restrictions; any noise-generating activity occurring outside of the City Noise Ordinance hours would be potentially significant. Incorporation of Certified PEIR MM N-1 would ensure compliance with the City's Noise Ordinance and reduce noise impacts to a less than significant level.

The Certified PEIR concluded mobile source (e.g., traffic) noise would result in potentially significant impacts. Incorporation of Certified PEIR MMs N-2(a) and N-2(b) would reduce impacts to less than significant.

The Certified PEIR concluded that operational noise from the Approved Project would result in potentially significant on-site noise impacts on adjacent residences. Incorporation of Certified PEIR MMs N-3(a) through N-3(g) would reduce impacts associated with on-site activity to less than significant.

Less Than Significant Impact. The Intersection Component would be constructed within the hours restricted by the City's Noise Ordinance. As daytime construction activity is exempt from City Noise Ordinance restrictions, noise impacts from the Intersection Component's construction would be less than significant. The Intersection Component would implement intersection improvements, Agoura Village Gateway Monuments, and City Gateway Entry Monuments, which would not result in any changes to the noise levels that already exist at the Intersection Component site. No stationary noise sources would be included as part of the Intersection Component (e.g., parking lots, HVAC, or mechanical equipment). The Intersection Component would include a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection, which would allow for an open space gathering area. While the accumulation of people and loud speaking may create a new stationary noise source, the terraced plaza would be located adjacent to the Kanan Road/Agoura Road intersection. Therefore, the mobile noise sources would be louder and more continuous than the people who would gather at the terraced plaza area and would not constitute a substantial increase in noise levels. Further, there are no noise-sensitive receptors located in proximity of the proposed terraced plaza who would be affected by the increase in noise levels. Mobile noise sources (i.e., vehicles) would utilize the proposed intersection, however, no change in traffic volumes would occur as a result of the Intersection Component, thus, no change in mobile source noise would occur. Therefore, noise impacts from the Intersection Component operations would be less than significant concerning a substantial or permanent increase in ambient noise levels in excess of standards established in the City's Noise Ordinance.

b. Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.9-16 through 4.9-17)

The Certified PEIR concluded that vibrations from blasting during construction of the Approved Project would be potentially significant. Incorporation of Certified PEIR MM GEO-4(a) would reduce impacts associated with vibration to less than significant.

Less Than Significant Impact. AHMC § 9305.E prohibits operations or activities in commercial districts that would cause vibration noticeable without instruments at the perimeter of the subject property.

Construction can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Ground disturbing activity as part of the Intersection Component would entail excavation for grading and access to underground utilities. The ground disturbing activities require heavy machinery that could generate excessive groundborne vibrations, which can spread through the ground and diminish with distance from the source. Intersection Component construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 in/sec peak particle velocity [PPV]) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration

source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec PPV is considered safe and would not result in any construction vibration damage.

Table 4.13-2: Typical Construction Equipment Vibration Levels lists vibration levels at 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 4.13-2**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during the Intersection Component's construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity.

Table 4.13-2: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 40 Feet (in/sec)[1]
Large Bulldozer	0.089	0.031
Loaded Trucks	0.076	0.027
Small Bulldozer	0.003	0.001
Vibratory Roller	0.210	0.104
Jackhammer	0.035	0.012

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

The nearest structure to the Intersection Component site is approximately 40 feet away. **Table 4.13-2** shows that, at 40 feet, the vibration velocities from construction equipment would not exceed 0.104 in/sec PPV, which is below the FTA's 0.20 in/sec PPV threshold for building damage. It is also acknowledged that construction activities would occur throughout the Intersection Component site and would not be concentrated at the point closest to the nearest structure. Therefore, Intersection Component construction vibration impacts would be less than significant.

3. 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?

Summary of Previous Environmental Analysis.

The Certified PEIR did not identify any environmental impacts concerning excessive noise related to an airport.

No Impact. As discussed in **Section 4.9: Hazards and Hazardous Materials**, the Intersection Component site is not within two miles of a private airstrip or an airport land use plan. Therefore, the Intersection Component would not *expose people residing or working in the Proposed Project's area to excessive noise levels.* No impact would occur, and no mitigation is required.

4.14 Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
2. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	■	☐

a. Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Summary of Previous Environmental Analysis (See Certified PEIR pages 5-1 through 5-2)

The Certified PEIR concluded that the Approved Project would introduce population, housing, and employment to the City that exceeds SCAG projections. The Certified PEIR determined that the exceedance would not be a physical impact of the Approved Project, and that the contribution to local jobs, housing, and population, along with other growth in the City, would be reflected in future growth projections. Furthermore, the AVSP area is partially developed and includes existing roads and water and sewer infrastructure. The infrastructure improvements and extensions needed for the Approved Project would not result in inducement of growth.

No Impact. The Intersection Component does not propose new homes or businesses, thus, would not result in direct population growth through development of such uses. Additionally, the Intersection Component would modify an existing intersection and Kanan and Agoura Roads, but would not extend a road or other infrastructure, thus, would not result in indirect population growth through construction of such infrastructure. No impact would occur, and no mitigation is required.

b. Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Summary of Previous Environmental Analysis (See Certified PEIR pages 5-1 through 5-2)

The Certified PEIR concluded that the Approved Project would not result in displacement such that construction of replacement housing elsewhere is needed. Therefore, the Approved Project would not result in an impacts related to population and housing.

Less Than Significant Impact. Small portions of two 2021-2029 HEU opportunity sites (0.14 acres in Site A and 0.04 acres in Site B) are within the Intersection Component site. However, as discussed above in **Section 4.11: Land Use and Planning**, because the 2021-2029 HEU assumes a 34 percent reduction in the

net acreage for Sites A and B and the Intersection Component would only reduce each Site's acreage by one percent or less, the Intersection Component would not interfere with the 2021-2029 HEU's intent for Sites A or B as it relates to providing housing and fulfilling the City's RHNA obligation. Therefore, the Intersection Component's impacts concerning the displacement of existing people or housing would be less than significant and no mitigation is required.

4.15 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project result in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1. Fire protection?	☐	☐	☐	■
2. Police protection?	☐	☐	☐	■
3. Schools	☐	☐	☐	■
4. Parks?	☐	☐	☐	■
5. Other public facilities?	☐	☐	☐	■

a. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-12 through 4.10-13)

The Certified PEIR concluded that the Approved Project would comply with Fire Code and Los Angeles County Fire Department (LACFD) standards, including specific construction specifications, access design, location of fire hydrants, and other design requirements. The Approved Project would be located in a High Severity Wildland Fire Hazard Zone. Additionally, the roundabout proposed as part of the Approved Project would have the potential to restrict access to fire safety personnel and emergency vehicles. Therefore, impacts to fire safety are potentially significant. Incorporation of Certified PEIR MMs PS-3(a) through PS-3(d) would reduce impacts to less than significant.

No Impact. The Intersection Component proposes a widened standard four-leg signalized intersection instead of the Approved Project's proposed roundabout. The Intersection Component is a transportation improvement and does not propose a fire protection facility nor land uses that would create a demand for fire protection services/facilities. Therefore, Intersection Component would not result in the need for new or physically altered fire protection facilities and no environmental impacts from construction of fire protection facilities would occur. No impact would occur, and no mitigation is required. As such, Certified PEIR MM PS-3(c): Roundabout Engineering, which requires further detailed engineering design for the previously proposed roundabout, and Certified PEIR MM PS-3(d): Emergency Access, which addresses the roundabout's potential to restrict access to safety personnel/emergency vehicles, would not be required and are not applicable to the Intersection Component. See Threshold 4.17(d) for discussion concerning adequate emergency access.

b. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Summary of Previous Environmental Analysis (See Certified PEIR page 4.10-14)

The Certified PEIR concluded the Approved Project would result in an increased number of calls to the local Los Angeles County Sheriff's Department Los Hills Substation, which would result in an increased demand for additional costs, personnel time, and response times. Impacts would be potentially significant. Furthermore, the roundabout proposed at the Kanan Road/Agoura Road intersection would have the potential to inhibit access to Sheriff's Department personnel and emergency vehicles. Incorporation of Certified PEIR MMs PS-4(a) and PS-4(b) would reduce impacts to less than significant.

No Impact. The Intersection Component proposes a widened standard four-leg signalized intersection instead of the Approved Project's proposed roundabout. The Intersection Component is a transportation improvement and does not propose a police protection facility nor land uses that would create a demand for police protection services/facilities. The Intersection Component would increase access and efficiency on the existing roadway network, thus creating a benefit for police protection services' access. The Intersection Component would not result in the need for new or physically altered police protection facilities. Therefore, the Intersection Component would not cause environmental impacts from construction of police protection facilities. No impact would occur, and no mitigation is required. As such, Certified PEIR MM PS-4(b): Roundabout Engineering, which refers to Certified PEIR MM PS-3(c) and requires LACSD review and approval of the roundabout, would not be required and is not applicable to the Intersection Component. Additionally, as noted in Response 4.15(a) above, Certified PEIR MM PS-3(c): Roundabout Engineering and Certified PEIR MM PS-3(d): Emergency Access would not be required and are not applicable to the Intersection Component.

c. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-15 through 4.10-16)

The Certified PEIR concluded that the Approved Project would generate additional students, which may result in a potentially significant impact to schools. Incorporation of Certified PEIR MMs PS-5(a) and PS-5(b) would reduce impacts to less than significant.

No Impact. The Intersection Component does not propose residential or other uses that would generate an increase in the area's student population. The Intersection Component does not propose or generate a need for new or physically altered school facilities. Therefore, the Intersection Component would not cause environmental impacts from construction of school facilities. No impact would occur, and no mitigation is required.

d. *Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?*

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-18 through 4.10-16)

The Certified PEIR concluded that the Approved Project would provide additional parkland to the City and the proposed residents, but that there would continue to be an overall shortfall of parkland compared to adopted standards. However, the developers within the AVSP area would be required to collectively provide a minimum of 2.64 acres of land for parks or equivalent in-lieu fees. Therefore, impacts would be less than significant concerning adverse physical impacts associated with the provision of new or physically altered parks.

No Impact. The Intersection Component does not propose residential or other uses that would generate a demand for parkland or recreational facilities. . The Intersection Component does not propose or generate a need for new or physically altered park or recreational facilities. Therefore, the Intersection Component would not cause environmental impacts from construction of park or recreational facilities. No impact would occur, and no mitigation is required.

e. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

No Impact. The Intersection Component does not propose land uses that would increase the City's population, or create a demand for governmental facilities, such as libraries. The Intersection Component does not propose or generate a need for new or physically altered government facilities such as library facilities. Therefore, the Intersection Component would not cause environmental impacts from construction of library facilities. No impact would occur, and no mitigation is required.

4.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
2. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-18 through 4.10-16)

The Certified PEIR concluded that the Approved Project would provide additional parkland and recreational facilities to the City and the proposed residents, but that there would continue to be an overall shortfall of parkland compared to adopted standards. However, the developers within the AVSP area would be required to provide a minimum of 2.64 acres of land for parks or in-lieu fees. Therefore, impacts would be less than significant on parks and recreational facilities.

No Impact. The Intersection Component does not propose residential or other uses that would increase the use of existing neighborhood and regional parks or other recreational facilities. Therefore, the Intersection Component would not cause the physical deterioration of a park or other recreational facility to be accelerated. No impact would occur, and no mitigation is required.

b. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-18 through 4.10-16)

The Certified PEIR concluded that the Approved Project would provide additional parkland and recreational facilities to the City and the proposed residents, but that there would continue to be an overall shortfall of parkland compared to adopted standards. However, the developers within the AVSP area would be required to provide a minimum of 2.64 acres of land for parks or in-lieu fees. Therefore, impacts would be less than significant on parks and recreational facilities.

No Impact. The Intersection Component does not include recreational facilities or residential or other uses that would require construction or expansion of recreational facilities. Therefore, the Intersection Component would not have an adverse physical effect on the environment from construction of such facilities. No impact would occur, and no mitigation is required.

4.17 Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Conflict with an applicable plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
2. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☐	■
3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
4. Result in inadequate emergency access?	☐	■	☐	☐

a. Would the Project conflict with an applicable plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.11-28 through 4.11-33)

The Certified PEIR concluded that the Approved Project would require access, circulation, and parking improvements that would result in potentially significant impacts on bicycle and pedestrian facilities. The Approved Project's proposed roundabout would have the potential to restrict access to safety personnel and emergency vehicles and could impact vehicle or pedestrian movement. The proposed mid-block crosswalks may also create safety issues and would be potentially significant. Incorporation of Certified PEIR MMs T-3(a) through T-3(f) would reduce impacts to less than significant.

Less Than Significant Impact. The 2023 AVSP addresses the circulation system including transit, roadway, bicycle and pedestrian facilities, as summarized below.

2023 AVSP Chapter 3: Streetscape Beautification & Public Improvements focuses on streetscape beautification, gateways and monument signage, and streetscape furnishings to create a unified and cohesive village.

See *Intersection Component* in **Section 2.5** for a discussion of the streetscape beautification, gateways and monument signage, and streetscape furnishings proposed at the Kanan Road/Agoura Road Intersection.

2023 AVSP Chapter 4: Mobility focuses on mobility, illustrating the preferred circulation pattern throughout the Village.

See also *Intersection Component* **Section in 2.5** for a discussion of the circulation pattern proposed at the Kanan Road/Agoura Road Intersection.

See the *Street Frontage Standards in* **Section 2.5** for a discussion of the street frontage standards proposed at the various roadway classifications.

See the *General Plan Amendment – Infrastructure and Community Services Chapter in S*ection 2.5 for a discussion of the proposed roadway classification updates intended to ensure consistency between the General Plan and the proposed 2023 AVSP.

2023 AVSP Chapter 7: Plan Administration describes the AVSP's adoption process, environmental document, and administrative procedures required for AVSP amendments/modifications, as well as review requirements for development applications within the AVSP area. The Street Frontage Standards would be included within this chapter to address the ministerial procedure for street frontage improvements.

The Agoura Hills City Council adopted the 2008 AVSP and certified the accompanying Certified PEIR in accordance with CEQA in 2008. One of the 2008 AVSP components was a proposed roundabout at the Kanan Road/Agoura Road intersection. On September 10, 2014, the City Council voted to not proceed with the roundabout as the preferred alternative, and instead authorized the design of a traffic signal as the ultimate configuration of the Kanan Road/Agoura Road intersection as part of the Proposed Project.

As a transportation improvement, the Intersection Component's proposed components are designed to improve and benefit the 2008 AVSP. The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component includes improvements that include widening the intersection, providing Agoura Village Gateway Monuments and City Gateway Entry Monuments, and undergrounding overhead power/telecommunication lines, among others. Further, the Intersection Component would include new pedestrian curb ramps, landscape buffers, conflict striping, a striped median, and a Class II bike lane. These improvements would benefit the City, and the proposed components would not conflict with policies addressing circulation system, roadways, and bicycle and pedestrian facilities.

See *Street Frontage Standards in* Section 2.5 for a discussion of the street frontage standards proposed at the various roadway classifications. The Street Frontage Standards would provide standards related to, among other features, roadway width and contents (i.e., median, number of travel and bike lanes), street, sidewalk, curb and gutter improvements, accessibility ramps and path of travel, driveways, intersections, landscaping, fire hydrant placement, utility pole relocation, and lighting; see 2023 AVSP Chapter 4: Mobility. The improvements facilitated by the Street Frontage Standards would occur within 2008 AVSP/General Plan proposed ROWs; see **Table 2-5: Summary of AVSP Street Frontage Improvement Environmental Analysis**, and contain standards that are based on the existing regulatory framework and the 2008 AVSP's Objective Standards and development standards/design guidelines that were previously evaluated for environmental impacts in the Certified PEIR and GPU FEIR as part of the assumed street improvements, no conflict would occur with the General Plan Infrastructure and Community Services Chapter.

See *General Plan Amendment – Infrastructure and Community Services Chapter* Section 2.5 and Threshold 4.11.b above for discussions concerning the proposed roadway classification updates intended to ensure consistency between the General Plan and the proposed 2023 AVSP.

Following approval of the aforementioned GPA, the Proposed Project would not conflict with the General Plan Infrastructure and Community Services Chapter, which addresses the circulation system including transit, roadway, bicycle and pedestrian facilities. Impacts would be less than significant, and no mitigation is required.

b. Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

No Impact. The Intersection Component's improvements include widening an existing intersection, Agoura Village Gateway Monuments and City Gateway Entry Monuments, and undergrounding overhead power/telecommunication lines, among others. The Intersection Component would include new pedestrian curb ramps, landscape buffers, conflict striping, a striped median, and a Class II bike lane. Modified road alignments, including elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional cars to wait at all intersection approaches. The proposed widened pavement improvements would generally match the existing Kanan and Agoura Roads pavement structural sections.

The City of Agoura Hills Transportation Assessment Guidelines (Guidelines) was prepared to establish protocol for conducting a transportation assessment, and includes guidance for local traffic impact analysis (using roadway and intersection performance) and CEQA analysis (using VMT).[29] The Guidelines do not specifically consider the effects of transportation projects (i.e., the Intersection Component) on vehicle travel. The *Technical Advisory on Evaluating Transportation Impacts in CEQA*[30] does state the following concerning the effects of transportation projects on vehicle travel:

"A transportation project which leads to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel," would need to quantify the amount of additional vehicle travel in order to assess air quality impacts, greenhouse gas emissions impacts, energy impacts, and noise impacts. Transportation projects also are required to examine induced growth impacts under CEQA…… For any project that increases vehicle travel, explicit assessment and quantitative reporting of the amount of additional vehicle travel should not be omitted from the document…… "

As described above, the Intersection Component does not propose to add through lanes and would generally match the existing Kanan and Agoura Roads pavement structural sections. Given its nature and scope, the Intersection Component would not lead to induced vehicle travel. Additionally, the Intersection Component would not induce any population growth in the area, either directly by proposing new homes or businesses, or indirectly through extension of roads or other infrastructure. Therefore, because the Intersection Component would result in no impact concerning VMT, the Intersection Component would not conflict with State CEQA Guidelines § 15064.3(b).

c. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.11-28 through 4.11-31)

The Certified PEIR concluded that the Approved Project's roundabout would result in potentially significant impacts due to the geometry being non-optimal for vehicle or pedestrian movement. Incorporation of Certified PEIR MM T-3(a) through T-3(f) would reduce impacts to a less than significant level.

Less Than Significant Impact. The Intersection Component's proposed intersection/roadway improvements would be designed to the City's adopted specifications and design standards. The

[29] City of Agoura Hills, Transportation Assessment Guidelines, July 2020, https://www.agourahillscity.org/home/showpublisheddocument/23449/637345476945830000. Accessed January 14, 2022.

[30] State of California Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, page 19, https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed January 12, 2022.

Intersection Component's modified road alignments required to accommodate the widened intersection would correct the lane shift in the existing westbound lanes through the Kanan Road/Agoura Road intersection. The Intersection Component's changes to the east leg of Agoura Road would also allow bikes to move to the left of right-turning vehicles to avoid potential pedestrian-vehicle conflicts. The Agoura Village Gateway Monuments and City Gateway Entry Monuments would include setbacks and landscaped buffers such that they are not directly adjacent to roadways. The signage would include lighting to ensure clear visibility. Therefore, the Intersection Component would not increase hazards due to a design feature such as a dangerous intersections, or through introducing an incompatible use. A less than significant impact would occur and no mitigation is required.

d. Would the Project result in inadequate emergency access?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.11-28 through 4.11-31)

The Certified PEIR concluded that the Approved Project's roundabout would result in potentially significant impacts due to the geometry being non-optimal for vehicle or pedestrian movement. Incorporation of Certified PEIR MM T-3(a) through T-3(f) would reduce impacts to a less than significant level.

Less Than Significant Impact with Mitigation Incorporated. See Response 4.9(f) concerning the Intersection Component emergency evacuation and disaster routes.

The Intersection Component would not develop a roundabout, which as analyzed in the Certified PEIR would potentially result in issues for emergency vehicle access through the Kanan Road/Agoura Road intersection and would, instead, develop a widened standard four-leg signalized intersection.

During Intersection Component construction, there is potential for lane closures that could block emergency access to nearby roadways. MM TRANS-1 requires the Intersection Component to develop a Traffic Control Plan. Specifically, the Traffic Control Plan would require emergency services (e.g., police, fire, and other emergency service providers) as well as facility owners and administrators of surrounding land uses to be notified of the timing, location, and duration of the Intersection Component's construction activities and the locations of detours and lane closures. With MM TRANS-1 incorporated, Intersection Component construction activities would not result in inadequate emergency access. Impacts would be less than significant with mitigation incorporated.

The Intersection Component roadway/driveway improvements would be designed and constructed pursuant to City design standards which address the provision of adequate emergency access. The Intersection Component's additional ancillary improvements (i.e., sidewalks, bicycle lanes, and landscaping) would similarly not result in inadequate emergency access as they would be designed and constructed pursuant to the City's adopted design standards. Therefore, Intersection Component operations would not result in inadequate emergency access. Impacts would be less than significant, and no mitigation is required.

4.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k), or	☐	■	☐	☐
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	☐	■	☐	☐

The discussion below regarding potential impacts on tribal cultural resources is based in part on AB 52 and SB 18 communications between the City and the respective tribes; see **Appendix 4.18-1: Tribal Cultural Resources Documentation**.

a. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k)?

b. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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 § 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe?

Summary of Previous Environmental Analysis

This threshold was not analyzed in the Certified PEIR.

Less Than Significant Impact With Mitigation Incorporated. Chapter 532 Statutes of 2014 (AB 52) requires that lead agencies evaluate a project's potential impact on "tribal cultural resources," which 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, based on substantial evidence, whether a resource qualifies as a "tribal cultural resource."

As discussed under **Section 1.1**, the City prepared an IS/MND for the Kanan Road/Agoura Road Ultimate Intersection Improvement project (i.e., the Intersection Component), which evaluated the environmental impacts from Intersection Component construction and operations. In compliance with PRC §21080.3.1(b), the City provided formal notification to California Native American tribal representatives identified by the California NAHC for both the Kanan Road/Agoura Road Ultimate Intersection Improvement project (i.e., the Intersection Component) and the AVSPU. Native American groups may have knowledge about the area's cultural resources and may have concerns about a development's adverse effects on tribal cultural resources, as defined in PRC § 21074. Consistent with AB 52, the City contacted the tribal representatives of the tribes noted below on December 1, 2022 regarding the Kanan Road/Agoura Road Ultimate Intersection Improvement project (i.e., the Intersection Component) and on July 20, 2023 regarding the AVSPU:

- Barbareno/Ventureno Band of Mission Indians, Julie Tumamait-Stenslie
- Fernandeño Tataviam Band of Mission Indians, Jairo Avila
- Gabrieleno Tongva San Gabriel Band of Mission Indians, Anthony Morales

Additionally, because the Proposed Project requires both General Plan and Specific Plan amendments, the Proposed Project is subject to SB 18. Pursuant to SB 18 requirements, the City contacted the tribal representatives of the tribes noted below on December 1, 2022 regarding the Kanan Road/Agoura Road Ultimate Intersection Improvement project (i.e., the Intersection Component) and on July 20, 2023 regarding the AVSPU:

- Barbareno/Ventureno Band of Mission Indians, Julie Tumamait-Stenslie
- Gabrieleno Tongva San Gabriel Band of Mission Indians, Anthony Morales
- Chumash Council of Bakersfield, Julio Quair
- Gabrielino/Tongva Nation, Sandonne Goad
- Coastal Band of the Chumash Nation, Mariza Sullivan
- Gabrielino Tongva Indians of California Tribal Council, Robert Dorame
- Gabrielino Tongva Indians of California Tribal Council, Christina Conley
- Gabrielino-Tongva Tribe, Charles Alvarez
- Gabrielino Band of Mission Indians – Kizh Nation, Andrew Salas
- Fernandeño Tataviam Band of Mission Indians, Rudy Ortega
- Fernandeño Tataviam Band of Mission Indians, Jairo Avila
- Northern Chumash Tribal Council, Violet Walker

- San Luis Obispo County Chumash Council, Mark Vigil
- Santa Ynez Band of Chumasn Indians, Kenneth Kahn

On March 17, 2022, the City received a request for consultation from the Gabrielino Tongva Indians of California and on March 31, 2022, initiated consultation with Christina Conley concerning the Intersection Component. Consultation with the Gabrielino Tongva Indians of California revealed that the southwest corner of the Kanan Road/Agoura Road intersection was a village site and monitoring was requested during ground disturbance activities. The Gabrielino Tongva Indians of California did not request for consultation regarding the AVSPU.

On March 9, 2022, the City received a request for consultation from the Fernandeño Tataviam Band of Mission Indians concerning the Intersection Component and on March 31, 2022 the City initiated consultation with Jairo Avila. Consultation with the Fernandeño Tataviam Band of Mission Indians revealed that the Intersection Component site is culturally and archaeologically sensitive for resources and requested monitoring during ground disturbance activities.

On August 11, 2023, the City received a request for consultation from the Fernandeño Tataviam Band of Mission Indians concerning the AVSPU and on September 27, 2023 initiated consultation with Sarah Brunzell. During consultation the Fernandeño Tataviam Band of Mission Indians requested that the City inform all project applicants within the City of the Fernandeño Tataviam Band of Mission Indian's required intake and consultation forms. Because the Proposed Project's GPA is only comprised of minor amendments to the General Plan Infrastructure and Community Services Chapter, Mobility Section, and does not involve General Plan in its entirety, no mitigation measures were requested.

The City received a request for consultation from the Santa Ynez Band of Chumash Indians and on April 28, 2022 initiated consultation with Wendy Giddens Teeter, PhD, RPA concerning the Intersection Component. Consultation with the Santa Ynez Band of Chumash Indians revealed that the southern portion of the Intersection Component site is a potential tribal cultural resource area that would most likely be impacted by the Intersection Component and requested monitoring during ground disturbance activities.

On October 6, 2023, the City received a letter noting that the Santa Ynez Band of Chumash Indians continue to feel that a Native American Monitor should be present during ground disturbance.

As of the release date of this Recirculated IS/MND, the City has not received any additional requests for consultation pursuant to AB 52 nor SB 18.

As discussed in Response 4.5.b, the record search results indicate that the two prehistoric habitation sites would be crossed by portions of the Intersection Component's alignment, but no trace of either resource was identified. However, the two prehistoric resources indicate sensitivity for buried cultural resources within the Intersection Component site, and impacts during ground disturbing activities would be potentially significant. To address potential impacts to tribal cultural resources, the Intersection Component would incorporate MMs CUL-1 through CUL-4, of which MM CUL-2 requires retaining a tribal construction monitor during ground disturbance. Therefore, with MMs CUL-1 through CUL-4 incorporated, the Intersection Component's potential impacts to tribal cultural resources would be less than significant.

4.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	■	☐	☐
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple Dry years?	☐	☐	■	☐
3. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
4. 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?	☐	■	☐	☐
5. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	■	☐	☐

a. Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-10 through 4.10-12)

See Threshold 4.10.c, for a discussion of stormwater drainage. The Certified PEIR did not address electric power, natural gas, or telecommunications facilities.

The Certified PEIR concluded treatment of the Approved Project's wastewater would be accommodated at the Tapia Water Reclamation Facility, which has adequate capacity to serve future development allowed under the 2008 AVSP. Regarding water facilities, the Certified PEIR concluded the Approved

Project could require the extension of water lines and hydrants, but would not require the construction or relocation of a new water facility. Impacts would be less than significant.

Less Than Significant With Mitigation Incorporated. The Intersection Component would require modifications/relocations of existing water, sewer, stormwater drainage, electric power, natural gas, and telecommunications facilities, which could cause significant environmental effects, as discussed throughout this IS/MND and summarized below.

Water Facilities

The Intersection Component would require modifications/relocations of existing water facilities (e.g., curb inlets, drain lines, and one hydrant), but would not require construction of new facilities.

Sewer Facilities

The Intersection Component would not require modifications/relocations of existing sewer facilities.

Stormwater Drainage Facilities

Under existing conditions within the Intersection Component area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under Intersection Component conditions, these inlets would be relocated to accommodate the Agoura Road widening. The associated drain lines would be extended; however, flows would remain generally unchanged. See Threshold 4.10.c, for further discussion concerning the Intersection Component's stormwater drainage.

Electric Power and Telecommunications Facilities

The Intersection Component proposes to relocate and construct new electric power and telecommunication facilities. The Intersection Component proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see **Figures 2-3** and **2-12**. The lighting poles that include luminaires would remain in place, and all other utility poles, excluding one located on northbound Kanan Road, would also remain in place. Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations would be determined during final engineering design. The Intersection Component would relocate existing pedestrian and street lighting, but no new pedestrian or street lighting would be added. Minor lighting would be provided at the Agoura Village Gateway Monuments and City Gateway Entry Monuments for illumination and safety purposes. The lighting would be subject to 2023 AVSP development standards, which encourages the use of energy-efficient fixtures incorporating light emitting diode (LED) lamps.

Natural Gas Facilities

The Intersection Component would not require modifications/relocations of existing natural gas facilities.

Conclusion

The Intersection Component would require modifications/relocations of existing water, sewer, stormwater drainage, electric power, natural gas, and telecommunications facilities, as described above. As such, the Intersection Component could cause significant environmental effects associated with construction of these facilities. However, electric power facilities, the Intersection Component's utility improvements would be limited to relocations and minor modifications. The environmental effects associated with construction of the proposed improvements are discussed as part of the overall environmental analyses in Sections 4.1 through 4.19 of this IS/MND. As concluded in these sections, the Project's environmental effects would be reduced to less than significant through compliance with the

established regulatory framework and incorporation of the specified mitigation measures. Therefore, with mitigation incorporated, the Intersection Component would result in less than significant environmental effects associated with modifications/construction of water, sewer, stormwater drainage, electric power, natural gas, and telecommunications facilities; see **Section 4.4**, **Section 4.5**, **Section 4.7**, and **Section 4.9**.

Certified PEIR Mitigation Measures

See **Section 4.4** for MMs BIO-4(a) through BIO-4(e), **Section 4.5** for MM HA-1, and **Section 4.9** for MM GEO-1(b), GEO-3(a) through GEO-3(c), and GEO-5(a), GEO-5(b), GEO-6(a), and GEO-6(b).

Mitigation Measures

See **Section 4.4** for MM BIO-1, Section 4.5 for MM CUL-1 through CUL-4, **Section 4.6** for MM GEO-1, and **Section 4.9** for MM TRANS-1.

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

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-10 through 4.10-12)

The Certified PEIR concluded the water required for the Approved Project would be adequately served by the LVMWD, and that the LVMWD does not anticipate any deficiencies in service or flow due to the Approved Project. Individual projects would be required to comply with all water system and conservation requirements of the LVMWD and the California Plumbing Code. Impacts would be less than significant concerning water supplies.

Less Than Significant Impact. The Intersection Component is a transportation improvement project that would not generate a demand for potable water since it would utilize LVMWD recycled water for landscaping. The Intersection Component's recycled water demand would be generally similar to that anticipated in the Certified PEIR for landscaping the roundabout. Therefore, sufficient water supplies would be available to serve the Intersection Component, and impacts would be less than significant concerning water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

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

Summary of Previous Environmental Analysis (See Certified PEIR page 4.10-10)

The Certified PEIR concluded the Approved Project would be served by the Tapia Water Reclamation Facility, which has adequate capacity to serve the 2008 AVSP. Impacts would be less than significant.

No Impact. The Intersection Component is a transportation improvement project that would not generate wastewater or a demand for wastewater treatment. Therefore, the Intersection Component would have no impact concerning wastewater treatment capacity.

d. Would the Project 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. Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.10-16 through 4.10-18)

The Certified PEIR concluded the Approved Project's generated solid waste would be adequately accommodated at the Calabasas Landfill, and therefore would not have a significant impact on solid waste

facilities. During construction, disposal of excavated materials would be potentially significant and would require incorporation of Certified PEIR MMs GEO-6(a) and GEO-6(b) to reduce impacts to less than significant.

Less Than Significant With Mitigation Incorporated. As a transportation improvement project, the Intersection Component would only temporarily generate construction-related solid waste. The Intersection Component's construction would be required to comply with the City's Source Reduction and Recycling Element and Construction and Demolition Debris Program, which would be implemented in compliance with the City's Green Building Code and AB 939, to reduce the amount of waste disposed of in landfills to the highest degree feasible. Given the volume and nature of cut materials during construction, the materials may not be accepted at the Calabasas Landfill. Therefore, the Intersection Component would be subject to compliance with Certified PEIR MMs GEO-6(a) and GEO-6(b), which contain measures to reduce settlement impacts and the requirement for additional environmental analysis if a disposal site for the construction cut is not found within 12.5 miles of the AVSP area.

The Intersection Component would not generate solid waste during operations, thus, would have no impact on the disposal site's capacity. Therefore, following compliance with the City's Source Reduction and Recycling Element and Construction and Demolition Debris Program, and with Certified PEIR MMs GEO-6(a) and GEO-6(b) incorporated, the Intersection Component would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or conflict with solid waste regulations. The Intersection Component's impacts concerning solid waste would be less than significant with mitigation incorporated.

Certified PEIR Mitigation Measures

See Certified PEIR MMs GEO-6(a) and GEO-6(b) above.

4.20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
1. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
2. 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?	☐	☐	■	☐
3. 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?	☐	☐	■	☐
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, 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. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project 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. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project expose people or structures to significant risks, including downslope or

downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Summary of Previous Environmental Analysis (See Certified PEIR pages 4.5-5)

The revised State CEQA Guidelines include a new separate discussion for Wildfire hazards. Although not addressed as a separate threshold, the Certified PEIR's Hazards and Hazardous Materials analysis (see Threshold 4.9.g above) noted that most the AVSP area is a Wildlife Urban Interface area and that future development of the Approved Project could increase the likelihood of wildfire impacts. However, the Certified PEIR concluded with implementation of standard fire prevention measures and proper site design, as required of the Los Angeles County Fire Code, Los Angeles County Code Title 32, and Los Angeles County Fire Department, for the potential impacts associated with increased wildfire hazards would be less than significant.

Less Than Significant Impact. See Response 4.9.g also. The Intersection Component would be located in urban/wildfire interface areas and in areas classified as VHFHSZ. The Intersection Component does not propose any structures or buildings for occupancy that could be prone or contribute to fire hazards. The proposed Intersection Component improvements would be constructed mostly within the existing public ROW but also a small portion within private vacant properties adjacent to the Kanan Road/Agoura Road intersection and roadway. The Intersection Component would also underground two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, which would further reduce the potential for downed lines to start a wildfire. New landscaping would be irrigated and would not consist of highly flammable materials. Further, as discussed above under Response 4.10.f, the Intersection Component would result in less than significant impacts concerning emergency response plans, whereas the roundabout analyzed in the Certified PEIR would require mitigation to reduce impacts to a less than significant level.

The Intersection Component site and surrounding vicinity are relatively flat. Therefore, the Intersection Component would not exacerbate wildfire risks due to slope, prevailing winds, and other factors. Further, the Intersection Component is a transportation improvement project, and there would be no occupants to expose to pollutant concentrations from wildfire or the uncontrolled spread of wildfire. Therefore, the Intersection Component would have a less than significant impact concerning wildfires and no mitigation is required.

4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. 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?	☐	■	☐	☐
2. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐
3. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

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?*

Less Than Significant With Mitigation Incorporated. As discussed throughout this IS/MND, the Proposed Project does not have the potential to degrade the environment's quality or result in significant environmental impacts that cannot be reduced to a less than significant levels following compliance with the established regulatory framework (i.e., local, State, and federal regulations) and the incorporation of MM.

As concluded in **Section 4.1: Aesthetics**, with Certified PEIR MM AES-3 incorporated, the Intersection Component would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Further, with Certified PEIR MM AES-4 incorporated, the Intersection

Component would not create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

As concluded in **Section 4.4: Biological Resources**, with MM BIO-1 incorporated, the Intersection Component would not have a substantial adverse effect on any species identified as candidate, sensitive, or special status, or on any riparian habitat or other sensitive natural community. Further, with Certified PEIR MM BIO-1(c) incorporated, the Intersection Component would not 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. With Certified PEIR MM BIO-3(a) through BIO-3(d) incorporated, the Intersection Component would not conflict with any local policies or ordinances protecting biological resources.

As concluded in **Section 4.5: Cultural Resources**, with MMs CUL-1 through CUL-4 incorporated, the Intersection Component would not cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines § 15064.5. With Certified PEIR MM HA-1(c) incorporated, the Intersection Component would result in a less than significant impact concerning potential to disturb human remains.

As concluded in **Section 4.7: Geology and Soils**, with Certified PEIR MM GEO-1(b) incorporated, the Intersection Component would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. With Certified PEIR MM GEO-3(a) through GEO-3(c) incorporated, the Intersection Component would not directly or indirectly cause substantial adverse effects involving landslides or be located on a geologic unit or soil that is made unstable as a result of the Intersection Component. With Certified PEIR MM GEO-5(a), GEO-5(b), GEO-6(a), and GEO-6(b) incorporated, the Intersection Component would not result in substantial soil erosion or the loss of topsoil and would not be located on expansive soil to create substantial direct or indirect risks to life or property. With MM GEO-1 incorporated, the Intersection Component would result in a less than significant impact concerning potential to destroy a unique paleontological resource or site or unique geologic feature. As concluded in **Section 4.9: Hazards and Hazardous Materials**, with MM TRANS-1 incorporated and City Council approval of the proposed GPA, the Intersection Component would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

As concluded in **Section 4.17: Transportation**, with MM TRANS-1 incorporated, the Intersection Component would not result in inadequate emergency access.

As concluded in **Section 4.18: Tribal Cultural Resources**, with MM CUL-1 through CUL-4 incorporated, the Intersection Component would not cause an adverse change in the significance of a tribal cultural resource.

As concluded in **Section 4.19: Utilities and Service Systems**, following compliance with Certified PEIR MMs GEO-6(a) and GEO-6(b), the Intersection Component would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or conflict with solid waste regulations.

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

Less Than Significant Impact With Mitigation Incorporated. State CEQA Guidelines § 15065(a)(3) defines "cumulatively considerable as times when "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The Intersection Component would result in significant impacts

unless mitigated for the following environmental issues: aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, tribal cultural resources, and utilities and service systems. The impacts associated with these resource areas are localized, thus, would not result in cumulative impacts. MMs have been specified for each of these environmental issue areas to reduce impacts to a less than significant level.

All other Intersection Component impacts were determined either to have no impact or to be less than significant following compliance with the established regulatory framework, without the need for mitigation. Cumulatively, the Intersection Component would not result in any significant impacts that would substantially combine with impacts of other current or probable future impacts. Therefore, the Intersection Component would not result in any cumulatively considerable significant impacts.

c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation Incorporated. A significant impact may occur if the Proposed Project has the potential to result in significant environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly. All potential impacts of the Intersection Component have been identified in the respective sections of this IS/MND, and MMs have been prescribed, where applicable, to reduce potential impacts to a less than significant level. All other potential Proposed Project impacts have been identified in either the Certified PEIR or GPU EIR, and MM have been prescribed, where applicable, to reduce potential impacts to a less than significant level. As such, following compliance with the established regulatory framework and with the specified MMs incorporated, the Intersection Component would not have significant environmental effects, or substantial adverse effects on human beings, directly or indirectly. Therefore, impacts would be less than significant with mitigation incorporated.

5.0 References

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Appendices

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Appendix 2-1

General Plan Infrastructure and Community Services Chapter Amendments

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ROADWAY CLASSIFICATION

The City's roadway network is classified as follows:

- **Primary Arterials**—Streets and highways that are designed to move relatively high volumes of traffic between the freeway and local circulation system. Intersections along major arterials are at-grade and typically signalized. Access from private property and collector streets is limited, as is on-street parking.
- **Secondary Arterials**—Streets that are similar to primary arterials, but serving a more localized function. Generally, they have less access and parking restrictions and a narrower right-of-way than primary arterials.
    - **Semi-Rural Secondary Arterial** – Streets that are similar to secondary arterials but, to keep a semi-rural character, have only two lanes and a reduced minimum roadway width. Curb, gutter, sidewalk and streetlights are optional.
- **Collector Streets**—Streets that are designed to distribute traffic from higher classified arterial streets to local access streets and adjacent properties.
- **Local Streets**—Streets that are designed to be low-volume and low-speed streets that provide access to individual properties. Residential streets are generally not intended to handle through traffic.

Figure M-1 (Circulation Plan and Street Classification) displays the roadway functional classification system in the City of Agoura Hills. Figure M-2 (Typical Roadway Classification Cross Sections) displays typical cross sections for the roadway functional classification system in the City of Agoura Hills.

LOCAL ROADWAY SYSTEM

The following is a brief description of the main roadways serving the City:

- **Kanan Road**—Kanan Road is a north/south primary arterial. Generally two travel lanes per direction divided by a raised median are provided between the northerly city limit and just south of Thousand Oaks Boulevard; as Kanan Road approaches the US-101, three lanes are provided in the southbound direction beginning at Canwood Street. Between the US-101 overpass and Agoura Road, two through travel lanes are provided in each direction. South of Agoura Road to the southerly city limit, Kanan Road provides one lane per direction. Limited access is provided to developments along this corridor and parking is prohibited along this facility. The posted speed limit is 45 mph south of Agoura Road, 35 mph between Agoura Road and Canwood Street, 40 mph between Canwood Street and Laro Drive, and 45 mph north of Laro Drive. Bicycle lanes are provided on both sides of Kanan Road between the northern city limit and Hillrise Drive.

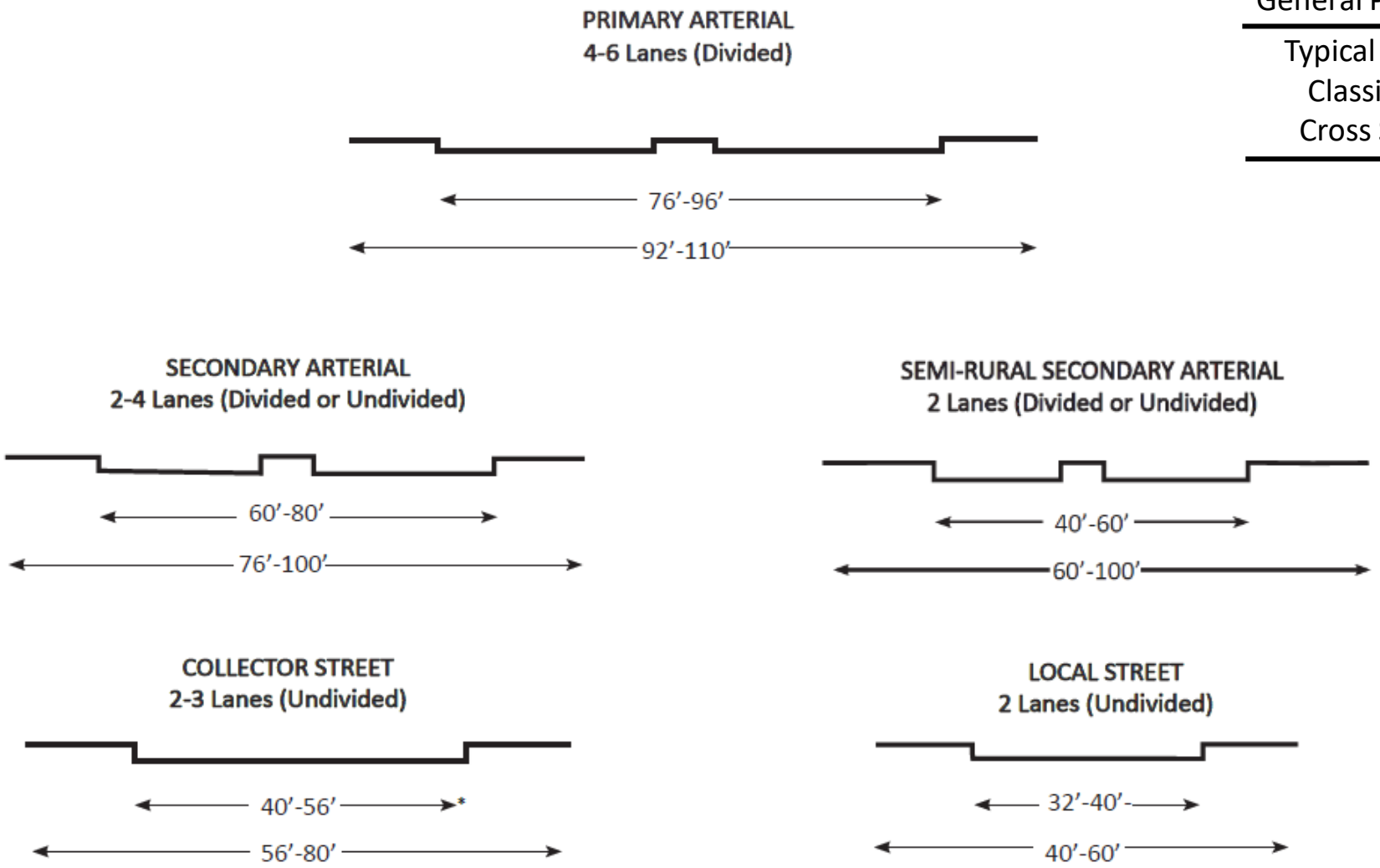
- **Agoura Road**—Agoura Road west of Cornell Road and just east of Vejar Drive is an east/west secondary arterial. Generally, one travel lane in each direction is available between the easterly city limits to just west of Kanan Road; two travel lanes in each direction are provided just west of Kanan Road to the westerly city limits. Agoura Road between Cornell Road and just west of Vejar Drive is an east/west semi-rural secondary arterial, which is a subclassification of the secondary arterial. This portion of Agoura Road has one travel lane in each direction. Parking is not permitted along this portion of Agoura Road between Cornell Road and just west of Vejar Drive. The posted speed limit is 45 mph.~~Most of the segment east of Cornell Road is semi-rural in nature with no curb, gutter, sidewalk, or streetlights. Parking is permitted along this facility from Kanan Road to Cornell Road and in the Old Agoura commercial area. The posted speed limit is 45 mph.~~ Bicycle lanes are provided on both sides of Agoura Road between the western city limit and Liberty Canyon Road.

- **Thousand Oaks Boulevard**—Thousand Oaks Boulevard is an east/west primary arterial. Two travel lanes are provided in each direction between the westerly city limits and just east of Kanan Road. There is limited access to developments along this corridor; parking is prohibited west of Kanan Road. The posted speed limit is 45 mph. Bicycle lanes are provided on both sides of Thousand Oaks Boulevard between the western city limit and Kanan Road. East of Kanan Road, a bike lane is provided on one side of Thousand Oaks Boulevard.

- **Reyes Adobe Road**—Reyes Adobe Road is a north/south secondary arterial. Two travel lanes are provided in each direction between Canwood Street and Lake Lindero Road; south of Canwood Street, one lane in each direction is provided over the US-101 overcrossing; south of US-101, two lanes are provided in each direction. There are no driveways along Reyes Adobe Road north of the US-101, and access is limited to the cross streets. Street parking is prohibited along this corridor. The posted speed limit is 40 mph. Bicycle lanes are provided on both sides of Reyes Adobe Road between Canwood Street and Lake Lindero Road.

CITY of AGOURA HILLS
General Plan Update

Typical Roadway Classification Cross Sections



*Minimum roadway width for Collector Streets (i.e., Cornell Road and Roadside Drive) within AVSP is 36'.

Figure M-2

Appendix 4.3-1

Air Quality Assessment

Kimley»Horn

Air Quality Assessment

Agoura Village Specific Plan Update Project

City of Agoura Hills, California

Kimley»Horn

Expect More. Experience Better.

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August 2023

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APPENDICES

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
AQMD	Air Quality Management District
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	lead
LST	localized significance threshold
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
sf	square foot
SO_{4-2}	sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Agoura Village Specific Plan Update Project's Kanan Road/Agoura Road Ultimate Intersection Improvements Component (Intersection Component). The purpose of this Air Quality Assessment is to evaluate the potential Intersection Component construction and operational emissions and determine the level of impact the Project would have on the environment.

1.1 Project Location

The Intersection Component site is in the City of Agoura Hills (City), which is located along the U.S. Route 101 (US 101). **Exhibit 1: Regional Vicinity Map**, depicts the Intersection Component site in a regional context.

Exhibit 2: Local Vicinity Map, depicts the Intersection Component site in a local context and indicates the Intersection Component site is generally comprised of three discontiguous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

The Intersection Component area comprises approximately 6.1 acres in the AVSP area's north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange; see **Exhibit 3: Proposed Kanan Road/Agoura Road Intersection**. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area.

1.2 Project Description

The Agoura Hills City Council adopted the AVSP (2008 AVSP) and certified the supporting updated Final Revised and Recirculated Program Environmental Impact Report (Certified PEIR) (State Clearinghouse [SCH] No. 2003111051) on October 22, 2008 (Resolution 08-1503). One of the AVSP's proposed components was a roundabout at the Kanan Road/Agoura Road intersection, which was evaluated throughout the Certified PEIR as the Preferred Alternative.

In September 2014, the City Council voted to discontinue the Kanan Road/Agoura Road roundabout as the Preferred Alternative because of the large amount of property outside of the existing right-of-way ("ROW") which the City would need to acquire to construct the roundabout. Hence, to limit ROW acquisitions, the City Council authorized the design of a widened standard four-leg signalized intersection as the ultimate configuration.

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The intersection's high use and visibility make the Intersection Component a challenging and sensitive priority for the City.

The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines, among others, as depicted on **Exhibit 3: Proposed Kanan Road/Agoura Road Intersection**, and described below. **Exhibit 4: Proposed Kanan Road/Agoura Road Intersection Improvements** provides a close-up view of the proposed improvements by segment. Although the Agoura Village Gateway Monuments would be constructed at a later date by others, the environmental impacts from the City

Gateway Entry Monuments and Agoura Village Gateway Monuments are analyzed herein, including construction effects, to provide a conservative analysis.

1.2.1 Intersection and Roadway Improvements

Modified road alignments, including road elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional queuing capacity at all intersection approaches. The through lanes would vary between 10 and 13 feet wide. The proposed widened pavement improvements would generally match the existing Kanan Road and Agoura Road pavement structural sections, as further detailed below.

a. **North Leg:** Improvements on the north leg would occur within the 100-foot ROW and would extend from the Kanan Road/Agoura Road intersection to approximately 50 to 60 feet north. Improvements would be limited to new pedestrian curb ramps, relocation of traffic signals, landscape buffers, full-depth asphalt replacement, and a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection. The existing lane geometry would remain, with two northbound through lanes and five southbound lanes including two left-turn pockets, two through lanes, and one right turn pocket lane.

b. **South Leg:** Improvements on the south leg would extend from the Kanan Road/Agoura Road intersection to approximately 250 feet south. Improvements include full depth asphalt replacement, asphalt milling[1] and overlay, creation of a new right-turn pocket lane, relocation of existing utilities and traffic signals, and new pedestrian curb ramps and 12-foot sidewalk along northbound lanes. The northbound geometry would include a 12-foot left-turn lane, two through lanes ranging from 12 to 13 feet, and a new right-turn pocket lane measuring 13 feet wide. The existing ROW would be relocated further east to accommodate the proposed improvements. The two existing 15-foot southbound though lanes would remain. The south leg would also include utility undergrounding; see Underground Utility Improvements, below.

c. **East Leg:** Improvements on the east leg would extend from the Kanan Road/Agoura Road intersection to approximately 530 feet east, terminating at the existing landscaped median on Agoura Road, near the vacant lot at 29125 Agoura Road. The existing eastbound and westbound six-foot Class II bike lane[2] would remain. Improvements include full depth asphalt replacement, asphalt milling and overlay, new green conflict striping,[3] relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 10 feet to the south to allow for the bike lane and sidewalk to each be widened by one foot, and new landscape buffers. A Southern California Edison transformer would need to be relocated to the south to avoid the newly widened sidewalk. A striped median ranging in width from 10 to 21 feet is also proposed. Left-turn access to the Speedway Gas Station would be maintained. Eastbound lanes would retain two 11-foot through lanes, eventually merging into one through lane to the Intersection Component terminus. Westbound lanes geometry would remain the same. One westbound through lane would expand to provide one 14-foot right-turn pocket lane and one 11-foot through lane, with the existing six-foot bike lane with new green conflict striping in between. The westbound lane would

[1] Asphalt milling (also called pavement milling) refers to grinding and removing the topmost layer of asphalt pavement. This is often done to keep pavement from getting too high from years of asphalt resurfacing and also prevents drainage problems.

[2] Class II bike lanes are one-way facilities that dedicate some of the roadway ROW to bicyclists.

[3] A conflict zone is an area where the bicycle path and vehicle path intersect. The green colored pavement within a bicycle lane is meant to increase the visibility of the facility, identify potential areas of conflict between bicycle, vehicle, and pedestrian, and reinforces priority to bicyclists in conflict areas.

terminate at the Kanan Road/Agoura Road intersection with the 12-foot right-turn pocket lane, the existing six-foot bike lane with new green conflict striping, the existing 11-foot through lane, and the existing 11-foot left-turn pocket at the Kanan Road/Agoura Road intersection.

d. **West Leg:** Improvements on the west leg would extend from the Kanan Road/Agoura Road intersection to approximately 400 feet west, terminating just west of the existing AT&T driveway located west of the Tavern Tomoko & Ladyface Brewery and the existing driveways for the Agoura Pointe Shopping Center. Improvements include full depth asphalt replacement, asphalt mill and overlay, new green conflict striping for existing eastbound bike lane, relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 7 feet to the south to accommodate new 11-foot right-turn pocket lane. Eastbound lanes would feature two 11-foot left-turn pocket lanes, one 11-foot through lane, six-foot Class II bike lane, and new 12-foot right-turn pocket lane. Westbound lanes would feature a 11-foot through lane with seven-foot Class II bike lane. Approximately 190 feet west of the Kanan Road/Agoura Road intersection, a set of stairs would be created to connect the westbound sidewalk to the Agoura Pointe Shopping Center parking lot. The development of the stairway connection would remove the existing parking spot and would open into the parking lot. The parking spot would be replaced with a landing zone and would be surrounded by the existing island with an oak tree to the east and a landscape buffer to the west. Three mature oak trees, two of which are located north of Agoura Road and one which is located south of Agoura Road, would be protected and remain in place as part of the Intersection Component.

Ancillary improvements such as minor utility modifications/relocations would be required to accommodate the above improvements; see also the *Underground Utility Improvements* section below. Existing pedestrian and street lighting would also be relocated; however, no new pedestrian or street lighting would be added.

1.2.2 Signage Improvements

The Intersection Component includes entryway and statement signage (i.e., the City Gateway Entry Monuments and Agoura Village Gateway Monuments) on Kanan Road and Agoura Road. The new signage would adhere to AVSP Chapter 2: Land Use, Regulations, and Guidelines, Section F: Design Guidelines, as applicable. The signage improvements are comprised of the City Gateway Entry Monuments and Agoura Village Gateway Monuments.

In total, six Agoura Village Gateway Monuments and two City Gateway Entry Monuments are proposed, as described below. The Agoura Village Gateway Monuments would be up to approximately 10 feet tall, and up to approximately 10 feet wide by 10 feet long. A 15-foot wide landscaped buffer would be provided surrounding the base of the Agoura Village Gateway Monuments. Thus, the total base footprint of the Agoura Village Gateway Monuments with the landscaped buffer would be approximately 1,600 SF each.

The City Gateway Entry Monuments would be up to 15 feet tall, and up to 24 feet wide by 24 feet long. A 5-foot landscaped buffer would be provided surrounding the base of the City Gateway Entry Monuments. Thus, the total base footprint of the City Gateway Entry Monuments with the landscaped buffer would be approximately 1,156 SF each.

- **Agoura Village Gateway Monument East and West Locations:** Four monuments are proposed on Agoura Road at the two locations depicted on **Exhibit 4** (two for each location, offset from each other on either side of the road). These are intended to establish the character of the AVSP area;
- **Agoura Village Gateway Monument South Locations:** Two monuments are proposed on Kanan Road at the location depicted on **Exhibit 4** (two for this location, offset from each other on either

side of the road) to establish the AVSP area's southern boundary. The proposed locations would be approximate with the conceptual driveway locations of the proposed developments east and west of Kanan Road; and

- **City Gateway Entry Monument Locations:** Two monuments are proposed on Kanan Road at the locations depicted on **Exhibit 4** near the Kanan Road/Cornell Road intersection. These are intended to approximately establish the City's southern limit.

The new signage, along with other aesthetic improvements from new landscaping islands, activated pedestrian corners, and street furnishings are intended to contribute and define a unique "gateway for the City." Minor lighting would be provided at the pilasters and monuments for illumination and safety purposes.

1.2.3 Underground Utility Improvements

The Intersection Component proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see **Exhibit 4** and **Exhibit 5**.

The lighting poles that include luminaires will remain in place, and all other utility poles, excluding one located on northbound Kanan Road, will also remain in place. Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations will be determined during final engineering design.

Further details concerning undergrounding the utilities is provided under the *Construction and Phasing* Section below.

1.2.4 Drainage and Water Quality

Under existing conditions within the Intersection Component area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under Intersection Component conditions, these inlets would be relocated to accommodate the widening of Agoura Road. The associated drain lines would be extended; however, flows would remain generally unchanged.

1.2.5 Construction and Phasing

The Intersection Component improvements are proposed to occur in a single phase, except the Agoura Village Gateway Monuments, which would be constructed at a later date by others.[4] Prior to the start of construction, the City will need to purchase the ROW and coordinate temporary construction easements. This process will be approximately 6 to 9 months. After the purchase and receipt of the easements, construction will start and is anticipated to occur over approximately 12 months, beginning as early as November 2024 and ending as early as November 2025. The proposed improvements would be located mostly within existing City ROW but would require partial permanent acquisitions and temporary construction easements (TCE) from adjacent properties; see **Table 1: Intersection Component Proposed Right-of-Way**. As indicated in **Table 1**, approximately 0.18 acres of permanent property acquisitions and approximately 6.04 acres of temporary construction easements are required for the Intersection Component. The Agoura Village Gateway Monuments and City Gateway Entry Monuments would be located in approximate areas within the marked areas in **Exhibit 4**; therefore, the areas for improvements are approximate. It should be noted that the Intersection Component would not result in acquisitions or

[4] For purposes of the analysis, it is conservatively assumed that the construction activities would occur in a single phase to present the most conservative (e.g., highest) daily maximum construction emissions.

TCE for the Agoura Village Gateway Monuments; if and when the properties that are identified for the Agoura Village Gateway Monuments are developed, then the ROW/easements would occur.

Table 1: Intersection Component - Proposed Right-of-Way

Parcel	Required Permanent Property Acquisitions	Required Temporary Construction Easements (TCE)
City Right of Way	--	5.33
2061-032-021	0.04	--
2061-031-020	0.14	0.16
2061-004-034	--	0.20
2061-032-022	--	0.02
2061-032-028	--	0.11
2061-007-905	--	0.07
2061-029-004	--	0.02
2061-004-046	--	0.04
2061-032-025	--	0.09
Source: Kimley-Horn, 2022.		

To underground the two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, the Intersection Component would require approximately 1,105 linear feet of trenching approximately 4.5 feet deep and 2.5 feet wide, generally between Agoura Road and Cornell Road. The light poles that include luminaires will remain in place, and all other utility poles, excluding one located on northbound Kanan Road, will also remain in place. Undergrounding the power lines would involve removing the existing overhead utility lines and one pole located on northern Kanan Road approximately 150 feet south of the Kanan Road/Agoura Road intersection, installing conduit and substructures (e.g., transformers on concrete pads), installing cable through the conduits, and backfilling.

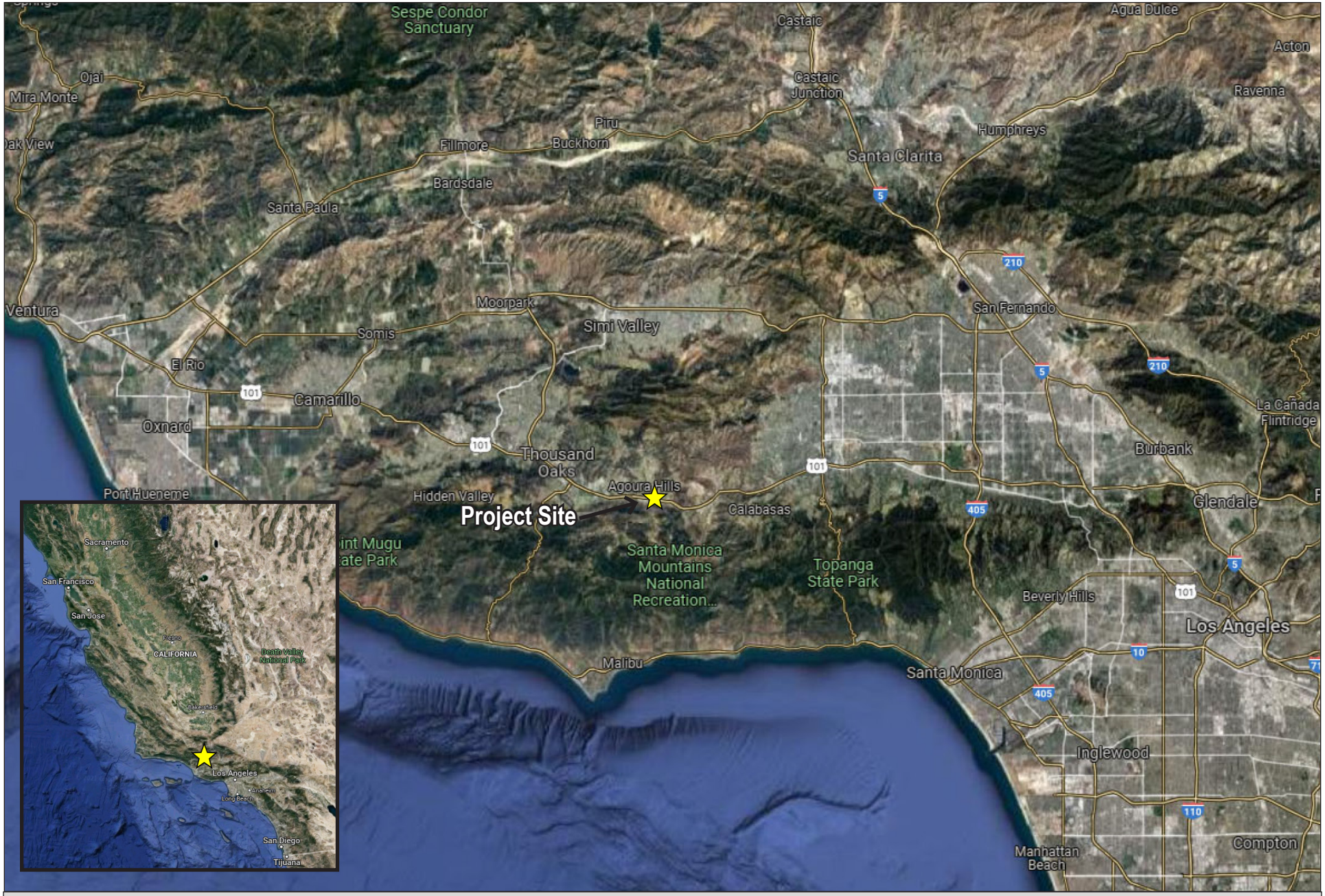

EXHIBIT 1: REGIONAL VICINITY MAP

Agoura Village Specific Plan Update Project

NOT TO SCALE

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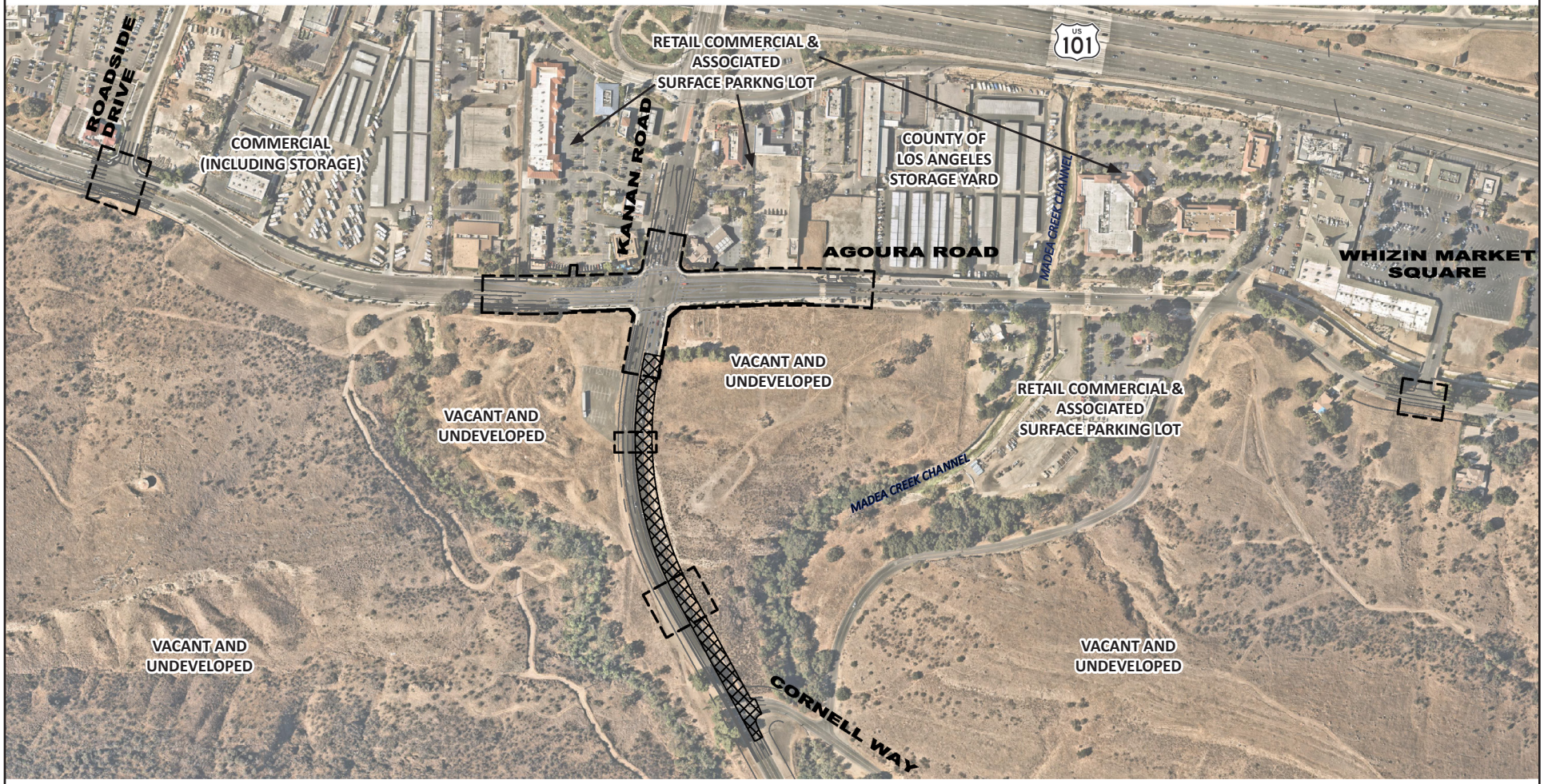

EXHIBIT 2: LOCAL VICINITY MAP

Agoura Village Specific Plan Update Project

SCALE: 1" = 300'

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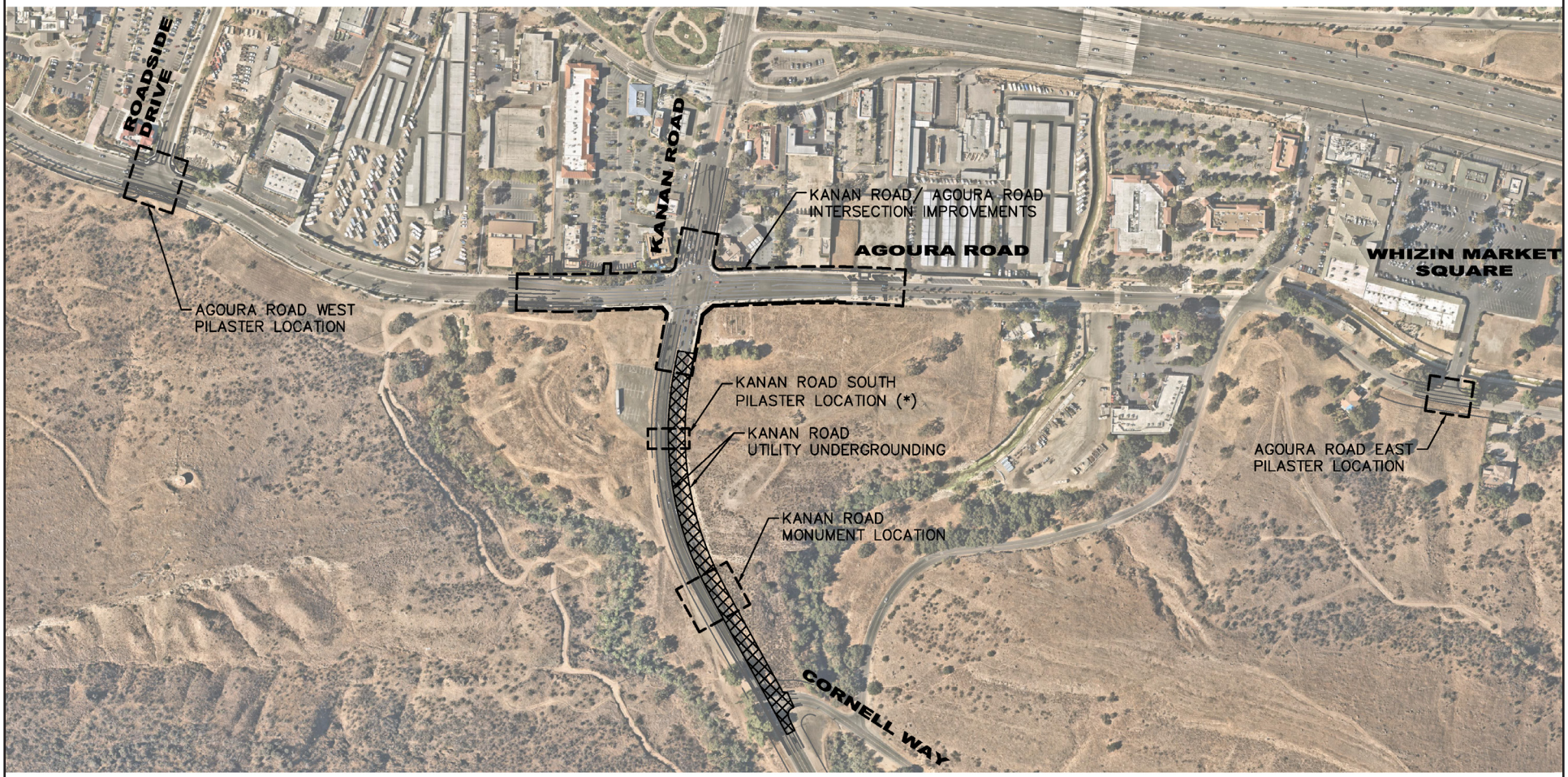

LEGEND

(*) – APPROXIMATE LOCATION. WILL BE DETERMINED WHEN DRIVEWAYS ARE APPROVED.

EXHIBIT 3: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION

Agoura Village Specific Plan Update Project

SCALE: 1" = 300'

Kimley»Horn

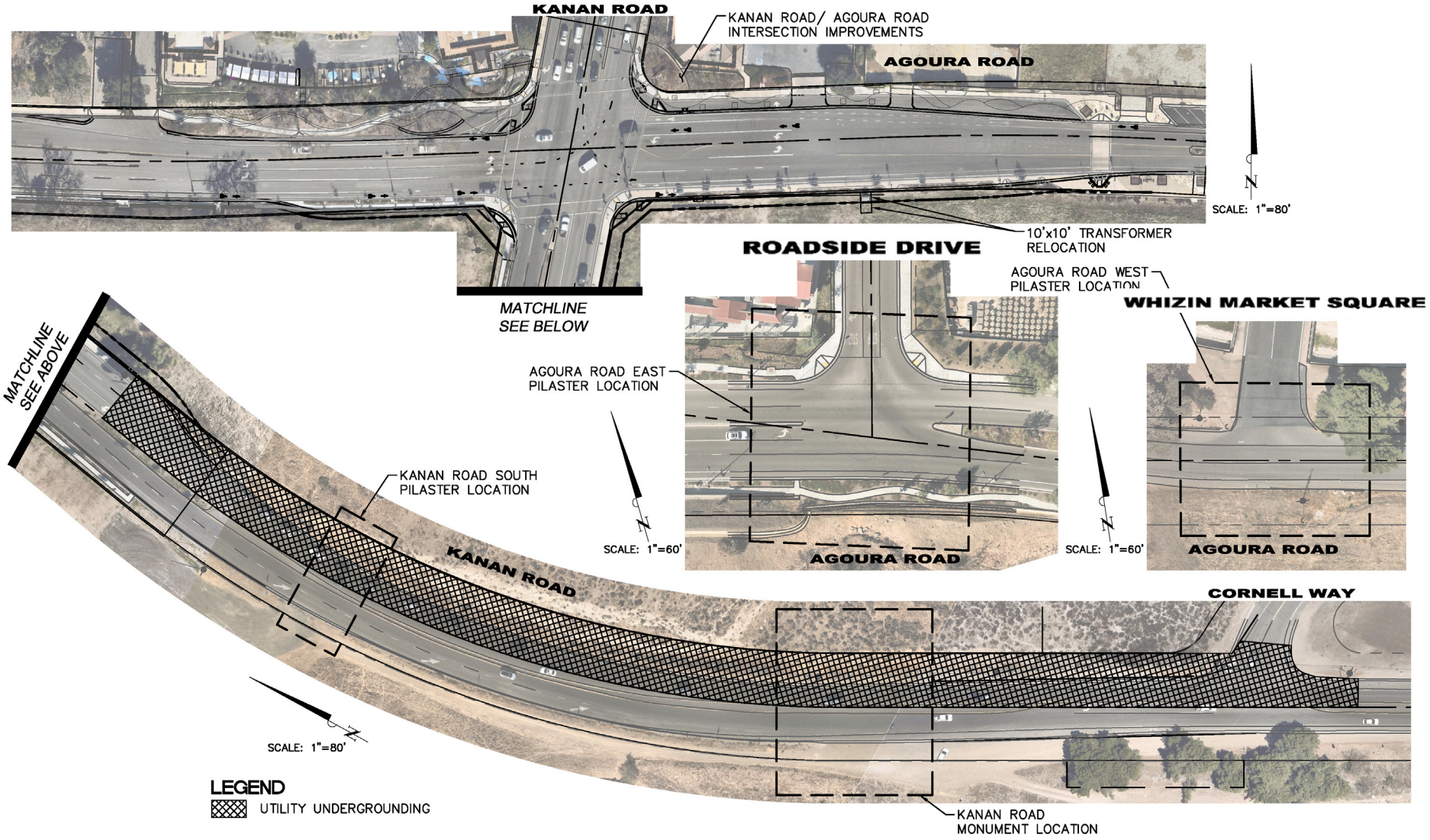

EXHIBIT 4: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION IMPROVEMENTS

Agoura Village Specific Plan Update Project

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2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Intersection Component site is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter.[5] Air quality in this area is determined by natural factors such as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

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

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

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

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

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

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

[5] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by State and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are primary criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 2: Air Contaminants and Associated Public Health Concerns**.

2.2.1 Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e., chronic, carcinogenic or cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Table 2: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Notes:

1. Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, http://www.capcoa.org/health-effects/

2.2.2 Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing ambient air quality levels, historical trends, and projections near the Intersection Component site are documented by measurements made by the South Coast Air Quality Management District (South Coast AQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB are O_3, PM_{10}, and $PM_{2.5}$. The air monitoring station nearest the Intersection Component site that monitors ambient concentrations of these pollutants is the Reseda Monitoring Station (located approximately 16 miles to the northeast). Local air quality data for this Station from 2018 to 2020 are provided in **Table 3: Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS) for each year.

Table 3: Ambient Air Quality Data

Criteria Pollutant	2019	2020	2021
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.122	0.142	0.110
8-hour Maximum Concentration (ppm)	0.094	0.115	0.083
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.070 ppm)	14	33	4
NAAQS 8-hour (>0.070 ppm)	34	62	31
Carbon Monoxide (CO) [1]			
1-hour Maximum Concentration (ppm)	2.56	2.04	2.60
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	0.0644	0.0499	0.0542
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [2]			
National 24-hour Maximum Concentration	127.9	90.5	103.7
State 24-hour Maximum Concentration	124.3	90.1	101.5
State Annual Average Concentration (CAAQS=20 µg/m³)	19.5	—	
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	0	0	0
CAAQS 24-hour (>50 µg/m³)	4	6	3
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	30	73.8	55.5
State 24-hour Maximum Concentration	120.9	80.1	55.5
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m³)	0	3	3

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million.
µg/m³ = micrograms per cubic meter; – = not measured
1. Measurements taken at the Reseda Monitoring Station at 18330 Gault Street, Reseda, CA 91702 (CARB# 70074)
2. Measurements taken at the Simi Valley-Cochran Street Monitoring Station at 5400 Cochran Street, Simi Valley, CA 93063 (CARB# 56434)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. **Table 4: Sensitive Receptors** lists the sensitive receptors nearest the Intersection Component site, which are residential uses. As shown in **Table 4**, the sensitive receptors nearest the Intersection Component site are located approximately 1,800 feet southeast of the proposed construction boundary.

Table 4: Sensitive Receptors

Receptor Description	Distance and Direction from the Intersection Component
Single Family Homes	1,800 feet to the southeast
Source: Google Maps	

3 REGULATORY SETTING

3.1 Federal

3.1.1 Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary NAAQS for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable NAAQS are summarized in **Table 5: State and Federal Ambient Air Quality Standards**.

3.2 State of California

3.2.1 California Air Resources Board

CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 5**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting NAAQS for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State 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 such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable CAAQS are summarized in **Table 5**.

Table 5: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m³)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m³	NA
	Calendar Quarter	NA	1.5 µg/m³
	Rolling 3-Month Average	NA	0.15 µg/m³
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m³)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m³)	NA

Notes:
ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

1. California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m$_3$. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.
4. On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.
5. The national 1-hour O_3 standard was revoked by the EPA on June 15, 2005.
6. In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.
7. The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.
8. On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO_2 NAAQS.
9. In December 2012, EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
10. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
11. National lead standards, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*.

3.2.2 Heavy-Duty and Off-Road Vehicle Idling Emission Reduction

California Code of Regulations (CCR) Title 13 §§ 2485 and 2449 limits diesel-fueled motor vehicle idling to no more than five minutes. Specifically, CCR § 2485 limits idling for diesel-fueled commercial motor vehicles with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed to operate on publicly maintained highways and streets within California. CCR § 2449 limits idling for off-road diesel-fueled fleets.

3.3 Regional

3.3.1 South Coast Air Quality Management District

The South Coast AQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that CAAQS and NAAQS are attained and maintained in the SCAB. The South Coast AQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to South Coast AQMD rules and regulations in effect at the time of construction.

The South Coast AQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the South Coast AQMD Governing Board on March 3, 2017. The purpose of the 2016 AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the South Coast AQMD's commitments towards meeting the NAAQS for 8-hour O_3.

On October 1, 2015, the EPA strengthened the NAAQS for ground-level O_3. The 2022 AQMP, adopted by the South Coast AQMD Governing Board on December 2, 2022, was developed to address the requirements for meeting the 2015 8-hour O_3 standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes various additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other FCAA measures to achieve the 2015 8-hour O_3 standard.

The AQMP incorporates the latest scientific and technological information and planning assumptions, including the *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated state implementation plan for the attainment and maintenance of the NAAQS. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The South Coast AQMD has published the California Environmental Quality Act (CEQA) Air Quality Handbook (approved by the South Coast AQMD Governing Board in 1993 and augmented with guidance

for Local Significance Thresholds [LST] in 2008). The South Coast AQMD guidance helps local government agencies and consultants to develop environmental documents required by CEQA and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The South Coast AQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The State and federal attainment status designations for the SCAB are summarized in **Table 6: South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area for CAAQS for O_3, PM_{10}, and $PM_{2.5}$, as well as NAAQS for 8-hour O_3 and $PM_{2.5}$. The SCAB is designated as attainment or unclassified for the remaining CAAQS and NAAQS.

Table 6: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2021.

The following is a list of South Coast AQMD rules that are required of construction activities associated with the Intersection Component:

- **Rule 402 (Nuisance)** – This rule prohibits the 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. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

3.4 Local

3.4.1 City of Agoura Hills General Plan

The City of Agoura Hills General Plan (General Plan) contains the following goals and policies to improve air quality as part of the Natural Resources Element:

Goal NR-7: Improvement of the City and the region's air quality.

Policy NR-7.18: Regional Cooperation. Cooperate with the South Coast Air Quality Management District (SCAQMD) and the SCAG in their efforts to implement provisions of the region's Air Quality Management Plan.

Policy NR-7.2: Truck Deliveries. Encourage businesses to alter local truck delivery schedules to occur during non-peak hours, as feasible.

Policy NR-7.3: Federal and State Regulations. Comply with and promote state and federal legislation that improves vehicle/transportation technology and cleaner fuels.

Policy NR-7.4: Dust and Particulate Control. Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, parking lots, and building construction.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project would have a significant effect on the environment if it would:

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

4.1.1 South Coast AQMD Thresholds

The significance criteria established by South Coast AQMD may be relied upon to make the above determinations. According to the South Coast AQMD, an air quality impact is considered significant if the Intersection Component would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The South Coast AQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 7: South Coast Air Quality Management District Emissions Thresholds**.

Table 7: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	Maximum Pounds Per Day (lbs/day)	
	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55
Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*.		

4.1.2 Localized Carbon Monoxide

In addition to the daily thresholds listed above, the Intersection Component would also be subject to the CAAQS and NAAQS. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Intersection Component site are above CAAQS and NAAQS for CO (the more stringent CAAQS are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour CAAQS and NAAQS.

4.1.3 Localized Significance Thresholds

In addition to the CO hotspot analysis, the South Coast AQMD developed localized significance thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the South Coast AQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres

or less on a single day. The City of Agoura Hills is located within South Coast AQMD SRA 6 (West San Fernando Valley). **Table 8: Localized Significance Thresholds for Construction/Operations** shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 6 with sensitive receptors located within 25 meters of the project site.

Table 8: Localized Significance Thresholds for Construction/Operations

Project Size	Maximum Pounds Per Day (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
1 Acre	103/103	426/426	4/1	3/1
2 Acres	147/147	644/644	6/2	4/1
5 Acres	221/221	1,158/1,158	11/3	6/2
NO_X = Nitrogen Oxides; CO = Carbon Monoxide; PM_{10} = Particulate Matter 10 microns in diameter or less; $PM_{2.5}$ = Particulate Matter 2.5 microns in diameter or less				
Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology,* July 2008.				

LSTs associated with all acreage categories are provided in **Table 8** for informational purposes. **Table 8** shows that the LSTs increase as acreages increase. It is noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based on the daily acreage disturbed.

4.2 Methodology

This air quality impact analysis considers the Intersection Component's construction and operational impacts. Where criteria air pollutant quantification was required, emissions were modeled using Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model version 9.0.0 (RCEM), which is consistent with the guidance provided by the South Coast AQMD for evaluating construction impacts from roadway projects.[6] RCEM is a land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Intersection Component construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in RCEM.

Due to the nature of the Intersection Component (i.e., intersection improvements) no new or additional operational emissions beyond the Approved Project as analyzed in the Certified PEIR would occur; therefore, operational emissions are not quantified in this technical study.

[6] South Coast Air Quality Management District, Air Quality Modeling, https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Similar to a State implementation Plan described above, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the CAAQS and NAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Intersection Component is located within the SCAB, which is under the jurisdiction of the South Coast AQMD. The South Coast AQMD is required, pursuant to the FCAA, to reduce criteria pollutant emissions for which the SCAB is in nonattainment. To reduce such emissions, the South Coast AQMD adopted the 2016 and 2022 AQMPs (AQMPs). The AQMPs establish a program of rules and regulations directed at reducing air pollutant emissions and achieving CAAQS and NAAQS. The AQMPs are a regional and multi-agency effort including the South Coast AQMD, the CARB, the SCAG, and the EPA. The AQMPs pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Intersection Component is subject to the AQMPs.

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

- **Consistency Criterion No. 1**: The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the South Coast AQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 9: Construction-Related Emissions** below, the Intersection Component construction emissions would not exceed South Coast AQMD thresholds. Therefore, the Intersection Component would not have the potential to violate or contribute to a CAAQS or NAAQS violation. Further, the Intersection Component would not include new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational criteria emissions. The Intersection Component does not propose any buildings and therefore no permanent source or stationary source emissions would result. Therefore, the Intersection Component would not contribute to an existing air quality violation and is consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMPs contains air pollutant reduction strategies based on SCAG's latest growth forecasts, which were defined in consultation with local governments and with reference to local general plans. The General Plan references the AVSP, which analyzes a proposed roundabout at the intersection of Kanan Road and Agoura Road. The Intersection Component would amend the AVSP to replace the roundabout with a widened standard four-leg signalized intersection to accommodate expected traffic flows upon future 2035 buildout of the AVSP. The Intersection Component

includes improvements to the Kanan Road/Agoura Road intersection and roadways. The Intersection Component does not include any improvements that would result in a change to the City's projected population growth forecast and/or induce population growth. Therefore, the Intersection Component would not exceed the population or job growth projections used by the South Coast AQMD to develop the AQMPs. Thus, a less than significant impact would occur, as the Intersection Component is also consistent with the second criterion.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?

Construction Emissions

Intersection Component construction would generate short-term emissions of criteria air pollutants. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the South Coast AQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

Intersection Component construction activities are estimated to be completed within approximately seven months. Construction-generated emissions were calculated using the RCEM computer program, which is designed to model emissions for road construction projects, based on typical construction requirements. See **Appendix A: Air Quality Modeling Data** for more information regarding the construction assumptions used in this analysis. Compliance with South Coast AQMD Rules 402 and 403, which prohibit nuisances, require dust control measures, and limit VOC content in paints, respectively, would further reduce construction-related emissions; however, compliance with Rules 402 and 403 have not been assumed in the analysis. Predicted maximum daily Intersection Component construction-generated emissions are summarized in **Table 9**, which shows that unmitigated construction emissions would not exceed the established South Coast AQMD thresholds for criteria pollutants.

Table 9: Construction-Related Emissions

Construction Year	Maximum Pounds Per Day (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Unmitigated Emissions[1]						
Total Emissions	8.64	90.09	83.95	0.21	4.15	3.45
South Coast AQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
ROG = Reactive Organic Gases; NO_X = Nitrogen Oxides; CO = Carbon Monoxide; SO_2 = Sulfur Dioxide; PM_{10} = Particulate Matter 10 microns in diameter or less; $PM_{2.5}$ = Particulate Matter 2.5 microns in diameter or less						
1. This analysis assumes the use of water trucks to minimize fugitive dust impacts. South Coast AQMD Rules 402 and 403 were not applied. No mitigation was applied to construction equipment.						
Source: RCEM version 9.0.0. Refer to **Appendix A: Air Quality Modeling Data** for model outputs.						

Operational Emissions

The Intersection Component would not include new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational criteria emissions. The Intersection Component does not propose any buildings and therefore no permanent source or stationary source emissions would result. Intersection improvements do not directly generate vehicle trips, a predominant source of air pollutant emissions. Vehicle trips are typically generated by land use changes that may be indirectly influenced by transportation improvements. The Intersection Component would not result in increases in the rate of vehicle trips. Rather, the proposed traffic facility improvements provide improved circulation through an area with existing and forecast traffic congestion and are considered necessary to enhance traffic capacity and improve mobility, safety, and access within the City. In addition, the Intersection Component would reduce idle time of vehicles at the Kanan Road/Agoura Road intersection. The longer a vehicle idles in a single location, the more air pollutant emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling; thus, vehicle idle emissions would decrease as a result of the Intersection Component. Therefore, impacts in this regard would be less than significant.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for CAAQS for O_3, PM_{10}, and $PM_{2.5}$ and nonattainment for NAAQS O_3 and $PM_{2.5}$. Appendix D of the South Coast AQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003)[7] notes that projects that result in emissions that do not exceed the project-specific South Coast AQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in **Table 9**, Intersection Component construction-related emissions by themselves would not exceed the South Coast AQMD significance thresholds for criteria pollutants. Therefore, the Intersection Component would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The South Coast AQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. The analysis assumed one water truck would be utilized during construction to implement frequent water applications. South Coast AQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with South Coast AQMD rules and regulations would further reduce the Intersection Component construction-related impacts. Therefore, Intersection Component-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Intersection Component would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The South Coast AQMD developed the operational thresholds of significance based on the level above which

[7] South Coast Air Quality Management District, *Air Quality Analysis Handbook*, *Cumulative Impacts Emissions Analysis*, https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the South Coast AQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As discussed previously, the Intersection Component's operational emissions would not include permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable criteria emissions from project emissions. As a result, Intersection Component operational emissions would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Additionally, adherence to South Coast AQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. As a result, the Intersection Component would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the Intersection Component would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Construction Localized Significance Analysis

As shown in **Table 4**, the sensitive receptors nearest the Intersection Component site are the single-family residences located approximately 1,800 feet southeast. To identify impacts to sensitive receptors, the South Coast AQMD recommends addressing LSTs for construction.

LSTs were developed in response to South Coast AQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The South Coast AQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific emissions. The South Coast AQMD produced look-up tables for projects that disturb areas less than or equal to five acres in size. The appropriate SRA for the localized significance thresholds is the West San Fernando Valley (SRA 6) since this area includes the Intersection Component site.

The South Coast AQMD's methodology states that "off-site mobile emissions from the Intersection Component should not be included in the emissions compared to LSTs." However, this analysis considers total construction emissions, inclusive of both on-site and off-site construction emissions, to provide a more conservative estimate of potential construction emissions. Since RCEM calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 10: Equipment-Specific Grading Rates**, is used to determine the maximum daily disturbed acreage for comparison to LSTs. Intersection Component construction is anticipated to disturb a maximum of 5 acres in a single day.

Table 10: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Tractors	4	0.5	8	2.0
	Graders	2	0.5	8	1.0
	Dozers	0	0.5	8	0
	Scrapers	2	1	8	2.0
				Total Acres Graded per Day	**5.0**
Source: RCEM version 9.0.0. Refer to **Appendix A: Air Quality Modeling Data** for model outputs.					

The nearest sensitive receptors are the single-family residences located approximately 1,800 feet (549 meters) southeast of the Intersection Component site. Therefore, LSTs for receptors located at 500 meters were utilized in this analysis. **Table 11: Localized Significance of Construction Emissions** presents the results of localized construction emissions and shows that emissions of criteria pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. A less than significant impact would occur in this regard.

Table 11: **Localized Significance of Construction Emissions**

Construction Activity	Maximum Pounds Per Day (lbs/day)			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Grubbing/Land Clearing	9.31	10.05	0.52	0.39
Grading/Excavation	53.42	45.08	2.34	1.95
Drainage/Utilities/Sub-Grade	27.37	28.82	1.30	1.11
Paving	14.00	19.44	0.74	0.66
Maximum[1]	90.09	83.95	4.15	3.45
South Coast AQMD Localized Screening Threshold (5 acres at 500 meters)	*313*	*9,271*	*181*	*96*
Exceed South Coast AQMD Threshold?	**No**	**No**	**No**	**No**
NO_X = Nitrogen Oxides; CO = Carbon Monoxide; PM_{10} = Particulate Matter 10 microns in diameter or less; $PM_{2.5}$ = Particulate Matter 2.5 microns in diameter or less				
1. Maximum emissions account for overlapping construction phases.				
Source: RCEM version 9.0.0. Refer to Appendix A: Air Quality Modeling Data for model outputs.				

Localized Operational Significance Analysis

According to the South Coast AQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Intersection Component is an intersection improvement project and does not include such uses. Thus, no long-term localized significance threshold analysis is needed. No operational LST impacts would result in this regard.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502). The South Coast AQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme O_3 nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds

correlate with the trigger levels for the federal New Source Review (NSR) Program and South Coast AQMD Rule 1303 for new or modified sources. The NSR Program[8] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the South Coast AQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

As previously discussed, localized effects of total Intersection Component emissions on nearby receptors for the Intersection Component would be less than significant (refer to **Table 11**). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable CAAQS or NAAQS. The LSTs were developed by the South Coast AQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The CAAQS and NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations. However, as discussed above, neither the South Coast AQMD nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a project's mass emissions. Information on health impacts related to exposure to O_3 and particulate matter emissions published by the EPA and CARB have been summarized above and discussed in the Regulatory Framework section. Health studies are used by these agencies to set the NAAQS and CAAQS.

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the NAAQS and CAAQS, none of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single project. It should also be noted that this analysis identifies health concerns related to particulate matter, CO, O_3, and NO_2. **Table 2** includes a list of criteria pollutants and summarizes common sources and effects. Thus, this analysis is reasonable and intended to foster informed decision making. shown above, Intersection Component-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the Intersection Component would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

[8] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

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

Construction-Related Diesel Particulate Matter

Intersection Component construction would result in the generation of DPM emissions from the use of required off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the Intersection Component site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time which would limit the exposure of any proximate individual sensitive receptor to TACs.

Additionally, construction is subject to and would comply with California regulations (e.g., CCR Title 13 §§ 2485 and 2449), which reduce DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the Intersection Component site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM of any one receptor is exposed to would be limited. Therefore, considering the relatively short duration of DPM-emitting construction activity at any one location, and the highly dispersive properties of DPM, sensitive receptors would not be exposed to substantial concentrations of construction-related TAC emissions. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. Given the nature and duration of construction-related odors, the Intersection Component would result in a less than significant impact concerning the creation of objectionable odors during construction.

The South Coast AQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project involves intersection improvements and would not include any of the land uses that have been identified by the South Coast AQMD as odor sources. Therefore, no impact concerning the creation of objectionable odors during operations would occur.

Mitigation Measures: No mitigation is required**.**

Level of Significance: Less Than Significant.

6 REFERENCES

1. California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, 2018.
2. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2019 to 2021*, 2023.
3. California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.
4. City of Agoura Hills, *Agoura Village Specific Plan: Updated Final Revised and Recirculated Environmental Impact Report*, August 2008.
5. City of Agoura Hills, *General Plan*, 2004.
6. South Coast Air Quality Management District, *2016 Air Quality Management Plan,* March 2017.
7. South Coast Air Quality Management District, *2022 Air Quality Management Plan, January 2023*.
8. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.
9. South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, 2009.
10. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2019.

Appendix A

Air Quality Modeling Data

Road Construction Emissions Model **Version 9.0.0**
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Kanan Agoura Intersection	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type	2	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	7.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.52	miles
Total Project Area	2.74	acres
Maximum Area Disturbed/Day	0.01	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	60.58	70.23
	Drainage/Utilities/Sub-Grade	20.00	0.00	3.56
	Paving	20.00	0.00	0.00
Asphalt	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	0.00	297.93
	Drainage/Utilities/Sub-Grade	20.00	0.00	0.00
	Paving	20.00	0.00	0.00

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	3.00	0.70	7/1/2023	1/1/2023
Grading/Excavation	1.00	2.80	8/1/2023	4/3/2023
Drainage/Utilities/Sub-Grade	5.00	2.45	9/1/2023	5/4/2023
Paving	2.10	1.05	11/1/2023	10/4/2023
Totals (Months)	11			

Please note: You have entered a different number of months than the project length shown in cell D16.
Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		7	210.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		1	30.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.01	0.19	1.45	0.05	0.02	0.01	793.99	0.00	0.12	831.20
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	8.73	0.00	0.00	9.14
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.03	0.21	0.01	0.00	0.00	113.14	0.00	0.02	118.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	6.22	0.00	0.00	6.51
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	14.96	0.00	0.00	15.66

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		15	450.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.03	0.40	3.11	0.11	0.05	0.02	1,701.41	0.00	0.27	1,781.14
Tons per const. Period - Grading/Excavation	0.00	0.00	0.03	0.00	0.00	0.00	18.72	0.00	0.00	19.59
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	18.72	0.00	0.00	19.59

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip		20		
One-way trips/day		2	Calculated Daily Trips	Calculated Daily VMT
No. of employees: Grubbing/Land Clearing		7	14	280.00
No. of employees: Grading/Excavation		22	44	880.00
No. of employees: Drainage/Utilities/Sub-Grade		15	30	600.00
No. of employees: Paving		12	24	480.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.90	0.07	0.05	0.02	0.00	315.42	0.00	0.01	317.41
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	316.99	0.00	0.01	319.01
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.03	2.73	0.29	0.00	0.00	0.00	67.79	0.07	0.03	78.91
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.12	0.07	0.03	79.33
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.04	0.65	0.05	0.03	0.01	0.00	198.20	0.00	0.00	199.79
Tons per const. Period - Grubbing/Land Clearing	0.00	0.02	0.00	0.00	0.00	0.00	6.54	0.00	0.00	6.59
Pounds per day - Grading/Excavation	0.13	2.04	0.17	0.09	0.04	0.01	622.90	0.01	0.02	627.92
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	0.00	6.85	0.00	0.00	6.91
Pounds per day - Drainage/Utilities/Sub-Grade	0.09	1.37	0.11	0.06	0.03	0.00	421.71	0.01	0.01	425.07
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.08	0.01	0.00	0.00	0.00	23.19	0.00	0.00	23.38
Pounds per day - Paving	0.07	1.11	0.09	0.05	0.02	0.00	339.05	0.01	0.01	341.78
Tons per const. Period - Paving	0.00	0.03	0.00	0.00	0.00	0.00	7.83	0.00	0.00	7.90
Total tons per construction project	0.01	0.14	0.01	0.01	0.00	0.00	44.42	0.00	0.00	44.77

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.31	0.01	0.00	0.00	151.24	0.00	0.02	158.32
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.01	0.00	0.00	0.00	4.99	0.00	0.00	5.22
Pounds per day - Grading/Excavation	0.00	0.04	0.31	0.01	0.00	0.00	151.24	0.00	0.02	158.32
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.66	0.00	0.00	1.74
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.31	0.01	0.00	0.00	150.85	0.00	0.02	157.92
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.02	0.00	0.00	0.00	8.30	0.00	0.00	8.69
Pounds per day - Paving	0.00	0.04	0.31	0.01	0.00	0.00	151.12	0.00	0.02	158.20
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	3.49	0.00	0.00	3.65
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	18.44	0.00	0.00	19.31

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.01	0.10	0.00	0.02	0.00
Fugitive Dust - Grading/Excavation		0.01	0.10	0.00	0.02	0.00
Fugitive Dust - Drainage/Utilities/Subgrade		0.01	0.10	0.01	0.02	0.00

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Excavators	0.38	6.52	3.10	0.15	0.14	0.01	1,000.21	0.32	0.01	1,010.99
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles		Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
					pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing		pounds per day		0.94	9.36	8.94	0.38	0.35	0.02	1,857.11	0.58	0.02	1,876.57
	Grubbing/Land Clearing		tons per phase		0.03	0.31	0.30	0.01	0.01	0.00	61.28	0.02	0.00	61.93

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.57	9.77	4.65	0.23	0.21	0.02	1,500.32	0.49	0.01	1,516.49
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Graders	0.77	3.39	9.31	0.30	0.28	0.01	1,281.71	0.41	0.01	1,295.52
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.31	3.70	3.22	0.18	0.16	0.01	508.22	0.16	0.00	513.69
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.27	1.51	2.65	0.09	0.08	0.01	605.56	0.20	0.01	612.10
	2		Model Default Tier	Scrapers	1.57	12.27	16.57	0.65	0.60	0.03	2,940.26	0.95	0.03	2,971.94
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Tractors/Loaders/Backhoes	0.61	8.93	6.14	0.30	0.28	0.01	1,206.31	0.39	0.01	1,219.29
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Grading/Excavation	pounds per day	4.65	42.42	48.38	1.97	1.82	0.09	8,899.27	2.86	0.08	8,994.61
	Grading/Excavation	tons per phase	0.05	0.47	0.53	0.02	0.02	0.00	97.89	0.03	0.00	98.94

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.25	2.41	1.71	0.09	0.09	0.00	375.26	0.02	0.00	376.66
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.30	3.67	2.68	0.12	0.12	0.01	623.04	0.03	0.00	625.11
	1		Model Default Tier	Graders	0.38	1.69	4.55	0.15	0.14	0.01	640.78	0.21	0.01	647.69
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.32	3.72	2.72	0.13	0.13	0.01	623.04	0.03	0.00	625.14
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.11	2.29	1.39	0.04	0.04	0.00	333.79	0.11	0.00	337.39
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Scrapers	0.78	6.10	8.16	0.32	0.30	0.02	1,469.92	0.48	0.01	1,485.76
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.45	6.70	4.55	0.22	0.20	0.01	904.85	0.29	0.01	914.58
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		pounds per day		2.75	27.39	26.74	1.12	1.06	0.05	5,103.78	1.17	0.04	5,146.10
Drainage/Utilities/Sub-Grade		tons per phase		0.15	1.51	1.47	0.06	0.06	0.00	280.71	0.06	0.00	283.04

Paving	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.19	2.88	1.87	0.09	0.08	0.00	455.21	0.15	0.00	460.12
	1		Model Default Tier	Paving Equipment	0.17	2.56	1.60	0.08	0.07	0.00	394.47	0.13	0.00	398.72
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.00	2		Model Default Tier	Rollers	0.46	5.56	4.81	0.26	0.24	0.01	762.33	0.25	0.01	770.54
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.45	6.69	4.59	0.23	0.21	0.01	904.76	0.29	0.01	914.50
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment — If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Paving	pounds per day	1.39	18.29	13.60	0.68	0.63	0.03	2,615.40	0.82	0.02	2,643.02
	Paving	tons per phase	0.03	0.42	0.31	0.02	0.01	0.00	60.42	0.02	0.00	61.05
Total Emissions all Phases (tons per construction period) =>			0.27	2.70	2.61	0.11	0.10	0.01	500.30	0.13	0.00	504.96

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Kanan Agoura Intersection				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	0.98	10.05	9.31	0.52	0.42	0.10	0.39	0.37	0.02	0.02	2,206.54	0.58	0.05	2,234.69
Grading/Excavation	4.82	45.08	53.42	2.34	2.24	0.10	1.95	1.93	0.02	0.12	12,168.81	2.87	0.51	12,393.19
Drainage/Utilities/Sub-Grade	2.84	28.82	27.37	1.30	1.20	0.10	1.11	1.09	0.02	0.06	5,789.48	1.18	0.10	5,847.54
Paving	1.46	19.44	14.00	0.74	0.74	0.00	0.66	0.66	0.00	0.03	3,105.58	0.83	0.06	3,143.00
Maximum (pounds/day)	8.64	83.95	90.09	4.15	3.85	0.30	3.45	3.39	0.06	0.21	20,164.84	4.64	0.65	20,475.41
Total (tons/construction project)	0.28	2.86	2.72	0.13	0.12	0.01	0.11	0.11	0.00	0.01	596.83	0.14	0.01	604.29

Notes:

Project Start Year ->	2023
Project Length (months) ->	7
Total Project Area (acres) ->	3
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	131	298	210	450	880	40
Drainage/Utilities/Sub-Grade	4	0	30	0	600	40
Paving	0	0	0	0	480	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Kanan Agoura Intersection				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	**ROG (tons/phase)**	**CO (tons/phase)**	**NOx (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**SOx (tons/phase)**	**CO2 (tons/phase)**	**CH4 (tons/phase)**	**N2O (tons/phase)**	**CO2e (MT/phase)**
Grubbing/Land Clearing	0.03	0.33	0.31	0.02	0.01	0.00	0.01	0.01	0.00	0.00	72.82	0.02	0.00	66.90
Grading/Excavation	0.05	0.50	0.59	0.03	0.02	0.00	0.02	0.02	0.00	0.00	133.86	0.03	0.01	123.67
Drainage/Utilities/Sub-Grade	0.16	1.59	1.51	0.07	0.07	0.01	0.06	0.06	0.00	0.00	318.42	0.07	0.01	291.77
Paving	0.03	0.45	0.32	0.02	0.02	0.00	0.02	0.02	0.00	0.00	71.74	0.02	0.00	65.87
Maximum (tons/phase)	0.16	1.59	1.51	0.07	0.07	0.01	0.06	0.06	0.00	0.00	318.42	0.07	0.01	291.77
Total (tons/construction project)	0.28	2.86	2.72	0.13	0.12	0.01	0.11	0.11	0.00	0.01	596.83	0.14	0.01	548.21

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Appendix 4.4-1

Biological and Aquatic Resources Assessment Memo

Kimley»Horn

MEMORANDUM

To: Ms. Jessie Fan, Kimley-Horn

From: Mr. Keoni Calantas, Rocks Biological Consulting

Date: February 1, 2022

Subject: Kanan Road/Agoura Road Ultimate Intersection Improvements Project – Biological and Aquatic Resources Assessment Memo

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This memorandum provides a high-level summary of the biological and aquatic resources assessment conducted by Rocks Biological Consulting (RBC) for the proposed Kanan Road/Agoura Road Ultimate Intersection Improvements Project (project). This memorandum also discusses the potential impacts that may result from the proposed project as well as mitigation considerations based on the results of the literature review and field survey.

Exact locations of the project components (e.g., monument signage and pilasters) and impact footprint within the project site have not been established at this time, therefore, discussions of potential impacts on biological and aquatic resources are intended to be general. Impact quantification and conclusive determinations of the significance of potential impacts are not provided within this memorandum.

1 INTRODUCTION

1.1 PROJECT LOCATION

The project site is in the City of Agoura Hills (City), which is located along the U.S. Route 101 (Highway 101) in the County of Los Angeles, California. Figure 1 depicts the project site in a regional context. The project site is generally comprised of three discontiguous areas (Figures 2a-2c):

- Kanan Road/Agoura Road intersection - this comprises most of the project site, with the south leg extending to Cornell Way
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed eastern pilasters location
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed western pilasters location

The Kanan Road/Agoura Road intersection is in the City's southern portion, approximately 600 feet south of the Kanan Road/Highway 101 interchange. The project site is within the Agoura Village

Specific Plan (AVSP) area, except the proposed western pilasters location, which is at the intersection of Agoura Road and Roadside Drive adjacent and west of the AVSP area.

1.2 PROJECT DESCRIPTION

The project proposes improvements to enhance traffic capacity and improve mobility, safety, and access within the City including widening the intersection of Kanan Road and Agoura Road, providing pilasters and monument signs, and undergrounding overhead power/telecommunication lines as described below.

1.2.1 INTERSECTION AND ROADWAY IMPROVEMENTS

Modified road alignments, including elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional queuing capacity at all intersection approaches. The through lanes would vary between 10 and 13 feet wide. The proposed widened pavement improvements would generally match the existing Kanan Road and Agoura Road pavement structural sections. Various additional improvements are proposed such as new pedestrian curb ramps, relocation of traffic signals, landscaping, asphalt replacement, road striping, and a terraced plaza at the northwest corner of Kanan Road and Agoura Road. Additionally, a stairway to connect the westbound sidewalk to the Agoura Pointe Shopping Center parking lot is proposed approximately 190 feet west of the Kanan Road/Agoura Road intersection. It should be noted that the stairway would terminate in the parking lot. The landing zone would be located between a newly proposed landscaped buffer on the west and an existing island with an oak tree on the east. The oak tree would not be impacted by the development of this landing zone and stairway.

1.2.2 MONUMENT SIGNAGE IMPROVEMENTS

The project includes entryway and statement signage on Kanan Road and Agoura Road. The sign improvements are comprised of pilasters and monument signs. In total, six pilasters are proposed, as described below. The pilasters would be up to approximately 10 feet tall, and up to approximately 10 feet wide by 10 feet long. A 15-foot landscaped buffer would be provided surrounding the base of the pilasters. Thus, the total base footprint of the pilasters with the landscaped buffer would be approximately 1,600 square feet each. The monuments would be up to approximately 15 feet tall, and up to approximately 24 feet wide by 24 feet long. A 5-foot landscaped buffer would be provided surrounding the base of the monuments. Thus, the total base footprint of the monuments with the landscaped buffer would be approximately 1,156 square feet each. The structures will be placed as follows:

- Agoura Road East and West Pilasters: four pilasters are proposed on Agoura Road at the two locations (two pilasters for each location, offset from each other on either side of the road).
- Kanan Road South Pilasters: two pilasters are proposed on Kanan Road (two pilasters for this location, offset from each other on either side of the road)
- Kanan Road Monuments: two monuments are proposed on Kanan Road at this location, near the Kanan Road/Cornell Road intersection.

1.2.3 UNDERGROUND UTILITY IMPROVEMENTS

The project proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way.

Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations will be determined during final engineering design.

2 METHODS

2.1 LITERATURE REVIEW

2.1.1 BIOLOGICAL RESOURCES

The review of background information for biological resources included documented observations of special-status plant and wildlife species, natural communities, and habitats of concern in California with the potential to occur within the project site. This review included the following:

- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database[1]
- California Natural Diversity Database (CNDDB)[2] (Figure 3a)
- USFWS Listed Species Database (Figure 3b)
- The California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California Electronic Inventory[3]
- County and City ordinances, codes, and available general plans to identify requirements for protected trees[4]

2.1.2 WATERS AND WETLANDS

RBC reviewed the United States Geological Survey (USGS) National Hydrography Dataset (NHD)[5] and the USFWS National Wetland Inventory (NWI)[6] for areas within the project site that may be potentially jurisdictional under the United States Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-

[1] IPaC: Information for Planning and Consulting, Powered by ECOS – the Environmental Conservation Online System. Website https://ecos.fws.gov/ipac/ (accessed May 23, 2021).

[2] California Department of Fish and Wildlife (CDFW). 2021. Special Animals, August 2021. California Natural Diversity Data Base (CNDDB).

[3] California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Accessed January 18, 2021. http://www.rareplants.cnps.org

[4] Agoura Hills Code of Ordinances. 2021. Oak Tree Preservation Guidelines. https://library.municode.com/ca/agoura_hills/codes/code_of_ordinances?nodeId=ARTIXZO_APXAOATRPRGU

[5] 2021. The National Map, Advanced Viewer. U.S. Department of Interior. Last accessed June 2021. https://viewer.nationalmap.gov/advanced-viewer/

[6] 2021. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Last accessed June 2021. http://www.fws.gov/wetlands/

Cologne), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code.

2.2 FIELD SURVEY

On June 30, 2021, RBC Senior Biologist Ian Hirschler and Regulatory Specialist Chelsea Polevy conducted a field survey that included vegetation mapping, a general biological survey, habitat assessments for special-status species, and a constraints-level wetland/non-wetland waters jurisdictional assessment for the project site. On January 18, 2022, RBC Senior Regulatory Specialist/Biologist Sarah Krejca conducted an additional field survey that included vegetation mapping, oak tree mapping, and a constraints-level wetland/non-wetland waters jurisdictional assessment for additional areas not previously surveyed within the project site, per the updated site plan (provided to RBC via email on December 13 and 15, 2021). Focused or protocol surveys for special-status species were not conducted during either survey.

Vegetation was mapped to determine the type and condition of habitats/land uses that occur within the project site. Habitats were classified based on the dominant and characteristic plant species in accordance with vegetation community classifications outlined in *A Manual of California Vegetation*[7] and *Preliminary Descriptions of the Terrestrial Natural Communities of California*[8].

The project site was assessed for potentially jurisdictional Corps, RWQCB, and CDFW aquatic resources. Areas with depressions, drainage patterns, wetland vegetation, or riparian vegetation within the project site were assessed for potential jurisdictional status, with focus on the presence of defined channels, soils, and hydrology. A formal jurisdictional aquatic resources delineation was not conducted during the survey.

3 RESULTS

The following includes a summary of the biological resources and potential aquatic resources within the project site based on the results of the preliminary literature review, constraints-level aquatic resources assessment, vegetation mapping, general biological survey, and special-status species habitat assessments.

Please note that the findings outlined in this memo regarding aquatic and biological resources are based on the currently applicable agency regulations and guidance. Determinations outlined in this section are subject to change given the uncertainty of future regulatory changes.

3.1 VEGETATION COMMUNITIES

The project site ranges in elevation between 845 to 900 feet above mean sea level (amsl). The majority of the vegetation in the project site consists of developed land including ornamental vegetation (Figures 2a-2c). The project site also supports California buckwheat (*Eriogonum fasciculatum*) scrub, California buckwheat scrub – disturbed, non-native grassland, and disturbed

[7] Sawyer, John O., et al. 2009. The Manual of California Vegetation. Second edition, California Native Plant Society Press.

[8] Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Department of Fish and Game.

habitat. Table 1 below provides the acreages of the vegetation communities and land cover types within the project site.

Table 1. Summary of Vegetation/Land Covers within the Project Site

Vegetation/Land Cover	Project Site (acres)
California Buckwheat Scrub	0.02
California Buckwheat Scrub – Disturbed	0.39
Non-native Grassland	0.06
Developed	5.43
Disturbed Habitat	1.30
Total	**7.20**

Native and naturalized vegetation including California buckwheat scrub, California buckwheat scrub – disturbed, and non-native grassland occur in the areas adjacent to Kanan Road where the utility improvements are proposed (Figure 2b). Disturbed habitat, which is dominated by non-native grass species such as *Bromus sp.* and receives frequent direct and indirect disturbance from traffic and other human-related activities, occurs along the sides of Kanan Road and Agoura Road as well as the roadsides for the Whizin Road and Roadside Road portions of the project site (Figures 2a-2c). Non-native grassland occurs in the areas located farther from frequent traffic and other human-related disturbance. Developed habitat within the project occurs as landscaped roadsides and medians as well as paved surfaces and other human structures.

3.2 SPECIAL-STATUS SPECIES

No federally or state-listed as threatened or endangered plants were observed within the project site during the field survey. Four federally or state-listed as threatened or endangered plants have been documented within three miles of the project site: Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*; federally threatened [FT]), Braunton's milk-vetch (*Astragalus brauntonii*; federally endangered [FE]), California Orcutt grass (*Orcuttia californica*; FE), and Lyon's pentachaeta (*Pentachaeta lyonia*; FE and state-endangered) (Figure 3b). Due to the lack of suitable habitat and disturbed nature of the project site, no federally or state-listed plant species have moderate or high potential to occur, although Agoura Hills dudleya and Braunton's milk-vetch have low potential to occur (Table 2). The project site does not occur within any USFWS Critical Habitat for listed plant species.

No other special-status plant species were observed during the field survey. Five additional plant species with a California Rare Plant Rank (CRPR) were listed on CNDDB within three miles of the project site and include: chaparral nolina (*Nolina cismontana*; CRPR 1B.2), mesa horkelia (*Horkelia cuneata* var. *puberula*; CRPR 1B.1), Ojai navarretia (*Navarretia ojaiensis*; CRPR 1B.1), Santa Susana tarplant (*Deinandra minthornii*; CRPR 1B.2), and slender mariposa-lily (*Calochortus clavatus* var. *gracilis*; CRPR 1B.2) (Figure 3a). Due to lack of suitable habitat, no plant species with a CRPR rank have moderate or high potential to occur within the project site. The potential for

special-status plant species to occur is based on habitat suitability and documented occurrences (e.g., CNDDB and USFWS records) and is presented in Table 2.

Additionally, oak trees (*Quercus* sp.), which are protected under City Municipal Code Division 7 Section 9657, have been documented within the project site and are discussed below in Section 3.5 (Figures 2a-2c).

Table 2. Special-Status Plant Species with Potential to Occur within the Project Site

Common Name	Status	Habitat	Potential to Occur
Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*)	FT, CRPR 1B.2	Perennial herb. Blooms May-July. Coastal sage scrub, chaparral, yellow pine forest, northern oak woodland, foothill woodland.	Low. Very little suitable habitat is present.
Braunton's milk-vetch (*Astragalus brauntonii*)	FE, CRPR 1B.1	Perennial herb. Blooms January-September. Coastal sage scrub, closed-cone pine forest, chaparral, valley grassland.	Low. Very little suitable habitat is present.
California Orcutt grass (*Orcuttia californica*)	FE, SE, CRPR 1B.1	Annual grasslike herb. Blooms April-September. Freshwater wetlands and valley grasslands.	None. No suitable habitat present.
Chaparral nolina (*Nolina cismontana*)	CRPR 1B.2	Shrub. Blooms May-July	None. This species would have been observed if present.
Lyon's pentachaeta (*Pentachaeta lyonii*)	FE, SE, CRPR 1B.1	Annual herb. Blooms March-September. Chaparral and valley grassland.	None. No suitable habitat is present.
Mesa horkelia (*Horkelia cuneata* var. *puberula*)	CRPR 1B.1	Perennial herb. Blooms February-August. Coastal strand, northern coastal scrub, coastal sage scrub, closed-cone pine forest, foothill woodland, chaparral.	Low. Very little suitable habitat is present.
Ojai navarretia (*Navarretia ojaiensis*)	CRPR 1B.1	Annual herb. Blooms May-July.	None. Suitable habitat not present.
Santa Susana tarplant (*Deinandra minthornii*)	CRPR 1B.2	Shrub. Blooms July-December. Coastal sage scrub and chaparral.	Low. Very little suitable habitat is present.
Slender mariposa-lily (*Calochortus clavatus* var. *gracilis*)	CRPR 1B.2	Perennial herb. Blooms March-July. Chaparral.	None. No suitable habitat is present.

FE = Federally Endangered
FT = Federally Threatened
SE = State-Listed as Endangered
ST = State-Listed as Threatened
CRPR = California Rare Plant Rank

No special-status wildlife species were observed within project site during the survey, and none have moderate or high potential to occur. Coast whiptail (*Aspidoscelis tigris stejnegeri*; a California Species of Special Concern [SSC]) and coastal California gnatcatcher (*Polioptila californica californica;* FT and SSC) have low potential to occur within the project site. The potential for special-status wildlife species to occur within the project site is based on habitat suitability and documented occurrences (e.g., CNDDB and USFWS records) and is presented in Table 3.

Table 3. Special-Status Wildlife Species with Potential to Occur within the Project Site

Common Name	Status	Habitat	Potential to Occur
Invertebrates			
Crotch bumble bee (*Bombus crotchii*)	SE (candidate)	Arid shrublands and grasslands in coastal and foothill areas of southern California. Nectar plants include milkweeds, buckwheat, and lupines.	None. Site is highly disturbed with a lack of appropriate nectar sources.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE	Vernal pools or other seasonal pools with a depth greater than 30 cm.	None. No suitable ponding features present.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Natural vernal pools or other seasonal pools.	None. No suitable ponding features present.
Reptiles and Amphibians			
California red-legged frog (*Rana draytonii*)	FT, SSC	Found mainly near water sources in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover.	None. No suitable aquatic features present.
Coast whiptail (*Aspidoscelis tigris stejnegeri*)	SSC	Inhabits hot and dry open areas with sparse foliage.	Low. Minimal suitable habitat present.
Southern California legless lizard (*Anniella stebbinsi*)	SSC	A variety of habitats including scrublands, woodlands, and sandy washes. This species requires moisture near the ground surface and is often found under plant litter or debris.	None. No suitable habitat present.
Western pond turtle (*Actinemys marmorata*)	SSC	Found in ponds, lakes, rivers, creeks, and marshes with abundant vegetation.	None. No suitable aquatic features present.
Birds			

American peregrine falcon (*Falco peregrinus anatum*)	FP (nesting)	Breeds in open landscapes with cliffs or skyscrapers for nest sites. Found along coastlines, lake edges, and mountain chains.	None. No suitable nesting habitat present.
Golden eagle (*Aquila chrysaetos*)	FP, WL (nesting and wintering)	Found in arid scrublands and grasslands. Requires cliffs to nest.	None. No suitable nesting habitat present.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT, SSC	Found in coastal sage scrub, usually at elevations less than 1,600 feet. However, can be observed at high elevation at inland scrub sites.	Low. Marginal habitat present.
Least Bell's vireo (*Vireo bellii pusillus*)	FE, SE	Riparian woodland with understory of dense young willows or mulefat and willow canopy. Nests often placed along internal or external edges of riparian thickets.	None. No suitable habitat present.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, SE	Breeds exclusively in riparian habitats, typically in dense riparian vegetation with surface water present.	None. No suitable habitat present.
Mammals			
Western red bat (*Lasiurus blossevilli*)	SSC	Roosts in tree foliage and commonly associated with cottonwoods in riparian areas at elevations below 6,500 ft.	None. No suitable habitat present.
Western mastiff bat (*Eumops perotis californicus*)	SSC	Chaparral, live oaks, and arid, rocky regions. Requires downward opening crevices.	None. No suitable habitat present.
FE = Federally Endangered FT = Federally Threatened SE = State-Listed as Endangered ST = State-Listed as Threatened FP = State Fully Protected Species SSC = State Species of Special Concern WL = State Watch List Species			

The project site does not occur within any USFWS Critical Habitat for listed wildlife species.

3.3 AQUATIC RESOURCES

As discussed in Section 2 (Methods), RBC performed a constraints-level assessment of the project site for potentially Corps-, RWQCB-, and CDFW-jurisdictional aquatic resources. Based on the assessment, the potentially jurisdictional aquatic resources documented within the project site consist of three concrete ditches and one earthen aquatic resource/drainage, as shown on Figures 2a-2c and discussed below.

Two concrete ditches and one earthen aquatic resource/drainage occur within the southern segment of the Roadside portion of the project site, south of Agoura Road (Figure 2a). The northern concrete ditch originates west of the Roadside portion of the project site, travels east into the project site, then outlets into a small culvert/storm drain under a sidewalk. The southern concrete ditch also originates west of the Roadside portion of the project site. Once entering the project site, the southern concrete ditch travels east, then gradually turns north before continuing east and exiting the eastern boundary of the Roadside portion of the project site.

The earthen aquatic resource/drainage originates southwest of the Roadside portion of the project site and briefly enters and exits the project site along the southern boundary. The earthen aquatic resource/drainage occurs within an area mapped as disturbed habitat with some valley oak (*Quercus lobata*). Based on field observations, flows from the southern concrete ditch and the earthen aquatic resource/drainage eventually outlet into a culvert located east of the project site. No standing water was observed in the two concrete ditches or one earthen drainage.

A concrete ditch occurs along the southern portion of Agoura Road, west of Kanan Road (Figure 2b). The ditch originates on site, briefly travels northwest, then continues west before terminating on site at a small culvert/storm drain under a sidewalk. No standing water was observed in the concrete ditch.

Based on the lack of hydrophytic vegetation and wetland hydrology indicators in the concrete ditches, these features are not anticipated to meet the appropriate wetland parameters to qualify as wetland waters of the U.S./State per the Corps and the RWQCB or associated wetland potentially jurisdictional by the CDFW. The concrete ditches would also not qualify as non-wetland waters of the U.S. per the Corps as the concrete ditches appeared to be excavated in uplands (i.e., did not relocate natural drainages or excavated tributaries) based on the field assessment and an initial review of Google Earth Pro[9] and NetrOnline Historic Aerials[10] aerial imagery. Specifically, the concrete ditches appear to have been constructed on site between May 2015 and October 2016 to manage stormwater runoff from the surrounding developed/paved areas.[11] There were no natural features within this area at least as far back as 1947 (i.e., the earliest aerial image reviewed).[12] Thus, based on the current pre-2015 definition of "waters of the U.S.," which was further defined by the 2001 *Solid Waste Agency of Northern Cook County* (SWANCC) decision and the 2006 *Rapanos* decisions, the concrete ditches should be considered ditches "excavated wholly in and draining only uplands" that do "not carry a relatively permanent flow of water."[13]

The concrete ditches would also likely not qualify as streambed jurisdictional per the CDFW, as the artificially constructed concrete ditches did not replace a natural feature(s)/streambed, lacked

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[9] Google Earth Pro V 7.3.4.8248. 2021. Agoura Hills, California. 34°08'36.92"N, 118°45'55.42"W. Eye alt 1602 feet. Image Google. Last accessed January 2022.

[10] NetrOnline. 2022. Historic Aerials (1947 – 2018). Last accessed January 2022. https://www.historicaerials.com/

[11] Google Earth Pro V 7.3.4.8248. 2021. Agoura Hills, California. 34°08'36.92"N, 118°45'55.42"W. Eye alt 1602 feet. Image Google. Last accessed January 2022.

[12] NetrOnline. 2022. Historic Aerials (1947 – 2018). Last accessed January 2022. https://www.historicaerials.com/

[13] U.S. Environmental Protection Agency (U.S. EPA). 2008. Clean Water Act Jurisdiction Following the Supreme Court's Decision in Rapanos v. United States and Carabell v. United States. December 2.

association with a natural feature(s)/streambed, and did not support wildlife habitat; furthermore, the concrete ditches should also not qualify as surface waters/non-wetland waters of the State jurisdictional by the RWQCB under the Porter-Cologne. The concrete ditches were artificially created to channelize sheet flows off adjacent hillsides and provide no aquatic resource functions other than flow conveyance; additionally, the concrete ditches do not provide/have no impact on potential downstream beneficial uses.

Based on the lack of hydrophytic vegetation observed within the earthen aquatic resource/drainage within the Roadside portion of the project site during the initial assessments, this feature is not anticipated to meet the appropriate wetland parameters to qualify as a wetland waters of the U.S./State per the Corps and the RWQCB, respectively, or associated wetland jurisdictional by the CDFW; however, RBC anticipates a formal aquatic resources delineation would find that this resource qualifies as a non-wetland waters of the U.S./State jurisdictional by the Corps and RWQCB, respectively, and streambed jurisdictional by the CDFW (Figure 2a).

Section 10 navigable waters of the U.S. did not occur within the project site based on field observations.

Because project improvements are proposed in or near the mapped potentially jurisdictional aquatic resources as seen in Figures 2a – 2b, a formal, project-specific aquatic resources delineation and reporting per Corps, RWQCB, and CDFW standards and guidelines and further coordination with the Corps, RWQCB, and CDFW would be required to receive a determination from the regulatory agencies of their concurrence with the findings related to potential aquatic resources on site. Jurisdictional determinations should be made per the latest applicable regulatory requirements and/or guidance.

3.3 WILDLIFE CORRIDORS

A wildlife corridor can be defined as a physical feature that links wildlife habitat, often consisting of native vegetation that joins two or more larger areas of similar wildlife habitat. Corridors enable migration, colonization, and genetic diversity through interbreeding and are therefore critical for the movement of animals and the continuation of viable populations. Corridors can consist of large, linear stretches of connected habitat (such as riparian vegetation) or as a sequence of stepping-stones across the landscape (discontinuous areas of habitat such as wetlands and ornamental vegetation), or corridors can be larger habitat areas with known or likely importance to local fauna.

The project site does not occur within a wildlife corridor. The project site occurs along existing roads and adjacent to existing development within the City.

3.4 LOCAL ORDINANCE – CITY OF AGOURA HILLS OAK TREE PRESERVATION GUIDELINES

The City Municipal Code Article IX Chapter 6 Part 2 Division 7 Section 9657 Oak Tree Preservation Guidelines (Guidelines) provide regulatory measures to protect and preserve oak trees in recognition of their historical, aesthetic and environmental value to the City, including valley oak, coast live oak (*Quercus agrifolia*), Nuttall's scrub oak (*Q. dumosa*), and scrub oak (*Q. berberidifolia*).

The Guidelines require preservation of all healthy oak trees within all public or private land located within the incorporated areas of the City and prohibits the removal, cutting, pruning, and/or encroachment into protected zone of an oak tree without a valid oak tree permit, with exemptions provided in Section 9657.4 of the Guidelines.

Two oak species, valley oak and coast live oak, occur within the project in areas mapped as developed (landscaping) and disturbed habitat (Figure 2a-c). As shown in Figure 2a, two valley oak trees are located on disturbed habitat south of the Agoura Road / Roadside Drive intersection where the western pilasters would be located. As shown in Figure 2b, 43 coast live oak trees and seven valley oak trees occur within the disturbed and developed roadsides where the Agoura Road and Kanan Road intersection improvements, utility improvements, and monument signage would occur. Although no oak trees occur within the eastern pilasters location at the Agoura Road/Roadside Drive intersection, one valley oak tree occurs immediately west of the site and one coast live oak tree occurs immediately east of the project site, as depicted in Figure 2c.

4 POTENTIAL IMPACTS AND MITIGATION CONSIDERATIONS

As stated previously, the impact footprint within the project site has not been established. This section discusses the potential impacts on biological and aquatic resources resulting from the project. A discussion of the mitigation considerations to avoid and minimize potential impacts on biological and aquatic resources is also discussed below.

4.1 VEGETATION COMMUNITIES

No sensitive vegetation communities occur within the project site. However, native vegetation communities occur within the project site and have the potential to be impacted. California buckwheat scrub and California buckwheat scrub – disturbed occur within the underground utility relocation area along the eastern side of Kanan Road (Figure 2b). The underground utility relocation would entail trenching activities, as well as removal of existing utility structures, which may be considered temporary if any of the impact area within California buckwheat scrub or California buckwheat scrub – disturbed was restored to pre-construction conditions. Generally, the project should implement best management practices during construction to avoid and minimize impacts to habitat as well as adhere to the Land Use Development Standards in Chapter 4 of the Agoura Hills Specific Plan. No additional mitigation is anticipated for impacts on native vegetation communities.

4.2 SPECIAL-STATUS SPECIES

Special-status plant species have a low potential to occur within the project site. The non-native grassland and buckwheat scrub within the project site are subject to frequent direct and indirect disturbance resulting from vehicle traffic and other forms of human activity, resulting in low suitability for special-status plant species. Mitigation related to potential impacts to special-status plants is not anticipated.

Special-status animal species have low potential to occur within the project site. The project site's location within and adjacent to developed habitat make it highly unlikely to support special-status animal species. Additionally, because the proposed project is a transportation improvement

project, it is unlikely that the proposed project would increase human-caused disturbance to the project site, and impacts on wildlife resulting from the proposed project aren't likely to increase substantially. Some wildlife species would likely flush at the onset of project construction, including coast whiptail. Coastal California gnatcatcher as low potential to occur within the native habitat surrounding Kanan Road; however, this habitat experiences edge effects from regular traffic and coastal California gnatcatcher was not detected during the field survey. Potential impacts to coastal California gnatcatcher nesting would also be avoided and minimized through pre-construction presence/absence surveys during the bird breeding season with avoidance of active nests, if any. Focused surveys and endangered species permitting for coastal California gnatcatcher is not anticipated.

4.2.1 MITIGATION

Trees within the project site, especially along the southern portion of Agoura Road, and adjacent areas of habitat surrounding Kanan Road have potential to support avian nests, which would be protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC) Sections 3503, 3503.5, and 3513. Therefore, pre-construction presence/absence surveys for birds are recommended:

> To avoid direct impacts to raptors and/or native/migratory birds, vegetation removal and ground-breaking activities should occur outside of the breeding season (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, a qualified biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds in the proposed area of disturbance. The pre-construction survey shall be conducted within three (3) calendar days prior to the start of construction activities (including removal of vegetation). If nesting birds are observed, a letter report or mitigation plan in conformance with applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the CDFW and/or USFWS as applicable for review and approval and implemented to the satisfaction of those agencies. The project biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If nesting birds are not detected during the pre-construction survey, no further mitigation is required.

Focused surveys for special-status species and federal/state permits for listed species are not anticipated for the project.

4.3 AQUATIC RESOURCES

4.3.1 PERMITTING

The Corps uses two primary jurisdictional determination processes to define its jurisdiction: a preliminary jurisdictional determination (PJD) and an approved jurisdictional determination (AJD). A

PJD serves as an initial, non-legally binding determination by the Corps that a specified area may contain waters of the U.S. A PJD treats "all aquatic resources that would be affected" by the project as jurisdictional under Corps regulations set forth at 33 Code of Federal Regulations (CFR) 328.3 to expedite the permitting process, even when the aquatic resources "may not be jurisdictional."[14] In contrast, an AJD serves as a "definitive, official determination by the Corps that there are, or that there are not, jurisdictional aquatic resources on a parcel."[15] The AJD is the only tool that the Corps may use to deem an aquatic resource non-jurisdictional under 33 CFR 328.3.

If any of the three concrete ditches are determined to be excluded as waters of the U.S. by the Corps under CWA Section 404 and the RWQCB under CWA Section 401 per the current pre-2015 definition of "waters of the U.S.," a request for an AJD from the Corps to conclude the concrete ditches within the project site are non-jurisdictional (concrete ditches "excavated wholly in and draining only uplands" that do "not carry a relatively permanent flow of water"[16]) could be submitted for the project site.

Note that the same methods for determining the extent of aquatic resources potentially jurisdictional under the Corps are used to determine the extent of aquatic resources potentially jurisdictional under the RWQCB pursuant to CWA Section 401 (33 U.S. Code [USC] § 1341).

The applicant would need to obtain permits through the Corps, RWQCB, and CDFW for impacts on jurisdictional aquatic resources (i.e., the earthen aquatic resource/drainage). The regulatory agencies must concur with the findings of a project-specific aquatic resources delineation and estimated impact calculations. Impacts on jurisdictional resources will likely require an AJD and application for a permit (e.g., a Nationwide Permit or Standard Individual permit, depending on total jurisdictional acreage/linear feet and final project impacts) from the Corps, a CWA Section 401 Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement (SAA) from the CDFW. The regulatory agencies must concur with the findings of a project- specific aquatic resources delineation and estimated impact calculations. The Corps, RWQCB, and/or CDFW may also require a functional assessment to quantitatively estimate the stream condition for the evaluation of the project site.

4.3.2 MITIGATION

The applicable regulatory agencies will require compensatory mitigation to offset proposed project impacts associated with the project site. Final mitigation ratios will be determined in consultation with the Corps, RWQCB, and/or CDFW, based on agency evaluation of current resource functions and values. A minimum 1:1 ratio is typically required, though ratios may be higher depending on the functions lost at the impact site in comparison to the functions gained at the proposed mitigation site as well as mitigation type and location. Potential compensatory mitigation to offset impacts on jurisdictional aquatic resources may be implemented through off-site, permittee-

[14] U.S. Army Corps of Engineers (Corps). 2016 Regulatory Guidance Letter No. 16-01. October 2016.

[15] U.S. Army Corps of Engineers (Corps). 2016 Regulatory Guidance Letter No. 16-01. October 2016.

[16] U.S. Environmental Protection Agency (U.S. EPA). 2008. Clean Water Act Jurisdiction Following the Supreme Court's Decision in Rapanos v. United States and Carabell v. United States. December 2.

responsible mitigation, in-lieu fee program or mitigation bank credit purchase, or a combination of these options depending on availability. The proposed mitigation strategy will prioritize in-kind and in-watershed options per the regulatory agencies' preferences. The regulatory agencies will make the final determination of the final compensatory mitigation requirements during the permit evaluation process.

4.4 WILDLIFE CORRIDORS

The project site is not within a wildlife corridor. Therefore, potential impacts on wildlife corridors and their associated mitigation considerations are not anticipated for this project.

4.5 CITY OAK TREE PRESERVATION GUIDELINES

As previously mentioned, the "removal, cutting, pruning, and/or encroachment into protected zone" of any oak tree is prohibited without the appropriate permit from the City Department of Planning and Community Development. Other actions that would impact oak trees include, but are not limited to, trenching, excavating or paving within the protected zone of a tree or at least 15 feet from the trunk, whichever distance is greater.

The project site contains both valley oak and coast live oak trees along the roadsides and landscaped medians of Kanan Road and Agoura Road (Figure 2a-c). Because these trees are likely to be impacted as a result of the project's roadway and intersection improvements at the Kanan/Agoura Road or signage installations, the project would require permits for the oak trees to be impacted. As a part of the permit application process, an additional focused oak tree survey may be required by the City to gather information such as the condition of the impacted trees, and justification for project activities impacting the trees. Please note that some oak trees within the project site are not planned for removal.

4.5.1 MITIGATION

To account for mitigation for impacts to oak trees, the permit would also include conditions such as the planting of new oak trees on/off the project site, relocation of trees, or even the payment of oak trees to be planted elsewhere as determined by the City. Newly planted or relocated trees may also require a maintenance program to insure the continued health and care of the trees, per the Guidelines. The size and quantity of oak trees to be planted are determined by the City and are dependent on the health of the impacted trees, the type of impact occurring on oak trees (e.g., total removal or pruning), and the type of project proposed (residential vs. commercial). It is recommended that once the project impact footprint is refined, a focused oak tree survey be conducted to determine the condition of the trees to be impacted as a result of the project.

5 CONCLUSIONS

Although special-status plant and wildlife species are not anticipated to occur on site, nesting birds, which are protected by the MBTA and CFGC are expected to occur within the project site. As such, pre-construction nesting bird surveys, as detailed in Section 4.2 above, are recommended should work occur during the bird breeding season. Potentially jurisdictional aquatic resources were

documented within the project site. If impacts are proposed in or near the mapped potentially jurisdictional aquatic resources, a formal, project-specific aquatic resources delineation and reporting per Corps, RWQCB, and CDFW standards and guidelines and further coordination with the Corps, RWQCB, and CDFW would be required to receive a determination from the regulatory agencies of their concurrence with the findings related to potential aquatic resources on site. The applicant would need to obtain permits through the Corps, RWQCB, and/or CDFW for any impacts on jurisdictional aquatic resources, as detailed in Sections 4.3.1 and 4.3.2 above. Oak tree species were also documented within the project site. An oak tree permit is required per the City of Agoura Hills Oak Tree Preservation Guidelines since project impacts on oak trees are proposed.

This memo is intended to be a general, constraints-level summary of the biological and aquatic resources within the project site. Conclusive determinations of potential impacts and mitigation measures to reduce potential impacts to a level below significant can be determined once the impact footprint is established and, if impacts to potential aquatic resources are proposed, a formal, project-specific aquatic resources delineation and reporting is completed.

ATTACHMENTS

Figure 1 – Project Location

Figure 2a-c – Biological Resources and Estimated Potential Aquatic Resource Boundaries

Figure 3a – CNDDB Plants and Wildlife

Figure 3b –USFWS Plants and Wildlife

Figure 4 – NHD & NWI

Attachment A – Site Photographs

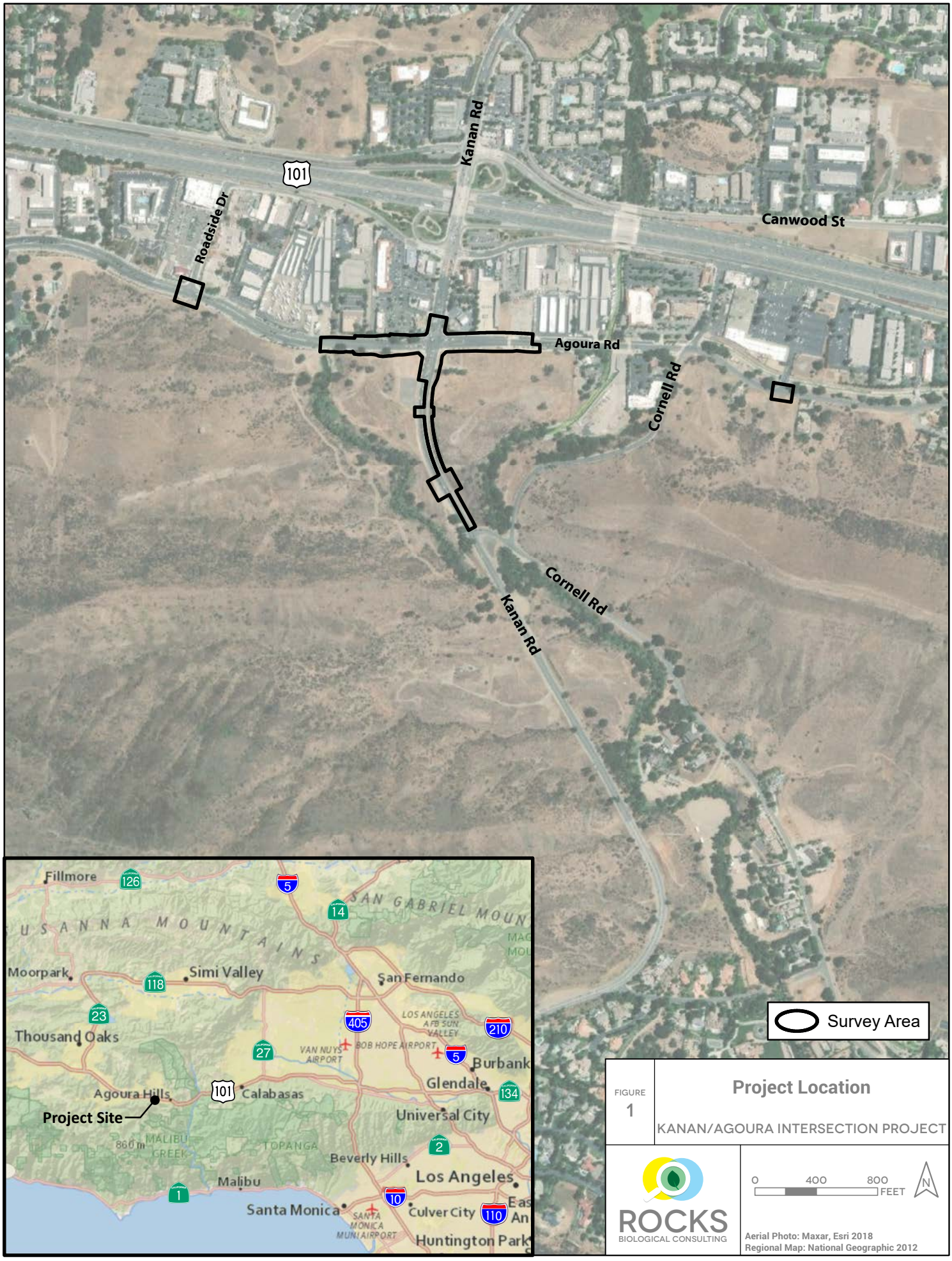


FIGURE 1

Project Location

KANAN/AGOURA INTERSECTION PROJECT

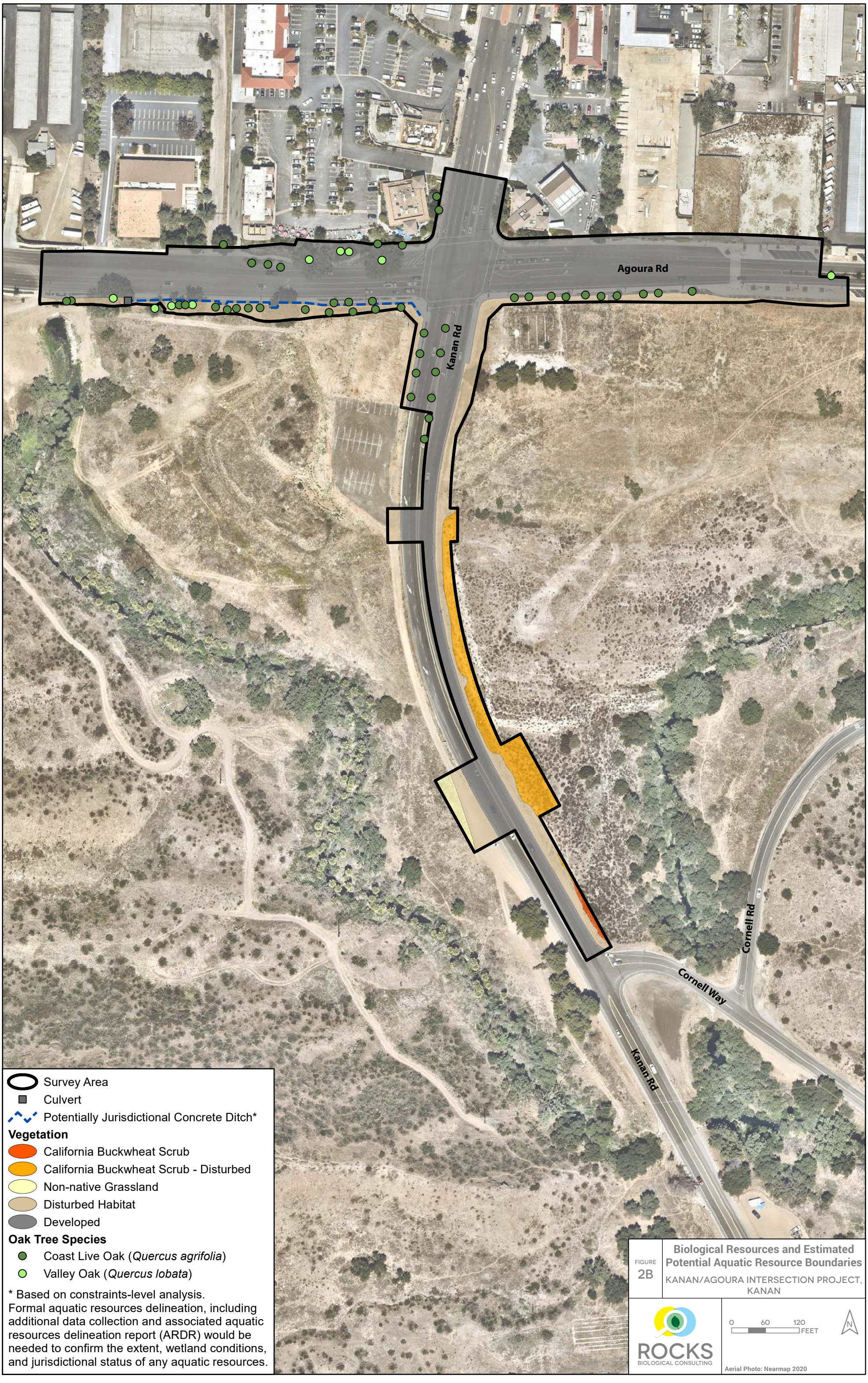
ROCKS BIOLOGICAL CONSULTING

0 400 800 FEET

N

Aerial Photo: Maxar, Esri 2018
Regional Map: National Geographic 2012


Roadside Dr
Agoura Rd
Survey Area
Culvert
Potentially Jurisdictional Aquatic Resource*
Potentially Jurisdictional Concrete Ditch*
Vegetation
Disturbed Habitat
Developed
Oak Tree Species
Valley Oak (Quercus lobata)
* Based on constraints-level analysis. Formal aquatic resources delineation, including additional data collection and associated aquatic resources delineation report (ARDR) would be needed to confirm the extent, wetland conditions, and jurisdictional status of any aquatic resources.
FIGURE 2A
Biological Resources and Estimated Potential Aquatic Resource Boundaries
KANAN/AGOURA INTERSECTION PROJECT, ROADSIDE
ROCKS BIOLOGICAL CONSULTING
0 25 50 FEET
N
Aerial Photo: Nearmap 2020


Agoura Rd
Kanan Rd
Cornell Rd
Cornell Way
Kanan Rd
Survey Area
Culvert
Potentially Jurisdictional Concrete Ditch*
Vegetation
California Buckwheat Scrub
California Buckwheat Scrub - Disturbed
Non-native Grassland
Disturbed Habitat
Developed
Oak Tree Species
Coast Live Oak (Quercus agrifolia)
Valley Oak (Quercus lobata)
* Based on constraints-level analysis.
Formal aquatic resources delineation, including additional data collection and associated aquatic resources delineation report (ARDR) would be needed to confirm the extent, wetland conditions, and jurisdictional status of any aquatic resources.
FIGURE 2B
Biological Resources and Estimated Potential Aquatic Resource Boundaries
KANAN/AGOURA INTERSECTION PROJECT, KANAN
ROCKS BIOLOGICAL CONSULTING
0 60 120 FEET
N
Aerial Photo: Nearmap 2020


Agoura Rd
Survey Area
Culvert
Vegetation
Disturbed Habitat
Developed
Oak Tree Species
Coast Live Oak (Quercus agrifolia)
Valley Oak (Quercus lobata)
FIGURE 2C
Biological Resources and Estimated Potential Aquatic Resource Boundaries
KANAN/AGOURA INTERSECTION PROJECT, WHIZIN
ROCKS BIOLOGICAL CONSULTING
0 25 50 FEET
N
Aerial Photo: Nearmap 2020

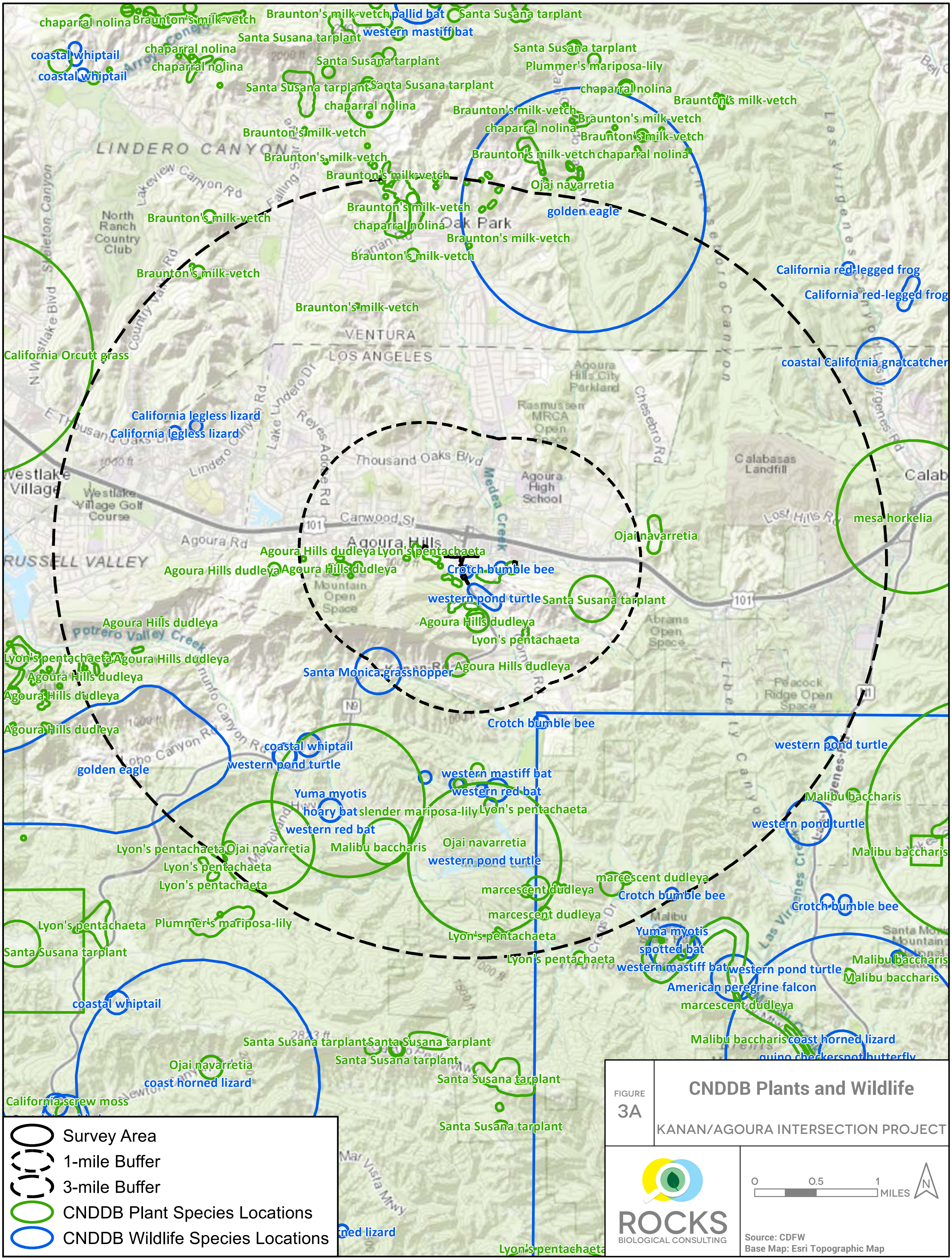
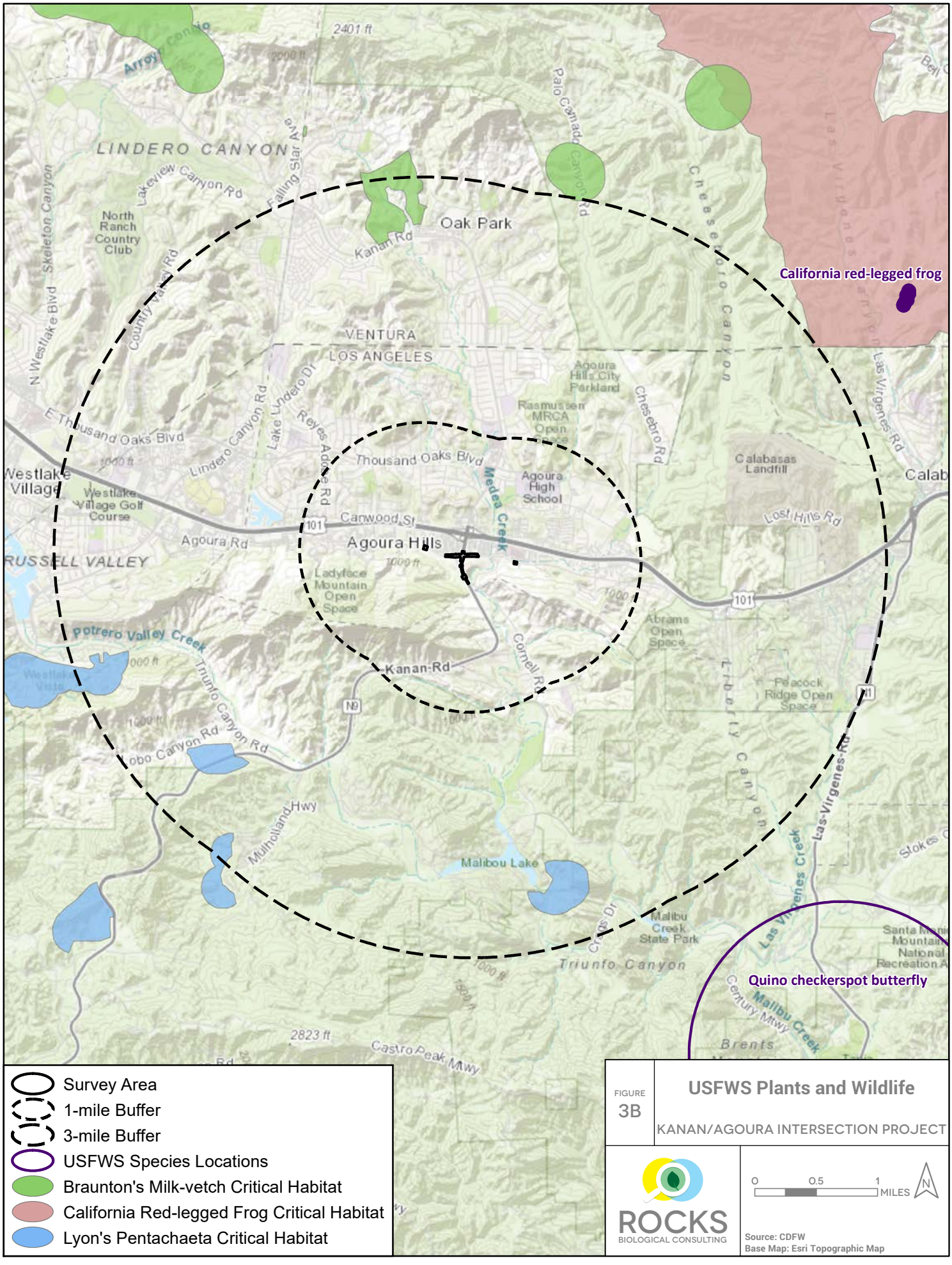
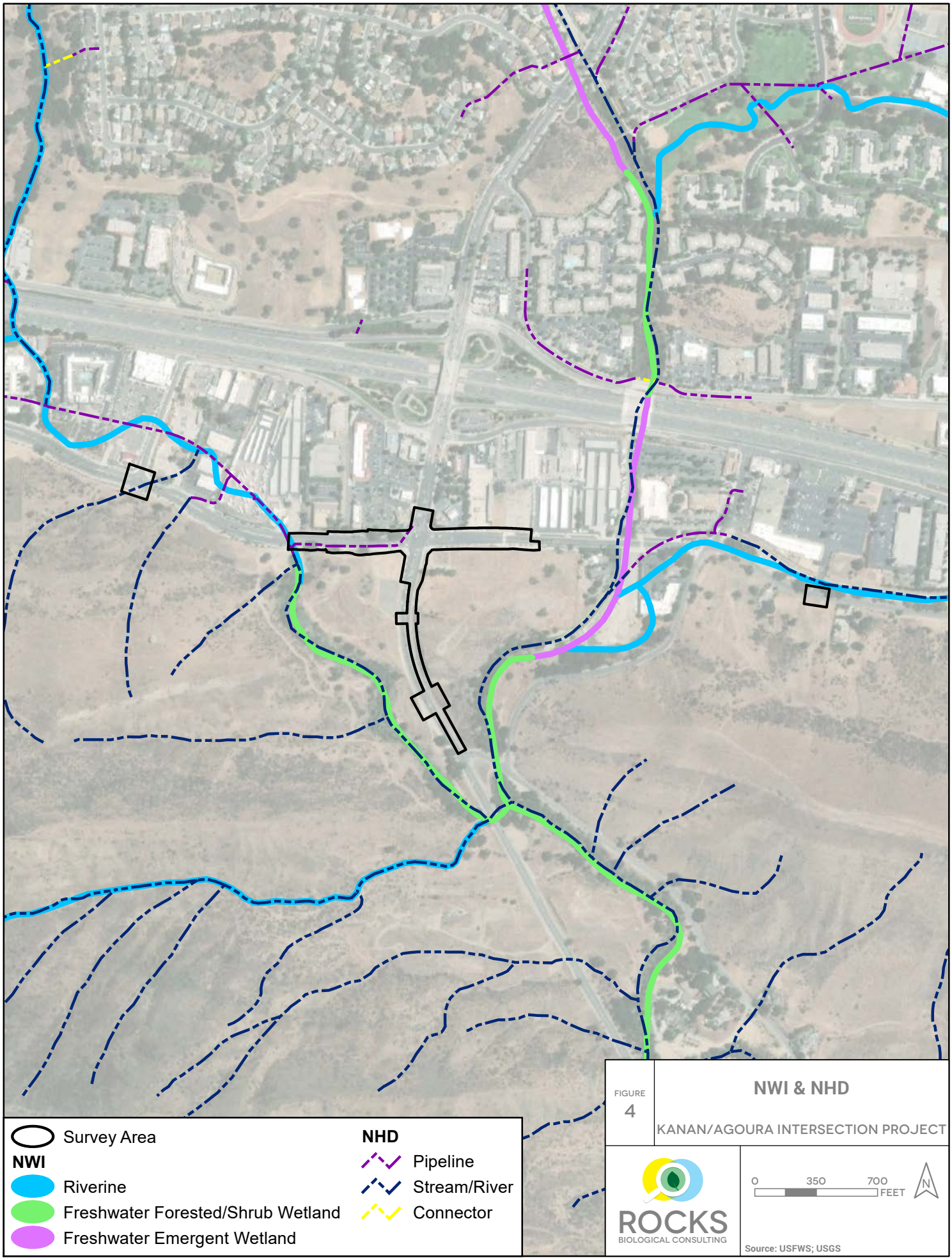


FIGURE 3A
CNDDB Plants and Wildlife
KANAN/AGOURA INTERSECTION PROJECT
Survey Area
1-mile Buffer
3-mile Buffer
CNDDB Plant Species Locations
CNDDB Wildlife Species Locations
ROCKS
BIOLOGICAL CONSULTING
0
0.5
1
MILES
N
Source: CDFW
Base Map: Esri Topographic Map
chaparral nolina
Braunton's milk-vetch
pallid bat
Santa Susana tarplant
western mastiff bat
coastal whiptail
Plummer's mariposa-lily
LINDERO CANYON
Ojai navarretia
golden eagle
Oak Park
North Ranch Country Club
California red-legged frog
VENTURA
LOS ANGELES
California Orcutt grass
coastal California gnatcatcher
California legless lizard
Westlake Village
Thousand Oaks Blvd
Agoura High School
Calabasas Landfill
mesa horkelia
Agoura Hills
RUSSELL VALLEY
Agoura Hills dudleya
Lyon's pentachaeta
Crotch bumble bee
western pond turtle
Potrero Valley Creek
Santa Monica grasshopper
Yuma myotis
hoary bat
slender mariposa-lily
western red bat
Malibu baccharis
marcescent dudleya
spotted bat
American peregrine falcon
coast horned lizard
quino checkerspot butterfly
California screw moss


California red-legged frog
Quino checkerspot butterfly
LINDERO CANYON
VENTURA
LOS ANGELES
Oak Park
Agoura Hills
Westlake Village
RUSSELL VALLEY
Thousand Oaks Blvd
Agoura Rd
Kanan Rd
Medea Creek
Potrero Valley Creek
Triunfo Canyon
Malibu Lake
Malibu Creek State Park
Las Virgenes Creek
Las Virgenes Rd
Lost Hills Rd
Calabasas Landfill
Agoura High School
Ladyface Mountain Open Space
Peacock Ridge Open Space
Abrams Open Space
Rasmussen MRCA Open Space
Agoura Hills City Parkland
North Ranch Country Club
Westlake Village Golf Course
Mulholland Hwy
Castro Peak Mwy
Century Mwy
Malibu Creek
Brents
Triunfo Canyon
Survey Area
1-mile Buffer
3-mile Buffer
USFWS Species Locations
Braunton's Milk-vetch Critical Habitat
California Red-legged Frog Critical Habitat
Lyon's Pentachaeta Critical Habitat
FIGURE 3B
USFWS Plants and Wildlife
KANAN/AGOURA INTERSECTION PROJECT
ROCKS BIOLOGICAL CONSULTING
0 0.5 1 MILES
N
Source: CDFW
Base Map: Esri Topographic Map


Survey Area
NWI
Riverine
Freshwater Forested/Shrub Wetland
Freshwater Emergent Wetland
NHD
Pipeline
Stream/River
Connector
FIGURE
4
NWI & NHD
KANAN/AGOURA INTERSECTION PROJECT
ROCKS
BIOLOGICAL CONSULTING
0
350
700
FEET
N
Source: USFWS; USGS

Appendix A. Site Photographs

Kanan/Aguora Intersection Project Biological and Aquatic Resources Constraints Analysis – June 30, 2021

Photo 1. Overview of the northern segment of the Roadside portion of the survey area, dominated by ornamental vegetation and developed land, facing east (34.144590, -118.767299).

Photo 2. Overview of the southern segment of the Roadside portion of the survey area, dominated by disturbed habitat with some valley oak (*Quercus lobata*) just south of the study area boundary, facing east (34.14246, -118.767534).

Photo 3. View of the two potentially jurisdictional concrete ditches within the southern segment of the Roadside portion of the survey area, facing east (northern ditch in foreground, southern ditch in background) (34.144305, -118.767273).

Photo 4. View of the potentially jurisdictional aquatic resource/drainage located in the southern segment of the Roadside portion of the survey area, facing southwest (34.144170, -118.767242).

Photo 5. Overview of the western segment of the Kanan portion of the survey area, dominated by disturbed habitat with some non-native grassland, facing south (34.141166, -118.761870).

Photo 6. Overview of the eastern segment of the Kanan portion of the survey area, dominated by California buckwheat scrub (*Eriogonum fasciculatum*) - disturbed, facing north (34.140231, -118.760778).

Photo 7. Overview of the northern segment of the Whizin portion of the survey area, dominated by disturbed habitat and valley oak, facing east (34.142825, -118.754104).

Photo 8. Overview of the southern segment of the Whizin portion of the survey area, dominated by disturbed habitat, facing east (34.142638, -118.754614).

Appendix 4.5-1

Cultural Resources Assessment

Kimley»Horn

CULTURAL RESOURCES ASSESSMENT

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

City of Agoura Hills, Los Angeles County, California

Prepared for:

Rita Garcia
Kimley-Horn
1100 West Town & Country Road, Suite 700
Orange, California 92868

Prepared by:

David Brunzell, M.A., RPA
Contributions by Nicholas Shepetuk, B.A.
BCR Consulting LLC
505 West 8th Street
Claremont, California 91711

Project No. KIM2109

Data Base Information:
Type of Study: Intensive Survey
Resources Recorded: P-19-41, P-19-467
Keywords: Prehistoric Habitation Site
USGS Quadrangle: 7.5-minute *Thousand Oaks*, *California* (1981)

BCRCONSULTING LLC

September 28, 2022

MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to Kimley-Horn to complete a Cultural Resources Assessment of the Kanan Road/Agoura Road Ultimate Intersection Improvements Project (the project) located in the City of Agoura Hills, Los Angeles County, California. A cultural resources records search, intensive pedestrian field survey, paleontological overview, and Sacred Lands File search with the Native American Heritage Commission were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA).

The cultural resources records search revealed that 10 cultural resource studies have taken place resulting in 19 cultural resources recorded within 0.5 mile of the project site. Of the previous studies, eight have assessed the project site for cultural resources, and two prehistoric archaeological habitation sites (P-19-41 and P-19-467) have been recorded within the project site boundaries. The most recent previous study in 2011 attempted to relocate sites P-19-41 and P-19-467 and were not successful (see Harper and Turner 2011). During the current field survey, BCR Consulting archaeologists did not identify any cultural resources (including prehistoric or historic-period archaeological sites or historic-period buildings) within the project site boundaries. Although records search results indicate that two prehistoric habitation sites (designated P-19-41 and P-19-467, respectively) are crossed by portions of the project site, no trace of either resource was identified. Furthermore, project-related impacts within the depicted site locations are proposed in small areas of existing road frontage that have been subject to severe disturbances from road construction and utility installation and maintenance. Based on these results, further systematic evaluation of these two prehistoric sites is not recommended.

The prehistoric resources recorded during this study do indicate sensitivity for buried cultural resources within the project site. Therefore, BCR Consulting recommends that an archaeological monitor be present during all earthmoving activities related to the development of the project site. The monitor would work under the direct supervision of a cultural resources professional who meets the Secretary of the Interior's Professional Qualification Standards for archaeology. The monitor would be empowered to temporarily halt or redirect construction work in the vicinity of any find until the project archaeologist can evaluate it. In the event of a new find, salvage excavation and reporting will be required.

Findings were negative during the Sacred Lands File search with the NAHC. Since the City will initiate and carry out the required Native American Consultation, the results of the consultation are not provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff is available to answer questions and address concerns as necessary.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized

representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project would "directly or indirectly destroy a unique paleontological resource". The Paleontological Overview provided in Appendix D has recommended that:

> The geologic units underlying the project area are mapped as Quaternary alluvium dating to the Pliocene-Holocene and Miocene marine rocks, both of which are potentially fossiliferous, as well as Tertiary volcanic flow rocks, which have no fossil potential. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (Mammuthus columbi), Pacific mastodon (Mammut pacificus), sabertooth cat (Smilodon fatalis), ancient horse (Equus sp.), and many other Pleistocene megafauna.
>
> Any fossils recovered from the BCR Kanan Road/Agoura Road Ultimate Intersection Improvements Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Quaternary alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

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APPENDICES

INTRODUCTION

BCR Consulting LLC (BCR Consulting) is under contract to Kimley-Horn to complete a Cultural Resources Assessment of The Kanan Road/Agoura Road Ultimate Intersection Improvements Project (the project) located in the City of Agoura Hills, Los Angeles County, California. A cultural resources records search, intensive pedestrian field survey, paleontological overview, and Sacred Lands File search with the Native American Heritage Commission (NAHC) were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA). The project site is located in a non-sectioned portion of Township 1 North, Range 18 West, San Bernardino Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) *Thousand Oaks*, *California* (1981) 7.5-minute topographic quadrangle (Figure 1).

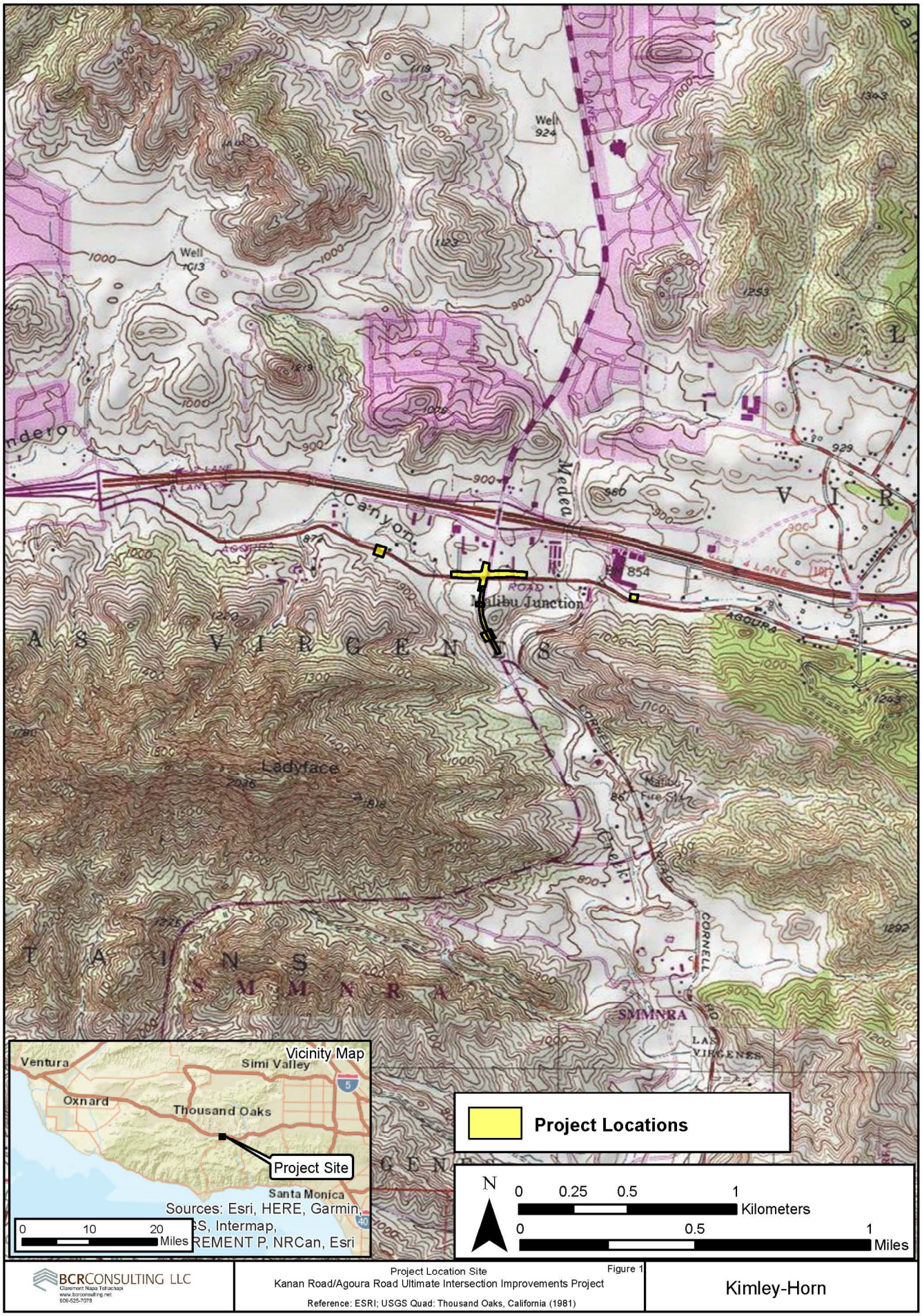
Regulatory Setting

The California Environmental Quality Act. CEQA applies to all discretionary projects undertaken or subject to approval by the State's public agencies (California Code of Regulations 14(3), § 15002(i)). Under CEQA, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (Cal. Code Regs. [CCR] tit. 14(3), § 15064.5(b)). State CEQA Guidelines section 15064.5(a) defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register
- Listed in a local register of historical resources (as defined at Cal. Public Res. Code § 5020.1(k))
- Identified as significant in a historical resource survey meeting the requirements of § 5024.1(g) of the Cal. Public Res. Code
- Determined to be a historical resource by a project's lead agency (Cal. Code Regs. tit. 14(3), § 15064.5(a))

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (Cal. Code Regs. tit. 14(3), § 15064.5(a)(3)).

The significance of a historical resource is impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for the California Register. If an impact on a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (State CEQA Guidelines § 15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource.



BCR CONSULTING LLC
Claremont/Napa/Tehachapi
www.bcrconsulting.net
909-625-7078

Project Location Site
Kanan Road/Agoura Road Ultimate Intersection Improvements Project
Reference: ESRI; USGS Quad: Thousand Oaks, California (1981)

Figure 1

Kimley-Horn

Section 5024.1 of the Cal. Public Res. Code established the California Register. Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register (Cal. Code Regs. tit. 14(3), § 15064.5(a)(3)). The eligibility criteria for the California Register are similar to those of the National Register of Historic Places (National Register), and a resource that meets one of more of the eligibility criteria of the National Register will be eligible for the California Register.

The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. Criteria for Designation:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. Associated with the lives of persons important to local, California or national history.
3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). Fifty years is normally considered sufficient time for a potential historical resource, and in order that the evaluation remain valid for a minimum of five years after the date of this report, all resources older than 45 years (i.e. resources from the "historic-period") will be evaluated for California Register listing eligibility, or CEQA significance. The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

Senate Bill 18. California Senate Bill 18 states that prior to a local (city or county) government's adoption of any general plan or specific plan, or amendment to general and specific plans, or a designation of open space land proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American tribes for the purpose of preserving or mitigating impacts to Cultural Places.

A Cultural Place is defined in the PRC sections 5097.9 and 5097.995 as:

1. Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9), or;
2. Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1,

including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5097.995).

The intent of SB-18 is to establish meaningful consultation between tribal governments and local governments ("government-to-government") at the earliest possible point in the planning process so that cultural places can be identified and preserved and to determine necessary levels of confidentiality regarding Cultural Place locations and uses. According to the Government Code (GC) Section 65352.4, "consultation" is defined as:

The meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American Tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

Assembly Bill 52. California Assembly Bill (AB) 52 was approved on September 25, 2014. As stated in Section 11 of AB 52, the act applies only to projects that have a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015.

AB 52 establishes "tribal cultural resources" (TCRs) as a new category of resources under CEQA. As defined under Public Resources Code Section 21074, TCRs are "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either: (1) included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register); included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (2) determined by the lead agency to be significant pursuant to the criteria for inclusion in the CRHR set forth in Public Resources Code Section 5024.1(c), if supported by substantial evidence and taking into account the significance of the resource to a California Native American tribe. A "historical resource" as defined in Public Resources Code Section 21084.1, a "unique archaeological resource" as defined in Public Resources Code Section 21083.2(g), or a "nonunique archaeological resource" as defined in Public Resources Code Section 21083.2(h) may also be TCRs.

AB 52 further establishes a new consultation process with California Native American tribes for proposed projects in geographic areas that are traditionally and culturally affiliated with that tribe. Per Public Resources Code Section 21073, "California Native American tribe" includes federally and non-federally recognized tribes on the NAHC contact list. Subject to certain prerequisites, AB 52 requires, among other things, that a lead agency consult with the geographically affiliated tribe before the release of an environmental review document for a proposed project regarding project alternatives, recommended mitigation measures, or potential significant effects, if the tribe so requests in writing. If the tribe and the lead agency agree upon mitigation measures during their consultation, these mitigation measures must be recommended for inclusion in the environmental document (Public Resources Code Sections 21080.3.1, 21080.3.2, 21082.3, 21084.2, and 21084.3). Since the City will initiate and carry out the required AB52 Native American Consultation, the results of the consultation are not

provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff are available to answer questions and address comments as necessary.

Paleontological Resources. CEQA provides guidance relative to significant impacts on paleontological resources, indicating that a project would have a significant impact on paleontological resources if it disturbs or destroys a unique paleontological resource or site, or unique geologic feature. Section 5097.5 of the California Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources. CEQA documentation prepared for projects would be required to analyze paleontological resources as a condition of the CEQA process to disclose potential impacts. Please note that as of January 2018 paleontological resources are considered in the geological rather than cultural category. Therefore, paleontological resources are not summarized in the body of this report. A paleontological overview completed by professional paleontologists from the Western Science Center is provided as Appendix D.

NATURAL SETTING

The elevation of the project site ranges from 865 to 890 feet above mean sea level (AMSL). A steep knoll on the east side of Kanan Road but outside the project site boundaries rises above the southern portion of the project site to approximately 920 feet AMSL. Terrain within the project site features a variable aspect. Artificial disturbances include road construction, the construction and subsequent demolition of a modern structure, the grading and use of a network of dirt roads, discing, and use of the land as an oat farm at one time.

Biology

Although recent and historic-period impacts have decimated local vegetation, remnants of a formerly dominant coastal sage scrub vegetation community have been sporadically observed in the area. Signature plant species include black sage (*Salvia mellifera*), California brittlebush (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemesia californica*), deerweed (*Lotus scoparius*), golden yarrow (*Eriophyllum confertiflorum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), poison oak (*Toxicodendron diverilobum*), purple sage (*Salvia leucophyla*), sticky monkeyflower (*Mimulus aurantiacus*), sugar bush (*Rhus ovate*), toyon (*Heteromeles arbutifolia*), white sage (*Salvia apiana*), coastal century plant (*Agave shawii*), coastal cholla (*Opuntia prolifera*), Laguna Beach liveforever (*Dudleya stolonifera*), many-stemmed liveforever (*Dudleya multicaulis*), our Lord's candle (*Yucca whipplei*), prickly pear cactus (*Opuntia sp.*) (Williams et al. 2008:118-119). Signature animal species within Coastal Sage Scrub habitat include the kangaroo rat (*Dipodomys sp.*), California horned lizard (*Phrynosoma coronatum frontale*), orange throated whiptail (*Cnemidophorus hyperthrus*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), brown-headed cowbird (*Molothrus ater*), California gnatcatcher (*Polioptila californica californica*), California quail (*Callipepla californica*), and San Diego cactus wren (*Campylorhynchus brunnecapillus sandiegensis*) (Williams et al. 2008:118-120). Local native groups made use of many of these species (see Lightfoot and Parrish 2009).

Geology

The project site is located in Lindero Canyon to the east of the Conejo Valley, north of the Santa Monica Mountains and south of the Simi Hills. Sediment here is dominated by older surficial sediments of unconsolidated to weakly consolidated alluvial gravel of the late Pleistocene. The central portion of the project site features Conejo volcanics extrusive rocks which are characterized by submarine and subaerial volcanic extrusive and related intrusive rocks of middle Miocene age (Dibblee, Jr. 1993).

CURRENT SETTING

The project site has been subject to severe disturbances associated with the construction and subsequent demolition of a building that once stood on the southeast corner of Kanan Road and Agoura Road. A concrete footing and asphalt parking lot were noted in this area but were not old enough to warrant consideration as potential historical resources. Undeveloped portions of the project site have been subject to discing for weed abatement. Mechanical grading has recently occurred on the west side of Kanan Road, severely disturbing surficial sediments.

CULTURAL SETTING

Prehistoric Context

Evidence for human occupation of the Central Coast first appears during the early Holocene. Humans proliferated globally during this era due to gradual environmental warming that marked the close of the last ice age. Changes in settlement patterns and subsistence focus are widely cited as adaptations to the new conditions and have been organized into a number of chronological frameworks for the region (see Moratto 1984, Warren and Crabtree 1986, and others). Although a matter of some dispute among archaeologists, the most widely accepted prehistoric cultural setting for California's Central Coast utilizes six sequentially organized periods. These periods have been based upon archaeological evidence for cultural hallmarks indicated by the presence of particular diagnostic artifact assemblages, and the results of related settlement and subsistence pattern and site interaction studies. Such studies have indicated human habitation of the region as far back as 9,000 years before present (see Greenwood 1972 and others). A summary of the chronological periods is summarized in Table A.

Table A. Prehistoric Periods of California's Central Coast

Period	Cultural Hallmarks	Notable Artifacts	Citations
Early Holocene (Pre-6500 BC)	Low population densities; reliance on plants, shellfish, and some vertebrates.	Flaked stone tools.	Moratto 1984; Erlandson 1994
Millingstone (6500-3500 BC)	Populations expand due to new reliance on seeds for dietary supplements evidenced by milling stones.	Flaked stone tools accompany hand stones and milling-slab style grinding implements.	Erlandson 1994, 1988, 1991; Glassow 1992; Jones et al. 1989; Wallace 1978
Early Period (3500-600 BC)	Larger, relatively mobile populations exhibit more regular and continuous use of habitation sites. Seed	Flaked stone tools, grinding implements include hand stones and milling-slabs; mortars and pestles appear.	Glassow and Wilcoxon 1988; Jones et al. 1994

	grinding is more heavily emphasized.		
Middle Period (600 B.C.-A.D. 1000)	More systematic hunting, fishing, plant processing; trading relationships established; fish and acorns highly exploited; development of food storage.	Earlier artifacts continue along with increased use of body ornaments, higher diversity of obsidian and beads than previously, shell fishhooks; flaked stone tool kit is diversified to include stemmed projectile points.	Glassow and Wilcoxon 1988; King 1990
Middle-Late Transitional (AD 1000-1250)	Continued systematic resource exploitation; social complexity including political complexity, and social ranking. Settlement shifts to the interior.	Grinding implements unchanged; flaked stone tool kit adds smaller leaf-shaped projectile points that indicates introduction of the bow and arrow.	Arnold 1992; Jones et al. 1994; Jones et al. 2007
Late Period (A.D. 1300-1769)	Social and political complexity and population continues to increase; economies introduced; Settlement shifts back to coast.	Projectile points and other highly specialized flaked stone tools, bedrock mortars, hopper mortars, and beads.	Jones et al. 2007

Ethnography

Chumash. The project site is located within the traditional territory of the Chumash. Tribal geographic boundaries were often permeable and fluid to some degree, even during the modern era. Archaeological evidence, historical references, and tribal accounts of these boundaries commonly disagree. Therefore, the following lays out the Cahuilla's tribal boundaries based on the available data and explains any glaring inconsistencies between these different sources. Most sources agree that the Chumash occupied the Channel Islands (Santa Cruz, San Miguel, Santa Rosa, and Anacapa). Their territory extended from the Pacific Coast to the western edge of the southwestern San Joaquin Valley. However, while most sources agree that Chumash territory extended from Malibu Canyon and Point Conception in the south to approximately Morro Strand State Beach in the North (Grant 1978; Kroeber 1925; Applegate 1974), tribal sources (Santa Ynez Band of Chumash Indians 2020) and some academic sources disagree (Gamble 2008). Santa Ynez claims that the territory is marked by "the beaches of Malibu to Paso Robles," and Gamble suggests that it is marked by Topanga Canyon in the South to the southern extent of Monterey County in the north.

The Chumash language family consisted of six to seven languages at least. Kroeber (1915) suggested that the Chumash may be appropriately grouped into the Hokan language stock, however the modern consensus tends to treat the Chumash as a separate group (Grant 1978; Klar 1977; Kroeber 1925). The languages spoken by the Chumash include Ventureño, Barbareño, Ynezeño, Purisimeño, Obispeño, and the Island dialect also known as Cruzeño. There is some evidence that suggests there may have been at least one more language that was spoken by interior Chumash west of the convergence of the Tehachapi Mountains and the Transverse Ranges, but this is not certain (Grant 1978; Kroeber 1925). There is significant variance in Chumash culture based mainly on the geographic and ecological setting in which the different subgroups of the tribe dwelled.

Gabrielino. The Gabrielino probably first encountered Europeans when Spanish explorers reached California's southern coast during the 15th and 16th centuries (Bean and Smith 1978; Kroeber 1925). The first documented encounter, however, occurred in 1769 when Gaspar de Portola's expedition crossed Gabrielino territory (Bean and Smith 1978). Other brief encounters took place over the years, and are documented in McCawley 1996 (citing numerous sources). The Gabrielino name has been attributed by association with the Spanish mission of San Gabriel, and refers to a subset of people sharing speech and customs with other Cupan speakers (such as the Juaneño/Luiseño/Ajachemem) from the greater Takic branch of the Uto-Aztecan language family (Bean and Smith 1978). Gabrielino villages occupied the watersheds of various rivers (locally including the Santa Ana) and intermittent streams. Chiefs were usually descended through the male line and often administered several villages. Gabrielino society was somewhat stratified and is thought to have contained three hierarchically ordered social classes which dictated ownership rights and social status and obligations (Bean and Smith 1978:540-546). Plants utilized for food were heavily relied upon and included acorn-producing oaks, as well as seed-producing grasses and sage. Animal protein was commonly derived from rabbits and deer in inland regions, while coastal populations supplemented their diets with fish, shellfish, and marine mammals (Boscana 1933, Heizer 1968, Johnston 1962, McCawley 1996). Dog, coyote, bear, tree squirrel, pigeon, dove, mud hen, eagle, buzzard, raven, lizards, frogs, and turtles were specifically not utilized as a food source (Kroeber 1925:652).

History

Historic-era California is generally divided into three periods: the Spanish Period (1769-1821), the Mexican Period (1821-1848), and the American Period (1848- present).

Spanish Period. The first European to pass through the vicinity is thought to be a Spaniard called Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who had been commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the region in 1772. Searching for San Diego Presidio deserters, Fages had traveled through Riverside to San Bernardino, crossed over the mountains into the Mojave Desert, and then journeyed westward to the San Joaquin Valley (Beck and Haase 1974).

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers

lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day (Beattie and Beattie 1974; Cleland 1941).

PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager/Principal Investigator for the study. Mr. Brunzell compiled the technical report, with contributions from BCR Consulting Archaeological Crew Chief Nicholas Shepetuk, B.A. The South Central Coastal Information Center (SCCIC) completed the cultural resources records search at California State University, Fullerton. Mr. Shepetuk and BCR Consulting Archaeological Field Technicians Fabian Martinez, B.A., and Johnny DeFachelle, B.A., completed the field survey.

METHODS

Research

The cultural resources records search completed by the SCCIC reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within one mile of the project site. Additional resources reviewed included the National Register, the California Register, and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures.

Field Survey

An archaeological field survey of the project site was conducted on September 9 and December 17, 2021. The survey was performed by walking parallel transects spaced 15 meters apart across 100 percent of the project site. Transects were narrowed to five-meter intervals where cultural resources had been previously identified. All soil exposures were carefully inspected for evidence of cultural resources. Hand-held global positioning units were available to help relocate previously recorded resources.

RESULTS

Research

Research completed by the SCCIC revealed that 10 cultural resource studies have taken place resulting in 19 cultural resources recorded within 0.5 mile of the project site. Of the previous studies, eight have assessed the project site for cultural resources, and two prehistoric archaeological habitation sites (P-19-41 and P-19-467) have been recorded within the project site boundaries. The most recent previous study in 2011 attempted to relocate sites P-19-41 and P-19-467 and were not successful (see Harper and Turner 2011). Records search results are summarized in Table B and the records search map, bibliography, and Department of Park and Recreation (DPR) 523 forms for sites within the project site are provided in confidential Appendix A.

Table B. Cultural Resources and Studies within 0.5 Mile of the Project Site

USGS Quad	Cultural Resources Within 0.5 Mile of the Project Site	Reports Within 0.5 Mile of Project Site
Thousand Oaks, California (1981)	P-19-41: prehistoric habitation site (partially within project) P-19-314: prehistoric habitation site (0.3 miles S) P-19-467: prehistoric habitation site (partially within project) P-19-1027: prehistoric habitation/burial/quarry (0.4 miles W) P-19-1059: prehistoric rock shelter (0.5 miles SW) P-19-1352: prehistoric habitation site (0.25 miles E) P-19-1436: prehistoric lithic scatter (0.2 miles SW) P-19-2078: prehistoric habitation site (0.3 miles S) P-19-2483: prehistoric quarry (0.3 miles S) P-19-4711: prehistoric habitation site (0.5 miles N) P-19-4819: prehistoric lithic scatter (0.4 miles NW) P-19-4820: historic structures and orchard (0.4 miles NW) P-19-4861: prehistoric lithic scatter (0.4 miles NW) P-19-100207: prehistoric lithic scatter (0.1 miles N) P-19-100208: prehistoric lithic scatter (0.1 miles N) P-19-100209: prehistoric lithic scatter (0.4 miles WNW) P-19-100210: prehistoric lithic scatter (0.4 miles WNW) P-19-101202: prehistoric lithic scatter (0.5 miles N) P-19-101203: prehistoric lithic scatter (0.5 miles N)	LA-81*, 531*, 1768*, 1916*, 3546*, 7675, 10092*, 10778, 11835*, 11836*

Field Survey

During the field survey, BCR Consulting archaeologists did not identify any cultural resources (including prehistoric or historic-period archaeological sites or historic-period buildings) within the project site boundaries. Although records search results indicate that two prehistoric habitation sites (designated P-19-41 and P-19-467, respectively) are crossed by portions of the project alignment, no trace of either site was identified. Disturbances related to adjacent road construction and utility installation and maintenance have resulted in severe disturbances in both locations. Descriptions of each resource is provided below, and comprehensive Department of Park and Recreation (DPR) 523 forms are provided in Appendix A. In general, the entire project site has been subject to disturbances associated with road construction, and with the construction and subsequent demolition of a building that once stood on the southeast corner of Kanan Road and Agoura Road. A concrete footing and asphalt parking lot were noted in this area but were not old enough to warrant consideration as potential historical resources. Undeveloped portions of the project site have been subject to discing for weed abatement. Mechanical grading has recently occurred on the west side of Kanan Road, severely disturbing surficial sediments. Surface visibility was about 50 percent and the sediment was consistent with descriptions in the Natural Setting section, above. Vegetation was dominated by seasonal grasses and there were numerous non-native oak trees located along the project alignment.

P-19-41. This site was originally documented by S.L. Peak as a “Village site: workshop” in 1951. A revisit in 1965 by Michael Glassow and James Hill indicated that the project site was still present, but had been highly disturbed by mechanical excavation equipment. During a site visit in 2000, Clay Singer noted that the site retained artifacts but was highly disturbed. In 2010 Chester King and Jeff Parsons revisited the site and recorded surface artifacts and completed excavation but indicated that the site was highly disturbed and in poor condition. Caprice Harper revisited the site along the Kanan Road frontage and did not identify any

artifacts. BCR Consulting revisited the site along the proposed impacts within the Kanan Road frontage and did not identify any evidence of cultural activity.

P-19-467. This site was originally documented by R.G. Coleman in 1972 on the south side of Agoura Road as a lithic scatter and midden. Clay Singer and J.E. Atwood revisited the site in 1988 and noted the presence of andesite core tools in disturbed context. L. Carbone, D. McDowell, K. Lotah updated the site record in 1996 and after completing subsurface testing indicated that the site had been destroyed. BCR Consulting revisited the site along the proposed impacts within the Agoura Road frontage and did not identify any indications of cultural activity.

RECOMMENDATIONS

The records search revealed that two prehistoric archaeological habitation sites (P-19-41 and P-19-467) have been recorded within its boundaries. The most recent previous study attempted to relocate sites P-19-41 and P-19-467 in 2011 and were not successful (see Harper and Turner 2011). During the current field survey, BCR Consulting archaeologists did not identify any cultural resources (including prehistoric or historic-period archaeological sites or historic-period buildings) within the project site boundaries. No trace of P-19-41 or P-19-467 were identified. Furthermore, project-related impacts within the depicted site locations are proposed in small areas of existing road frontage that have been subject to severe disturbances from road construction and utility installation and maintenance. Based on these results, further evaluation of these two prehistoric sites is not recommended.

The prehistoric resources recorded during this study do indicate sensitivity for buried cultural resources within the project site. Therefore, BCR Consulting recommends that an archaeological monitor be present during all earthmoving activities related to the development of the project site. The monitor would work under the direct supervision of a cultural resources professional who meets the Secretary of the Interior's Professional Qualification Standards for archaeology. The monitor would be empowered to temporarily halt or redirect construction work in the vicinity of any find until the project archaeologist can evaluate it. In the event of a new find, salvage excavation and reporting will be required.

Findings were negative during the Sacred Lands File search with the NAHC. Since the City will initiate and carry out the required Native American Consultation, the results of the consultation are not provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff is available to answer questions and address concerns as necessary.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project

would “directly or indirectly destroy a unique paleontological resource”. The Paleontological Overview provided in Appendix D has recommended that:

> The geologic units underlying the project area are mapped as Quaternary alluvium dating to the Pliocene-Holocene and Miocene marine rocks, both of which are potentially fossiliferous, as well as Tertiary volcanic flow rocks, which have no fossil potential. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (Mammuthus columbi), Pacific mastodon (Mammut pacificus), sabertooth cat (Smilodon fatalis), ancient horse (Equus sp.), and many other Pleistocene megafauna.
>
> Any fossils recovered from the BCR Kanan Road/Agoura Road Ultimate Intersection Improvements Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Quaternary alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

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APPENDIX A

CONFIDENTIAL RECORDS SEARCH RESULTS AND DEPARTMENT OF PARK AND RECREATION 523 FORMS

APPENDIX B

PROJECT PHOTOGRAPHS

Photo 1: Project Site Overview at P-16-41, Kanan Road, East of Agoura Rd (View E)

Photo 2: Graded Lot at P-16-467, West Side of Project Area (View S)

Photo 3: Central Project, East Side of Kanan Road (View N)

Photo 4: Modern Building Footings (View SW)

APPENDIX C

NATIVE AMERICAN HERITAGE COMMISSION
SACRED LANDS FILE SEARCH

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
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nahc@nahc.ca.gov
NAHC.ca.gov

July 29, 2021

David Brunzell
BCR Consulting LLC

Via Email to: david.brunzell@yahoo.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Kanan Road/Agoura Road Ultimate Intersection Improvements Project, Los Angeles County

Dear Mr. Brunzell:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Los Angeles County
7/29/2021

Barbareno/Ventureno Band of Mission Indians
Julie Tumamait-Stenslie, Chairperson
365 North Poli Ave
Ojai, CA, 93023
Phone: (805) 646 - 6214
jtumamait@hotmail.com
Chumash

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA, 93307
Phone: (661) 322 - 0121
chumashtribe@sbcglobal.net
Chumash

Coastal Band of the Chumash Nation
Mariza Sullivan, Chairperson
P. O. Box 4464
Santa Barbara, CA, 93140
Phone: (805) 665 - 0486
cbcntribalchair@gmail.com
Chumash

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org
Gabrieleno

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
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San Gabriel, CA, 91778
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Fax: (626) 286-1262
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Gabrieleno

Gabrielino /Tongva Nation
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Gabrielino

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Gabrielino

Gabrielino-Tongva Tribe
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Gabrielino

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Chumash

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Chumash

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
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Santa Ynez, CA, 93460
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kkahn@santaynezchumash.org
Chumash

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Kanan Road/Agoura Road Ultimate Intersection Improvements Project, Los Angeles County.

APPENDIX D

PALEONTOLOGICAL OVERVIEW

WESTERN SCIENCE CENTER

BCR Consulting LLC
Nicholas Shepetuk
505 West 8th Street
Claremont, CA 91711

July 13, 2021

Dear Mr. Shepetuk,

This letter presents the results of a record search conducted for BCR Kanan Road/Agoura Road Ultimate Intersection Improvements Project in the City of Agoura Hills, Ventura County, California. The project site is located in a non-sectioned area of Township 1 North and Range 18 West on the Thousand Oaks, California (1981) USGS 7.5 minute topographic quadrangle.

The geologic units underlying the project area are mapped as Quaternary alluvium dating to the Pliocene-Holocene and Miocene marine rocks, both of which are potentially fossiliferous, as well as Tertiary volcanic flow rocks, which have no fossil potential. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (*Mammuthus columbi*), Pacific mastodon (*Mammut pacificus*), sabertooth cat (*Smilodon fatalis*), ancient horse (*Equus* sp.), and many other Pleistocene megafauna.

Any fossils recovered from the BCR Kanan Road/Agoura Road Ultimate Intersection Improvements Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Quaternary alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

If you have any questions, or would like further information, please feel free to contact me at amcdonald@westerncentermuseum.org

Sincerely,

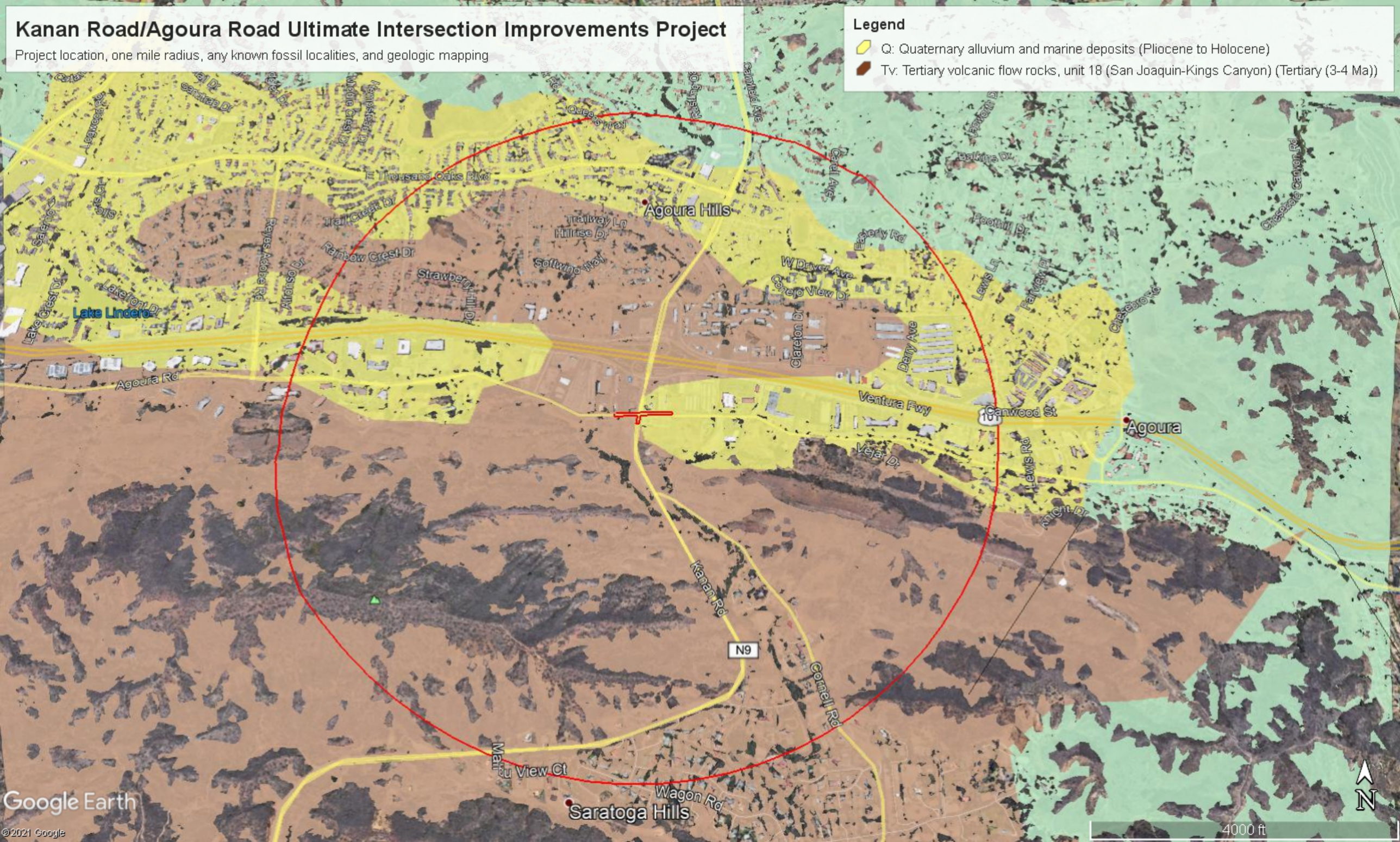
Andrew McDonald
Curator

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

Project location, one mile radius, any known fossil localities, and geologic mapping

Legend

- Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)
- Tv: Tertiary volcanic flow rocks, unit 18 (San Joaquin-Kings Canyon) (Tertiary (3-4 Ma))



Appendix 4.7-1

Geotechnical Investigation Report and Geotechnical Recommendation Memorandum

Kimley»Horn

GEOTECHNICAL INVESTIGATION REPORT
AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

May 25, 2012

KLEINFELDER
Bright People. Right Solutions.

May 25, 2012
Project No. 113541

Mr. Michael Choi
Kimley-Horn and Associates, Inc.
5550 Topanga Canyon Blvd., Suite 250
Woodland Hills, California 91367

Subject: **Geotechnical Investigation Report**
Agoura Road and Kanan Road Widening Project
City of Agoura Hills, California

Dear Mr. Choi:

Kleinfelder is pleased to present this report summarizing our geotechnical investigation for the subject project. The purpose of our geotechnical investigation was to evaluate subsurface soil conditions and provide geotechnical recommendations for the design and construction of the proposed roadway widening. The conclusions and recommendations presented in this report are subject to the limitations presented in Section 6.

Kleinfelder previously provided you with a draft report on May 26, 2011. We understand that Kimley-Horn provided that draft report to the City of Agoura Hills for review and has used that report for preliminary planning purposes. As a result of ongoing project planning with the City of Agoura Hills, Kimley-Horn requested that Kleinfelder perform additional sampling and testing of existing pavement subgrade materials along Agoura Road. Kimley-Horn has also informed Kleinfelder that the proposed work along Kanan Road has changed and that Kanan Road improvements will no longer include widening and modification of existing slopes along Kanan Road. The following report has been updated to include pavement thickness design recommendations based on the additional subgrade sampling. This report has also been updated to include recommendations for rock catchment design along Kanan Road based on our understanding of the current project.

We appreciate the opportunity to provide geotechnical engineering services to you on this project. If you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned at (951) 801-3681, or Eric Philips at (213) 622-3790.

Respectfully submitted,
KLEINFELDER WEST, INC.

Jeffery D. Waller, PE, GE
Project Geotechnical Engineer

C. Eric Philips, PE, GE
Project Manager

Richard F. Escandon, PG, CEG
Principal Engineering Geologist

523 West 6th Street, Suite 620, Los Angeles, CA 90014 p | 213.622.3706 f | 213.612.4954

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Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from alight industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ-sometimes significantly from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the express purpose of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in-this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechnical Engineer For Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone:' 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

IIGER06045.0M

EXECUTIVE SUMMARY

This report presents the results of our geotechnical investigation for the proposed roadway improvements located in Agoura Hills, California. The purpose of this investigation was to explore and evaluate the subsurface conditions along the project alignment and to provide geotechnical recommendations for design and construction.

The soils encountered in our explorations generally consisted of undocumented fill and native soils. In five of our borings, bedrock was encountered underlying the native and artificial fill soil. Undocumented fill was encountered in several borings to depths up to 5 feet below grade. The fill consisted of medium dense to dense silty sand, sandy gravel, clayey sand, and silty clay with varying amount gravels; deeper and/or poorer quality fill may exist between locations investigated. The native soils generally consist of medium dense to dense clayey to silty sand with gravel and some sandy clay.

Based on the results of our field investigation and laboratory testing, it is our professional opinion that the project is feasible from a geotechnical standpoint, provided that the recommendations contained in this report are incorporated into design and construction. Overexcavation of the undocumented fill and upper native soils is recommended to provide uniform support of pavement sections and retaining wall foundations. The primary geotechnical considerations for the proposed development are summarized below.

- The undocumented fill and upper native soils encountered during our investigation, in their current conditions, are not considered suitable for support of the proposed improvements. To provide better support of the proposed structures, we recommend that the existing soil be overexcavated and recompacted as engineered fill.
- Kleinfelder reviewed the referenced reports by GeoSoils Consultants and Gorian and Associates and the analyses presented are considered acceptable for Slopes 1 through 4. We judge that Slopes 1 through 4 may be designed with a maximum gradient of 2:1, horizontal to vertical (H:V).
- Slopes 5 through 7 were evaluated by Kleinfelder as cut slopes constructed at a 2:1 (H:V). We evaluated a cross section of the maximum slope height. The cross section of the maximum slope height, presented as A-A', is located within Slope 7.

- Kanan Road Slope 8 is an engineered cut slope along the east side of Kanan Road. It is approximately 420 feet in length and a maximum of approximately 52 feet high. Although the slope gradient varies along the length observed, generally the cut maintains an overall approximately 55 degree slope, inclined to the west. The slope comprises andesite-dacite flow breccias and agglomerates of the Miocene-age Conejo Volcanics, a member of the Topanga Group. The deposits are very thickly-bedded (3-10 feet thick) and are uniformly inclined northward toward Agoura Road between 35 and 45 degrees. Although the deposits are in most cases well-indurated, cobble-size clasts (average diameter of 3-inches to 12-inches) and boulder-size clasts (average diameter of 12 inches to 3 feet and locally up to 7 feet) are abundantly present and were observed locally eroding out of the slope, presenting a potential rock fall hazard.
- Based on the geologic mapping, the apparent dip of the bedding of Slope 8 is into the slope. Based on our geologic mapping and estimated shear strengths, we calculated a static factor of safety greater than 1.5 for a 1.5:1 (H:V) slope configuration. A steeper slope configuration may also have a calculated factor of safety greater than 1.5 depending on the overall height of the slope cut. However, based on Federal Highway Administration (FHWA) Catchment Design Guide, rockfall mitigation could require relatively wide catchment areas to provide 90% catchment. Because of the proposed construction of a sidewalk near the base of the cut slope, space is not available for a rockfall catchment area. For rockfall catchment, we modeled a 12-foot high catchment fence installed at the toe of the existing cut slope. Kleinfelder should be provided the opportunity to evaluate the final proposed design when it is available.

The executive summary presented herein briefly summarizes results of our geotechnical investigation for the subject project and should be used only in conjunction with recommendations presented in the attached report. It is subject to the limitations included in Section 6 of this report and the ASFE (Association of Engineering Firms Practicing in the Geosciences) insert.

1.0 INTRODUCTION

Kleinfelder performed a geotechnical investigation for the proposed Agoura Road and Kanan Road widening project in Agoura Hills, California. This report summarizes the results of our field exploration, laboratory testing and engineering analysis and provides recommendations for design and construction for the subject project. The location of the project presented in this report is shown on Plate 1, Site Location Map. The purpose of our geotechnical investigation was to evaluate subsurface soil conditions and provide geotechnical recommendations for the design and construction of the proposed road widening project. The scope of our services was presented in our proposal dated June 25, 2010 (Revision 2, July 28, 2010) and proposals for additional work dated November 18, 2010, and November 11, 2011.

Our report includes a description of the work performed, a discussion of the geotechnical conditions observed at the site, and recommendations developed from our engineering analyses of field and laboratory data. An information sheet prepared by ASFE (the Association of Engineering Firms Practicing in the Geosciences) is also included. We recommend that all individuals utilizing this report read the limitations (Section 6.0) along with the attached ASFE document.

1.1 PROJECT DESCRIPTION

We understand that the project consists of widening portions of the existing Agoura Road and adding a sidewalk along Kanan Road in the City of Agoura Hills, California.

Agoura Road is an arterial city street in the City of Agoura Hills, California. Agoura Road is generally one block south of and parallel to U.S. Highway 101 . The project limits of the proposed Agoura Road widening and improvements are generally from the City limits on the west end to the intersection of Cornell Road on the east end. Areas near the center of the project limits have already been improved and are not a part (NAP) of the project. We understand that Agoura Road improvements will include widening the existing 2- to 3-lane roadway to 4 lanes (two lanes in each direction). Improvements will also include constructing curb and gutter and sidewalks along both sides of the street. Some areas of Agoura Road will include median improvements and/or new median construction. Other areas will include diagonal parking and

construction of roundabouts to improve traffic flow and reduce traffic speeds. We anticipate new traffic lanes will be constructed with asphaltic concrete (AC). Unreinforced concrete will be used for sidewalks. Construction of the proposed improvements will include fill slopes up to approximately 15 feet in height, cut slopes up to approximately 60 feet in height, and conventional cantilever retaining walls up to approximately 5 feet in height supported on shallow spread foundations.

Kanan Road intersects Agoura Road towards the easterly end of the City of Agoura Hills. Kanan Road provides passage from Agoura Hills through the Santa Monica Mountains to the coast. The project limits of the proposed Kanan Road improvements are generally from the intersection of Agoura Road on the north end to the intersection of Cornell Road on the south end. We understand that the Kanan Road improvements will include construction of curb and gutter and sidewalks along the street. Previously, the project included widening Kanan road, cutting into an existing approximately 52-foot tall cut slope (Slope 8), and construction of a conventional cantilever retaining wall (approximately 6 feet tall) supported on a shallow spread foundation at the base of the slope. We understand that widening Kanan Road is no longer being considered as part of this project and that further grading of the slope will not be performed.

1.2 SCOPE OF SERVICES

The scope of our geotechnical investigation consisted of a literature review, subsurface explorations, limited geologic mapping, geotechnical laboratory testing, engineering evaluation and analysis, and preparation of this report. A description of our scope of services performed for the geotechnical portion of the project follows.

Task 1 – Background Data Review. We reviewed readily-available published and unpublished geologic literature in our files and the files of public agencies, including selected publications prepared by the California Geological Survey and the U.S. Geological Survey. We also reviewed readily available seismic and faulting information, including data for designated earthquake fault zones as well as our in-house database of faulting in the general site vicinity. In addition, we were provided with the following geotechnical reports.

- Gorian & Associates (2000), Geotechnical Update Report and Results of Geotechnical Investigation to Answer Review Letter by Bing Yen and Associates,

Inc. (dated November 9, 1998), Proposed Development at 30300 Agoura Hills Road, City of Agoura Hills, County of Los Angeles; California, Dated May 4, 2000.

- Gorian & Associates (2006), Geotechnical Update, Proposed Development at 30300 Agoura Hills Road, City of Agoura Hills, County of Los Angeles; California, Dated January 6, 2006.
- GeoSoils Consultants, Inc. (2009), Geologic and Geotechnical Engineering Review of Preliminary Development Plans, Conrad N. Hilton Headquarters Campus, 30500 and 30440 Agoura Road, APN 2061-002-024 and -048, Agoura Hills, California, Dated January 13, 2009
- GeoSoils Consultants, Inc. (2010), Response to City of Agoura Hills Geotechnical Review Sheet (GDI#: 09.00103.0174) Planning/Feasibility Comments dated August 28, 2009, 30500 and 30440 Agoura Road, APN 2061-002-024 and -048, Agoura Hills, California, Dated February 3, 2010.
- GeoSoils Consultants, Inc. (2010), Response to City of Agoura Hills Geotechnical Review Sheet (GDI#: 09.00103.0174) Planning/Feasibility Comments dated August 28, 2009, 30500 and 30440 Agoura Road, APN 2061-002-024 and -048, Agoura Hills, California, Dated May 19, 2010.

Hereinafter in this report, these consultants will be referred to as Gorian and Geosoils. We are assuming the role of Geotechnical Engineer of Record for slopes 1 through 4 as described in this report.

Task 2 – Field Exploration. Kleinfelder supervised excavation of 14 borings. Eleven borings were located along Agoura Road and 3 borings were located along Kanan Road. The approximate locations of the borings are presented on the boring location maps, Plates 2A through 2H. The borings were excavated to provide general information in order to characterize subsurface materials and perform our analyses. Traffic control was set up (traffic control services were provided by RP Barricade of Newbury Park, California) to provide a safe workspace during execution of our fieldwork.

Prior to beginning subsurface exploration, each of the 14 boring locations were marked and Kleinfelder notified Underground Service Alert (USA) of our intent to dig in accordance with California State law. In addition to USA notification, Kleinfelder subcontracted GEOVision (a geophysical services company from Corona, California) to provide borehole geophysical clearance services.

Exploratory borings along Agoura Road were drilled and logged between December 13 and 15, 2010 and on March 2, 2012. Exploratory borings along Kanan Road were drilled and logged on April 26, 2011. The borings were advanced to depths ranging from approximately 1.5 to 20.5 feet below the existing ground surface (bgs) using either a hand-auger, or limited access, or truck-mounted drill rigs operated by CalPac Drilling of Calimesa, California. Bulk and drive samples were retrieved from the borings, sealed and transported to our laboratory for further evaluation. A staff professional of Kleinfelder supervised the sampling, logged and visually classified the excavated soil cuttings and samples retrieved. Bulk soil samples were generally collected within the upper 5 feet of each boring and drive samples were collected at approximate 5-foot intervals using split-spoon samplers. Upon completion of the borings, excavated soil cuttings were used to backfill the excavations. The holes in pavements from the borings were patched with rapid-set concrete. The Logs of Borings B-1 through B-11 are included in Appendix A, Field Exploration at the end of this report. A description of the materials encountered in the additional borings (B-12 through B-14) drilled on March 2, 2012 are presented in tabular form in Section 4.4, Pavement Sections, of this report. The approximate locations of the borings are shown on Plates 2A through 2H, Boring Location Maps.

Task 3 – Limited Geologic Mapping. Rock exposures were only observed at slope 8. To characterize the rock mass where the cut slope (Slope 8) is planned for Kanan Road, a Kleinfelder geologist (under direct supervision of a California- Registered and Certified Engineering Geologist) performed mapping of the exposed rock surface at the proposed cut slope. The rock mass conditions and rock discontinuities will were evaluated for use in slope stability analyses.

Task 4 – Laboratory Testing. Laboratory testing was performed on selected samples to provide parameters for engineering evaluation. Testing consisted of in-situ density and moisture content, wash sieve, sieve and hydrometer, plasticity index, direct shear, expansion index, maximum density and optimum moisture, and R-value. Descriptions of the laboratory tests performed and the results of the testing are presented in Appendix B, Laboratory Test Results.

Task 5 – Geotechnical Analyses. Field and laboratory data were analyzed in conjunction with our understanding of the proposed project to provide geotechnical recommendations for the design and construction. In addition, seismic parameters based on the 2010 California Building Code (CBC) are presented.

Task 6 – Report Preparation. This report summarizes the work performed, data acquired, and our findings, conclusions, and geotechnical recommendations for the design and construction of the proposed improvements. Our report includes the following items:

- Site location map and site plan showing the approximate boring locations;
- Logs of borings, including approximate elevations (Appendix A);
- Results of laboratory tests (Appendix B);
- Discussion of general site conditions;
- Discussion of general subsurface conditions as encountered in our field exploration;
- Discussion of regional and local geology and site seismicity;
- Discussion of geologic and seismic hazards;
- Recommendations for site preparation, earthwork, temporary slope inclinations, fill placement, and compaction specifications, including excavation characteristics of subsurface soil deposits;
- Recommendations for retaining wall foundation design, allowable bearing pressures, and embedment depths;
- Recommendations for seismic design parameters in accordance with the 2010 CBC;
- Recommendations for cut-slope and fill-slope construction; and
- Preliminary evaluation of storm water infiltration.

2.0 SITE CONDITIONS

2.1 SITE DESCRIPTION

Agoura Road is an arterial city street in the City of Agoura Hills, California. Agoura Road is generally one block south of and generally parallels U.S. 101. The project limits of proposed Agoura Road widening and improvements are generally from the City limits on the west end to the intersection of Cornell Road on the east end.

Kanan Road intersects Agoura Road towards the easterly end of the City of Agoura Hills. Kanan Road provides passage from Agoura Hills through the Santa Monica Mountains to the coast. The project limits of proposed Kanan Road improvements are generally from the intersection of Agoura Road on the north end and the intersection of Cornell Road on the south end.

The following is a description of existing site conditions at slopes 1 through 8 shown on Plates 2A through 2H.

2.1.1 Slopes 1 through 4

Slopes 1 through 4 are engineered slopes, each approximately 300 to 600 feet in length, located along Agoura Road, approximately 0.20 mi. to 0.75 mi. west of Reyes Adobe Road. The north-facing slopes are inclined approximately 40 degrees to the north and are generally mapped as underlain by volcanic deposits that dip to the north and underlie varying thicknesses of older alluvium and in some cases artificial fill. In 2008, an investigation by GeoSoils, mapped volcanic breccia and interbedded volcanic sandstones and siltstones that dip 37 to 51 degrees throughout these slopes. Slopes 2 and 3 were found to have as much as 30 to 85 feet of older alluvium overlying the volcanic deposits, respectively. Conversely, Slope 4 did not exhibit any alluvial deposition.

2.1.2 Slopes 5 through 7

Slopes 5 through 7 are engineered slopes, each approximately 300 to 650 feet in length, located along Agoura Road, between Ladyface Court to the west and Roadside Drive to the east. The north-facing slopes are inclined approximately 40 degrees to the north and are generally mapped as underlain by basaltic breccias and flows that dip to the north and underlie younger alluvium and crop out south of Agoura Road. During

December 2010, Kleinfelder's field investigation included three borings; B-2, B-3 and B-4 drilled near Slope 5, Slope 6 and Slope 7, respectively. At B-2, several attempts to hand auger met refusal within the top two feet. At B-3, only partial recovery of very dense yellowish brown poorly graded sand with gravel was encountered to 15 feet below ground surface. At B-4 similar yellowish brown dense to very dense sand and gravel samples were retrieved. Based on regional mapping and the subsurface investigation these slopes are likely composed of basaltic breccias and flows that weather to a dark yellowish or olive brown. Surficial sedimentary deposits are probably minimal.

2.1.3 Slope 8

Kanan Road Slope 8 is an engineered cut slope along the east side of Kanan Road. It is approximately 420 feet in length and a maximum of approximately 52 feet high. Although the slope gradient varies along the length observed, generally the cut maintains an overall approximately 55 degree slope, inclined to the west. The slope comprises andesite-dacite flow breccias and agglomerates of the Miocene-age Conejo Volcanics, a member of the Topanga Group. The deposits are very thickly-bedded (3-10 feet thick) and are uniformly inclined northward toward Agoura Road between 35 and 45 degrees. Although the deposits are in most cases well-indurated, cobble-size clasts (average diameter of 3-inches to 12-inches) and boulder-size clasts (average diameter of 12 inches to 3 feet and locally up to 7 feet) are abundantly present and were observed locally eroding out of the slope, presenting a potential rock fall hazard. Other than the potential rock fall hazard, no evidence of gross instability, in the form of slumps, surface failures, cracking, etc., was observed.

3.0 GEOLOGY

3.1 REGIONAL GEOLOGIC SETTING

The site is located at the northern flank of the Santa Monica Mountains within the Transverse Ranges Geomorphic Province of California. The geologic setting is presented on Plate 3, Regional Geologic Map. The Transverse Ranges Province is characterized by roughly east-west trending, convergent structural features, such as, folding and reverse/thrust faulting, in contrast to the predominant northwest-southeast strike-slip structural trend in the other geomorphic provinces in California (California Geological Survey [CGS], 2002). The convergent deformational features of the Transverse Ranges are a result of north-south crustal shorting due to plate tectonics.

Compressive folding results in the local uplift of the mountains and lowering of the intervening valleys, along with propagation of reverse/thrust faults (including blind thrusts) and filling of the valley basins with alluvial sediments.

The primary geologic units comprising the foothills bordering the project area include the middle Miocene age Topanga Group (11 to 16 million years) and the younger, late Miocene age Modelo Formation (5 million years old). The Topanga Group comprises approximately 19,700 feet (6,000 meters) of sedimentary and volcanic rock, including the Conejo Volcanics, Topanga Canyon and Calabasas Formations (Yerkes and Campbell, 2005; Loyd, 2002). The Modelo Formation, which is not observed within the project area generally overlies the Calabasas Formation unconformably, but is often adjacent to the Calabasas Formation where there is faulting.

3.2 SUBSURFACE CONDITIONS

Subsurface conditions at the project consist of artificial fill, and younger and older alluvial deposits overlying bedrock of the Miocene-age Conejo Volcanics. The Conejo Volcanics consist of a sequence of volcanic flow deposits of basalt, andesitic basalt and volcanic sandstones, and siltstones, generally inclined steeply between approximately 37 and 51 degrees to the north. During December and April 26, 2011, Kleinfelder drilled eleven borings to a maximum depth of 20.5 feet below ground surface and mapped a bedrock slope (Slope 8) on Kanan Road, south of Agoura Road. Additional explorations were made on March 2, 2012 by coring through the asphalt along Agoura Road in order

to collect samples for R-value testing and provide additional support for pavement design recommendations.

The following is a general description of the subsurface conditions and the bedrock characteristics mapped that can be applied to subsurface conditions at the locations explored. Subsurface materials encountered at the locations explored generally consisted of a thin veneer of native older or younger alluvium or artificial fill overlying bedrock of the Conejo Volcanics. Detailed descriptions of the deposits are provided in our logs of borings presented in Appendix A.

3.2.1 Fill and Native Soils

Native and fill soils encountered generally consisted of medium dense to dense clayey to silty sand with gravel and some sandy clay. These soils were generally present locally within the upper 3 to approximately 5 feet. Laboratory testing of fill and native soil samples indicate that the soils encountered can generally be considered expansive. Laboratory testing of three bulk samples of subgrade soils collected at borings B-1, B-6, and B-9 resulted in R-values of 28, 16, and 5, respectively. Laboratory dry densities in borings B-9 and B-11 ranged from approximately 87 to 112 pounds per cubic-foot (pcf). Laboratory moisture contents ranged from approximately 11 to 15 percent.

3.2.2 Bedrock

Bedrock was mapped along Kanan Road at Slope 8. The slope predominantly comprised andesite-dacite clast-supported flow breccias and agglomerates of the Miocene-age Conejo Volcanics. These deposits were largely composed of cobble-size clasts (3-12” diameter) but also exhibited large boulder-size clasts (as large as 7 feet in diameter). These deposits were interbedded with matrix-supported volcanic breccias and sandstones. The deposits are very thickly-bedded (3-10 feet thick) and uniformly dip to the north toward Agoura Road between approximately 35 and 45 degrees. Bedrock materials encountered below native and fill soils were consistent with Conejo volcanics breccia and agglomerate flows with typical blow counts greater than 50 for 6 inches.

3.3 GROUNDWATER

Groundwater was not encountered in any of the borings performed at the site in December 2010 or in April 2011.According to the California Department of Conservation (2000) the historic shallow groundwater level at the site is within 10 feet below the ground surface. These shallow contours generally follow the natural alignment of Lindero Canyon and Medea Creek, which are also aligned with Agoura Road through much of the project site.

Fluctuations of the groundwater level, localized zones of perched water, and variations in soil moisture content should be anticipated during and following the rainy season (late fall to early spring). Irrigation of landscaped areas on and adjacent to the site can also cause a fluctuation of local groundwater levels.

3.4 FAULTING

There is a high potential for moderate to strong seismic shaking to occur during the design life of the project. The site is located in the highly seismic Southern California region within the influence of several fault systems that are considered to be active or potentially active. An active fault is defined by the State of California as being a "sufficiently active and well defined fault" that has exhibited surface displacement within Holocene time (about the last 11,000 years). A potentially active fault is defined by the State as a fault with a history of movement within Pleistocene time (between 11,000 and 1.6 million years ago). These active and potentially active faults are capable of producing potentially damaging seismic shaking at the site. It is anticipated that the project site will periodically experience ground acceleration as the result of earthquakes. Active faults without surface expression (blind faults) and other potentially active seismic sources, which are capable of generating earthquakes, are not currently zoned and are known to be locally present under the region.

According to the City of Agoura Hills General Plan (Agoura Hills, 2010) there are 6 minor faults have been identified within the City of Agoura Hills but are considered inactive. The closest active faults to the site are the Malibu Coast and Simi-Santa Rosa faults located approximately 7.5 and 9.5 miles from the site (Ziony and Jones, 1989).

3.5 ASSESSMENT OF POTENTIAL GEOLOGIC HAZARDS

3.5.1 Fault-Rupture Hazard

Faults identified by the State as being active are not known to be present at the surface at the site. The site is not located within a State of California Earthquake Fault Rupture Hazard Zone (Bryant and Hart, 2007). Based on our geologic literature review, no mapped active or potentially active fault traces are known to transect the project site.

3.5.2 Flood Hazard

The Federal Emergency Management Agency (FEMA) maintains a collection of Flood Insurance Rate Maps (FIRM), which cover the entire United States. These maps identify those areas which may be subjected to 100 year and 500-year cycle floods. Based on our review of FEMA map panel 1244F, the site intersects the 100-year floodplain at two FEMA designated floodways; Madea Creek and Lindero Canyon. Madea Creek is the more prominent of the two floodways.

According to the City of Agoura (Agoura Hills, 2010), seismic induced inundation in Agoura Hills is not expected to occur within the City. Within the City, Lake Lindero is the only sizeable body of water, and considered a low level hazard with respect to seismic induced inundation. Outside the City, several reservoirs are known to exist, including Bard Reservoir, Malibu Lake, Lake Sherwood, Westlake Lake, Las Virgenes Reservoir, and Lake Eleanor. To date these reservoirs have not been considered high priority through the State's Division of Safety of Dams of the Department of Water Resources, who investigates on a highest priority basis, those dams most likely to fail under seismic shaking.

3.5.3 Landsliding

Landslides are ground failures (several tens to hundreds of feet deep) in which a (mass of earth material, including debris and often portions of bedrock) large section of a slope detaches and slides downhill. Landslides are not to be confused with minor surficial slope failures (slumps), which are usually limited to the topsoil zone and can occur on slopes composed of almost any geologic material. Landslides can cause damage to structures both above and below the slide mass. Structures above the slide area are typically damaged by undermining of foundations. Areas below a slide mass can be damaged by being overridden and crushed by the failed slope material.

Several factors can increase the potential for landsliding; slope angle, rock or soil type, bedding and foliation orientation, persistence of fractures, fracture density, zones of shearing or faulting, weathering, clay content, seismicity, water content, groundwater and the presence or absence of vegetation.

Although the area of the project site is not identified as a landslide hazard zone, some of these risk factors for landslides do exist at the site. North-facing slopes along Agoura Road comprise bedrock known to have out of slope bedding dipping approximately 40 to 50 degrees to the north. Additionally, throughout the project area the presence of cobbles and boulders within the Conejo Volcanics breccias and agglomerates may create a rockfall hazard if engineering controls are not applied. The presence of faults or areas of shearing may intensify this affect.

3.5.4 Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade.

Soils in the project area have been identified by the City of Agoura Hills as moderately to highly expansive. The upper fill and alluvial soils (approximately upper 10 feet) are generally considered expansive. Our laboratory testing performed on a single sample resulted in an Expansion Index of 40, which is considered low expansion potential. However, information obtained from the referenced previous investigations by others (Gorian and Geosoils) indicates that medium to highly expansive soils should be expected at the project site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

Based on the results of our field exploration, laboratory testing and engineering analyses conducted during this study, it is our professional opinion that the proposed project is geotechnically feasible, provided the recommendations presented in this report are incorporated into the project design and construction. The primary geotechnical considerations for site development are the presence of expansive soils, stability of proposed slope cuts, and stability of proposed embankment fills.

The following opinions, conclusions, and recommendations are based on the properties of the materials encountered in the borings, the results of the laboratory-testing program, and our engineering analyses performed. Our recommendations regarding the geotechnical aspects of the design and construction of the project are presented in the following sections.

4.2 SEISMIC DESIGN CONSIDERATIONS

4.2.1 CBC Seismic Design Parameters

CBC (2010) Seismic Design Parameters are summarized in the following Table 1. The Seismic Design Category for a structure may be determined in accordance with Section 1613.5.6 of the 2010 CBC.

Table 1
Agoura Road Alignment 2010 CBC Seismic Design Parameters

Design Parameter	Recommended Value for West End of Project Alignment (City Limit) Latitude: 34.144806 Longitude: -118.793711	Recommended Value for East End of Project Alignment (Cornell Road) Latitude: 34.143457 Longitude: -118.76241
Site Class	D	D
S_s (Figure 1613.5(3)) (g)	1.71	1.65
S_1 (Figure 1613.5(4)) (g)	0.72	0.65
F_a (Table 1613.5.3(1))	1.0	1.0

Table 1 (Continued)
Agoura Road Alignment 2010 CBC Seismic Design Parameters

Design Parameter	Recommended Value for West End of Project Alignment (City Limit) Latitude: 34.144806 Longitude: -118.793711	Recommended Value for East End of Project Alignment (Cornell Road) Latitude: 34.143457 Longitude: -118.76241
F_v (Table 1613.5.3(2))	1.5	1.5
S_{MS} (Equation 16-36) (g)	1.71	1.65
S_{M1} (Equation 16-37) (g)	1.07	1.03
S_{DS} (Equation 16-38) (g)	1.14	1.10
S_{D1} (Equation 16-49) (g)	0.72	0.69

4.2.2 Slope Stability

The results of slope stability analyses for slopes 1 through 4 are presented in reports prepared by Gorian and GeoSoils, referenced herein. We reviewed slope stability analysis performed by Gorian and GeoSoils for slopes 1 through 4 and generally concur with their slope stability calculations. Additional investigation and analysis for slopes 1 through 4 was excluded from our authorized scope of work.

Kleinfelder performed slope stability analyses to evaluate proposed cut-slopes 5 through 7, the existing slope 8 configuration, and proposed roadway embankment fill slopes. Conclusions and recommendations for slopes 1 through 8 are presented below.

4.2.2.1 Materials Strength Parameters

Due to the lack of detailed geologic data for slopes 5 through 7, the slopes were analyzed as homogenous soil slopes. Shear strength parameters used in our analysis for proposed cut slopes 5 through 7 are based on conservative averaged ultimate direct shear strengths (cohesion (C) = 200 pounds per square-foot and friction angle (Φ) = 28 degrees) resulting from laboratory testing of soil samples collected in Kleinfelder Boring B-4 and B-5, and from previously published data presented in referenced reports by GSC, 2009. Cross-section A-A' depicts the maximum anticipated cut slope height (46 feet) proposed for Slopes 5, 6, and 7.

Shear strength parameters used in our analysis for proposed roadway embankment fill slopes are based on assumed conservative direct shear strengths and the results of our field investigation. Qualification testing of fill materials during construction will be required to verify strength parameters greater than or equal to cohesion (C) = 175 pounds per square-foot and friction angle (Φ) = 32 degrees. Embankment fill slope parameters are generally based on surficial stability in order to achieve a minimum Factor of Safety (FS) of 1.5 with maximum slope gradients of 2:1 (H:V).

Shear strength parameters for slope 8 were based on the results of our limited geologic mapping along the base of the existing slope and published geologic data (Conejo Volcanics). Anisotropic strengths were assigned to the bedrock materials to account for the directional shear strength based on bedding strike and dip. Apparent dip of the bedding is estimated to be approximately 35 degrees into slope. Along bedding strengths used are (C) = 350 psf and (Φ) = 24 degrees. Cross bedding strengths used are (C) = 1,000 psf and (Φ) = 33 degrees.

4.2.2.2 Analysis Methodology

Global slope stability analyses were performed using the computer program SLIDE 5.044 developed by Rocscience. SLIDE is a two-dimensional, limit equilibrium slope stability analysis program. The program was used perform random failure surface searches using Bishop Simplified method. Both static and pseudo-static stability analyses were performed. Pseudo-static analysis was performed in general accordance with guidelines presented in California Geological Survey (CGC, 2008) Special Publication 117A (SP 117A), Guidelines for Evaluating and Mitigating Seismic Hazards in California.

In order to evaluate if a slope is anticipated to experience lateral deformation during a design level seismic event, SP 117A guidelines require that the horizontal seismic coefficient used in pseudo-static slope stability analyses be determined from a screening analysis procedure. Generally, if the calculated factor of safety (F.S.) is 1.0 or less, further analysis is necessary to calculate predicted lateral deformation. If the calculated F.S. is 1.0 or greater, then it is assumed that lateral deformation would be on the order of 6 inches or less during a design level seismic event.

Input for the screening procedure for estimating the horizontal seismic coefficient include the maximum horizontal acceleration at the site for a soft rock condition (MHAr)

corresponding to a seismic hazard level with a return period of 475 years or 10% of probability of exceedance in 50 years, the mode earthquake magnitude (M) and distance (r) associated with this maximum horizontal acceleration, and the allowable slope displacement. Based on the CGS web site, site acceleration for a return period of 475 years and allowable slope displacements of approximately 6 inches, the estimated seismic coefficient keq is 0.16.

Kleinfelder also performed surficial slope stability analysis (infinite slope stability analysis). The assumptions made for our analyses are summarized below:

- Soil slopes with maximum slope gradients of 2:1 (H:V).
- The assumed slip surface is 4 feet from the slope surface and parallel to the slope surface.
- The soil is saturated to the depth of the assumed slip surface.
- There is water seepage downslope to a depth of 4 feet and the water seepage flows parallel to the slope surface.

The results of our analysis are presented in Appendix C of this report. The following presents our recommendations for construction of proposed slopes associated with the project.

4.2.2.3 Slopes 1 through 4

Based on our review of the analysis presented in the referenced GeoSoils and Gorian reports, we recommend that slopes 1 through 4 be constructed at a maximum slope gradient of 2:1 (H:V).

Detailed subsurface investigation of the conditions at each of these slopes was beyond our authorized scope of services. Though conditions could vary, we do not anticipate encountering adverse bedding conditions during grading. If adverse bedding conditions are encountered, redesign of the subject slopes may be necessary resulting in delays during construction. To reduce the risk of construction delays, confirmation borings could be excavated through the top of each proposed cut slope prior to construction. Kleinfelder can provide a proposal for additional scope and fee if this option is desired. Kleinfelder should be retained to provide full-time observation and geologic mapping

during construction of Slopes 1 through 4 to verify and validate assumptions drawn from the results of this investigation.

4.2.2.4 Slopes 5 through 7

Due to the lack of detailed geologic data for slopes 5 through 7, the slopes were analyzed as a homogenous soil slopes. Proposed slopes were analyzed at a gradient of 2:1 (H:V), as shown on Plate 3, Cross Section A-A'. The results of our slope stability analyses indicate calculated factors of safety of 1.64 for the static condition, 1.19 for the pseudostatic condition, and 1.17 for the Screening Analysis based on Special Publication 117A (SP 117A). We recommend that slopes 5 through 7 be constructed at a maximum gradient of 2:1 (H:V).

Detailed subsurface investigation of the conditions at each of these slopes was beyond our authorized scope of services. Though conditions could vary, we do not anticipate encountering adverse bedding conditions during grading. If adverse bedding conditions are encountered, redesign of the subject slope may be necessary resulting in delays during construction. To reduce the risk of construction delays, confirmation borings could be excavated through the top of each proposed cut slope prior to construction. Kleinfelder can provide a proposal for additional scope and fee if this option is desired. Kleinfelder should be retained to provide full-time observation and geologic mapping during construction of Slopes 5 through 7 to verify and validate assumptions drawn from the results of this investigation.

4.2.2.5 Slope 8

Slope 8 was evaluated based on limited surface geologic mapping, one shallow boring (B-10) performed near the toe of the existing cut slope, and geologic research of the general bedrock parameters. Based on the geologic mapping, the apparent dip of the bedding is approximately 35 degrees into the slope. Based on our understanding that widening Kanan Road is no longer being considered as part of this project and that further grading of the slope will not be performed, Kleinfelder evaluated the existing slope configuration. The results of our slope stability analyses indicate a factor of safety greater than 1.5. However, cobble-size clasts and boulder-size clasts are abundantly present and were observed locally eroding out of the slope, presenting a potential rock fall hazard. Based on Federal Highway Administration (FHWA) Catchment Design

Guide, rockfall mitigation could require relatively wide catchment areas to provide 90% catchment. Because of the proposed construction of a sidewalk near the base of the cut slope, space is not available for a rockfall catchment area. For rockfall catchment, we modeled a 12-foot high catchment fence installed at the toe of the existing cut slope. Additional options for rockfall catchment are presented in Section 4.2.2.7, Rockfall Hazard Mitigation and Catchment Design.

Detailed subsurface investigation of the conditions at each of these slopes was beyond our authorized scope of services. Though conditions could vary, we do not anticipate encountering adverse bedding conditions during grading. If adverse bedding conditions are encountered, redesign of the subject slope may be necessary resulting in delays during construction. To reduce the risk of construction delays, confirmation borings could be excavated through the top of each proposed cutslope prior to construction. Kleinfelder can provide a proposal for additional scope and fee if this option is desired. Kleinfelder should be retained to provide full-time observation and geologic mapping during scaling to remove the larger and loose rock blocks and during construction of rockfall catchment to verify and validate assumptions drawn from the results of this investigation.

4.2.2.6 Proposed Embankment Fills

Based on the referenced project plans, embankment fills are anticipated along the proposed Agoura Road alignment. Embankment fills, anticipated to be less than 15 feet in height, should be supported on competent bedrock, native soil, or a minimum of 2 feet of engineered fill prepared in accordance with the recommendations presented in Section 4.6, Earthwork. Embankment fills should be keyed at the base of the slope at least 3 feet deep and benched horizontally into the existing slope at least 6 feet and every 4 feet vertically. Recommended stability fill details are presented on Plate 5, Benching Details.

4.2.2.7 Rock Fall Hazard Mitigation and Catchment Design

Based on observations during geologic mapping along cut-slope 8, rock fall may be considered a hazard during the life of the project. We performed computer assisted analyses modeling rock fall simulations for the existing slope 8. We used the computer

program Colorado Rockfall Simulation Program (CRSP) for our analysis. The following describes input parameters used for our CRSP analysis.

Our simulations were modeled with 6-inch, one-foot, and two-foot diameter spherical-shaped rock blocks consistent with observed rock blocks along the existing cut-slope face. For each simulation, the model rolled 500 rock blocks. We chose normal coefficients, tangential coefficients, and surface roughness values for the CRSP runs based on field observations and recommendations from the CRSP Manual for different slope descriptions related to slope lithology (Jones, et. al., 2000). Table 2 summarizes the range of values used for the CRSP coefficients.

Table 2
Rock Slope Rock Fall Coefficient Ranges

Lithology	CRSP Slope Description	Normal Coefficient Range	Tangential Coefficient Range	Surface Roughness Coefficient Range
Competent Bedrock	Bedrock Slope	0.25-0.30	0.85-0.90	0.25-1.0
Weathered Bedrock/Colluvial	Bedrock Slope	0.20-0.25	0.80-0.85	0.50-1.0
Soil	Firm Soil Slope	0.15-0.25	0.75-0.80	0.50-1.0
Catchment Area	Firm Soil Slope	0.15-0.25	0.75-0.80	0.50-1.0
Catchment Fence	NA	0.60-0.80	0.85-0.95	0.20-0.30

The existing slope is approximately 52-feet in height and has an inclination of approximately 55 degrees (0.7H:1V). Because of the proposed construction of a sidewalk near the base of the cut slope, space is not available for a rockfall catchment area. For rockfall catchment, we modeled a 12-foot high catchment fence installed at the toe of the existing cut slope. Based on our analyses, the 12-foot high catchment fence provides approximately 90 percent rockfall catchment from the existing cut slope. The analysis indicates that the maximum kinetic energy generated from a two-foot diameter rock block is approximately 10,000 ft-lbs. The rockfall fence should be designed and sized to contain this energy level.

Another option to reduce the potential for rockfall is to install a wire mesh drape system on the cut slope. Typically, the wire mesh system is anchored at the top of the cut slope with rock anchors. The wire mesh is then draped down over the cut slope and hung to about 3-5 feet above the ground. If rockfall occurs, the wire mesh is designed to constrain the rockfall to slowly move down the slope and fall out the bottom of the drape. The rockfall can then be periodically cleaned up from the base of the slope. The wire mesh system should be designed for the rock block sizes present in the existing slope and the support anchors and wire mesh sized appropriately.

For either the catchment fence or wire mesh option discussed above, we recommend that the existing cut slope be scaled to remove the larger and loose rock blocks present. This will further reduce the potential for rockfall from the existing cut slope.

4.3 RETAINING WALLS

4.3.1 General

Based on the results of our field exploration, laboratory testing and geotechnical analyses, the proposed retaining walls may be supported on conventional spread foundations placed entirely on engineered fill or competent bedrock. If founded on engineered fill, spread foundations should be underlain by a minimum 2 feet of engineered fill constructed as recommended in Section 4.7. Recommendations for the design lateral earth pressures and design of spread foundations are presented below. Transitions from bedrock to engineered fill within a single footing should be avoided. If this condition exists, the bedrock portion should be overexcavated to provide the minimum fill thickness recommended above.

The recommended lateral earth pressures assume that drainage is provided behind the walls to prevent the buildup of hydrostatic pressures. Walls should be provided with drains to reduce the potential for the buildup of hydrostatic pressure. Drains may consist of a 2-foot-wide zone of ¾-inch rock wrapped in filter fabric located immediately behind the wall extending to within 1 foot of the ground surface. Perforated Schedule 40 PVC pipe should be installed within the rock at the base of the drain and sloped to discharge to a suitable collection facility. Commercially available drainage panels could be used as an alternative. The product manufacturer's recommendations should be

followed in the installation of a drainage panel. Expansive soils should not be used as wall backfill material.

Where slope extend at inclinations greater than horizontal behind retaining walls, a minimum of a 2-foot drainage swale should be constructed at the top of the wall to limit the amount of surface water infiltrating behind the wall

4.3.2 Spread Footings

Spread footings founded on engineered fill may be designed for a net allowable bearing pressure of 1,500 pounds per square foot (psf) for dead plus sustained live loads. Spread footings founded entirely on bedrock may be designed for a net allowable bearing pressure of 3,000 pounds per square foot (psf) for dead plus sustained live loads. The footings should be established at a depth of at least 24 inches below the lowest adjacent exterior grade and at least 12 inches into the bedrock. A one-third increase in the above bearing pressures can be used for wind or seismic loads.

The structural engineer should design the footing dimension and reinforcement; however spread footings should have a minimum width 24 inches. Structurally continuous foundations should not be directly founded on both engineered fill and bedrock. If the proposed foundations are anticipated to directly bear on both engineered fill and bedrock, a structural break should be constructed in the foundation to limit the distress caused by differential settlement.

4.3.3 Estimated Settlements

We estimate total static settlement for foundations designed in accordance with the recommendations presented above and supported entirely on engineered fill or bedrock to be less than ½ inch.

4.3.4 Lateral Resistance

Lateral load resistance may be derived from passive resistance along the vertical sides of the footings, friction acting at the base of the footing, or a combination of the two. An allowable passive resistance of 250 psf per foot of depth may be used for design. Allowable passive resistance values should not exceed 1,500 psf. An allowable coefficient of friction value of 0.30 between the base of the footings and the engineered fill soils and competent bedrock can be used for sliding resistance using the dead load forces. Friction and passive resistance may be combined without reduction. We

recommend that the first foot of soil cover be neglected in the passive resistance calculations.

4.3.5 Lateral Earth Pressures

Design earth pressures for retaining walls depend primarily on the allowable wall movement, wall inclination, type of backfill materials, backfill slopes, surcharges, and drainage. The earth pressures provided assume that that a non-expansive backfill will be used and a drainage system will be installed behind the walls, so that external water pressure will not develop. If a drainage system will not be installed, the wall should be designed to resist hydrostatic pressure in addition to the earth pressure.
The recommended active lateral earth pressures for horizontal backfills using granular relatively non-expansive soils on walls that are free to rotate at least 0.1 percent of the wall height is 35 pcf. The recommended active lateral earth pressures for backfills sloping not steeper than 1.5:1 using granular relatively non-expansive soils on walls that are free to rotate at least 0.1percent of the wall height is 60 pcf.

The above lateral earth pressures do not include the effects of surcharges (e.g., traffic, footings), compaction, or truck-induced wall pressures. Any surcharge (live, including traffic, or dead load) located within a 1:1 plane drawn upward from the base of the excavation should be added to the lateral earth pressures. The lateral contribution of a uniform surcharge load located immediately behind walls may be calculated by multiplying the surcharge by 0.33 for cantilevered walls. Walls adjacent to areas subject to vehicular traffic should be designed for a 2-foot equivalent soil surcharge (240 psf). Lateral load contributions from other surcharges located behind walls may be provided once the load configurations and layouts are known.

4.4 PAVEMENT SECTIONS

New pavement sections should be designed considering the parameters presented below. Laboratory testing of seven bulk samples of the pavement subgrade soils collected at borings B-1, B-6, B-8, B-9 and B-12 through 14 resulted in R-values ranging from 5 to 26. Due to uncertainty of soil conditions between the locations of our borings, the following table presents recommended pavement sections based on an average R-value of 16. Additional explorations were performed on March 2, 2012. The materials encountered in those explorations are described in the Table 3 below.

Table 3
Existing Conditions Encountered at Borings B-12 Through 14

Boring	Asphaltic Concrete (inches)	Aggregate Base (inches)	Comments Regarding Condition of Aggregate Base and Subgrade Soils
B-12	8	4	Boring extended approximately 39 inches below pavement surface; approximately 1 foot of cemented sand was encountered below the aggregate base (possible cement treated sub-base); and sandy clay was encountered below the cemented sand. An R-value of 16 resulted from laboratory testing of the clayey subgrade material. The sample was prepared to try to segregate sandy material that was potentially mixed by sampling through the overlying layer.
B-13	9.5	No Base	Boring extended approximately 24 inches below pavement surface. Aggregate base was not encountered below the asphalt. Sandy clay was encountered below the asphalt. An R-value of 13 resulted from laboratory testing of the clayey subgrade material.
B-14	5	14	Boring extended approximately 36 inches below pavement surface. Approximately 14 inches of aggregate base was encountered below the asphalt. Sandy clay with some gravel was encountered below the aggregate base. An R-value of 15 resulted from laboratory testing of the clayey subgrade material.

Recommended pavement sections were developed using Caltrans Highway Design Manual (last updated July, 2009) and presented in Table 4 below.

Table 4
Recommended Asphalt Pavement Sections
(Design R-Value = 16)

Traffic Index (TI)	Asphalt Concrete Pavement Thickness (inches)	Class 2 Aggregate Base Thickness* (inches)	Overall Pavement Section Thickness (inches)
7	4.5	13	17.5
	5.0	11.5	16.5
	5.5	10	15.5
	6.0	9	15
9	5.5	17.5	23
	6.0	16	22
	6.5	15	21.5
	7.5	13	20.5

Table 4 (Continued)
Recommended Asphalt Pavement Sections
(Design R-Value = 16)

Traffic Index (TI)	Asphalt Concrete Pavement Thickness (inches)	Class 2 Aggregate Base Thickness* (inches)	Overall Pavement Section Thickness (inches)
9.5	6.0	18	24
	6.5	17	23.5
	7.5	15	22.5
	8.0	14	22

*Aggregate base thicknesses should be increased by 15% to account for expansion potential of subgrade soils where clayey conditions are encountered during construction. Additional R-value testing may also be necessary where clayey conditions are encountered during construction.

A traffic study was not performed by Kleinfelder to generate the TI's presented above. The TI's above are assumed values based on our experience with similar projects and requests made by you. These TI's should be verified and validated by the project Civil Engineer. Changes in the traffic indices/volumes may affect the corresponding pavement sections.

The pavement sections provided above are contingent on the following recommendations being implemented during construction.

- Pavement sections should be underlain by a minimum of 24 inches of newly placed engineered fill, prepared as described within this report.
- The subgrade soils should be in a relatively stable, non-yielding condition at the time engineered fill and/or aggregate base materials are placed and compacted.
- Aggregate base materials should be placed at near optimum moisture content (within 3 percent) and compacted to at least 95 percent relative compaction.
- Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils and aggregate base materials are not allowed to become wet.
- Aggregate base materials should meet current Caltrans specifications for Class 2 aggregate baserock or "Greenbook" specifications for crushed aggregate base.
- Asphalt paving materials and placement methods should meet current Caltrans or "Greenbook" specifications for asphalt concrete.
- All concrete curbs separating pavement and landscaped areas should extend into the subgrade and below the bottom of adjacent, aggregate base materials.

- A representative of the geotechnical engineer should evaluate materials encountered during construction. Based on field observations during grading activities, additional R-Value testing may be needed. Modified pavement design recommendations may be presented after reviewing post-grading R-value test results.

4.5 CONCRETE FLATWORK

Prior to casting concrete flatwork, subgrade soils should be moisture conditioned and recompacted, as recommended in Section 4.7. Due to the potentially expansive soils at the site, the moisture content of the subgrade soils should be maintained at or above optimum prior to the placement of any flatwork. In the event that these subgrade soils are allowed to dry out, the exposed subgrade should be re-moisture conditioned.

Concrete walks for pedestrian traffic or landscape should be at least four inches thick. Weakened plane joints should be located at intervals of about 6 feet. Careful control of the water/cement ratio should be performed to avoid shrinkage cracking due to excess water or poor concrete finishing or curing.

4.6 STORM WATER INFILTRATION

The rate of infiltration is a function of saturated hydraulic conductivity, hydraulic gradient, and wetted area. Saturated hydraulic conductivity (permeability) of a soil, when considering infiltration system design, may be approximated by correlation with the grain size distribution. Correlations do not generally account for the in-situ compaction and/or density of the infiltrating soils. Vertical hydraulic gradient is estimated based on the depth to groundwater. Where groundwater, is deep (generally greater than 50 feet below the bottom of large infiltration ponds) and impermeable or low permeable layers are also deep, the saturated hydraulic conductivity is generally equivalent to the rate of infiltration. This is because the hydraulic gradient (i) can be considered to be equal to 1 so long as the wetting front moves vertically downward. This will be true only when depth to groundwater or low hydraulic conductivity soil layer is sufficient. When the wetting front encounters the groundwater table or a soil layer with low hydraulic conductivity the vertical hydraulic gradient can rapidly approach zero, resulting in greatly reduced infiltration and groundwater mounding.

Storm water infiltration systems are generally applicable for soil sites that have estimated long-term infiltration rates of at least ½ inch per hour. Based on the results of our field investigation, the majority of the near surface soils are fine-grained. Additionally, groundwater may be seasonably as shallow as 10 feet below ground surface. Therefore, long-term infiltration rates are anticipated to be much lower than a ½-inch per hour and infiltration systems may be subject to long-term ponding and/or overflow. We recommend that storm water infiltrations systems not be used for this project.

4.7 EARTHWORK

4.7.1 General

Site preparation and earthwork operations should be performed in accordance with applicable codes, safety regulations and other local, state or federal specifications, and the recommendations included in this report. References to maximum unit weights are established in accordance with the latest version of ASTM Standard Test Method D1557. The earthwork operations should be observed and tested by a representative of Kleinfelder.

4.7.2 Site Preparation

Organic, inert and oversized materials (greater than 3 inches in maximum dimension) should be stripped and isolated prior to removal of reusable soils. Pavement should be stripped and disposed off-site or pulverized and mixed with the on-site soils and reused as fill material. Overexcavation should remove any loose or soft earth materials until a firm, unyielding or competent subgrade is exposed, as evaluated by the geotechnical engineer. Overexcavation must expose a firm, non-yielding subgrade that is free of significant voids and organics. The subgrade soils exposed at the bottom of overexcavation should be observed by a geotechnical engineer from our office prior to the placement of any fill. Prior to the placement of engineered fill, after site preparation, the bottom of the overexcavations should be proof-rolled and compacted to at least 90 percent relative compaction to the satisfaction of the geotechnical engineer-of-record. Additional removals, scarification and drying operations, and/or subgrade reinforcement may be required to stabilize soft, yielding subgrades.

The grading contractor should anticipate that additional processing and moisture conditioning of the onsite soils will be necessary during site grading to obtain material which is acceptable to be placed as engineered fill, as described in this report. The moisture conditioning of some of the soils will require significant drying and some soils will require the addition of moisture. These conditions could hamper equipment maneuverability and efforts to compact site soils to the recommended compaction criteria. Disking to aerate, chemical treatment, replacement with drier material, stabilization with a geotextile fabric or grid, or other methods may be required to mitigate the effects of excessive soil moisture and facilitate earthwork operations.

The grading contractor should also anticipate encountering oversized material greater than 3 inches in maximum dimension within 5 feet of the existing subgrade. Quantifying the actual amount of oversize material that could be encountered requires additional investigation.

4.7.3 Fill Material

We anticipate that most of the on-site soils may be reusable as engineered fill once oversized materials greater than 3 inches in dimension (if encountered) have been removed and after organic and inorganic debris are cleared and disposed off-site. Fill should be placed in lifts no greater than 8 inches thick, loose measurement, and moisture conditioned to between 2 and 4 percent over optimum moisture. The engineered fill soil should be compacted to at least 90 percent relative compaction but generally no more than 92 percent relative compaction. In order to achieve 95 percent compaction of aggregate base, compaction of the upper 6 inches of pavement subgrade soils to 95 percent may be required and is considered acceptable.

If imported fill soils are to be used for engineered fill, they should be sampled and tested and approved by the geotechnical engineer prior to being transported to the site. In general, well-graded mixtures of gravel, sand and non-plastic silt are acceptable for use as import fill. Fine-grained soils should not be imported onsite for placement as engineered fill

4.7.4 Excavation Characteristics and Wet Soils

Our soil borings were performed with moderate effort using a hollow stem auger. The contractor should anticipate moderate excavation effort and plan accordingly. The Slope 8 bedrock may be moderately difficult to excavate and the grading contractor may

require special equipment for this portion of the project. Kleinfelder did not perform borings within the Slope 8 bedrock so conclusions regarding the excavatability of the bedrock are based upon our knowledge of the material in the area. Actual site conditions may be different. The contractor should anticipate encountering particles greater than 3 inches in diameter and may need to crush the material to make it reusable from a particle size standpoint.

4.7.5 Temporary Excavations

Temporary cuts up to 10 feet high may be sloped back at an inclination of no steeper than 1.5:1 (horizontal to vertical) in existing site soils. Minor sloughing and/or raveling should be anticipated as they dry out. If signs of slope instability are observed, the inclination recommended above should be decreased until stability of the slope is obtained. In addition, at the first signs of slope instability, the geotechnical engineer should be contacted. Where space for sloped embankments is not available, shoring will be necessary. Shoring and/or underpinning of existing improvements that are to remain may be required to perform the demolition and overexcavation. Excavations within a 1.5:1 plane extending downward from a horizontal distance of 2 feet beyond the bottom outer edge of existing improvements should not be attempted without bracing and/or underpinning the improvements. Personnel from the geotechnical engineer should observe the excavations so that modifications can be made to the excavations, as necessary, based on variations in the encountered soil conditions. All applicable excavation safety requirements and regulations, including OSHA requirements, should be met.

Where sloped excavations are used, tops of the slopes should be barricaded so that vehicles and storage loads do not encroach within a distance equal to the depth of the excavation. Greater setback may be necessary when considering heavy vehicles, such as concrete trucks and cranes. Kleinfelder should be advised of such heavy vehicle loadings so that specific setback requirements can be established. If temporary construction slopes are to be maintained during the rainy season, berms are recommended along the tops of the slopes to reduce runoff that may enter the excavation and erode the slope faces.

Temporary, shallow excavations with vertical side slopes less than 4 feet high should generally be stable, although sloughing may be encountered. Vertical excavations greater than 4 feet high should not be attempted without appropriate shoring to prevent

local instability. All trench excavations should be braced and shored in accordance with good construction practice and all applicable safety ordinances and codes. The contractor should be responsible for the structural design and safety of the temporary shoring system, and we recommend that this design be submitted to the Kleinfelder for review to check that our recommendations have been incorporated. For planning purposes, the on-site soils may be considered Type C, as defined using the current OSHA soil classification.

Stockpiled (excavated) materials should be placed no closer to the edge of an excavation than a distance equal to the depth of the excavation, but no closer than 4 feet. All trench excavations should be made in accordance with OSHA requirements.

4.7.6 Trench Backfill

If relocation of utilities is necessary, pipe or utility bedding should consist of sand or similar granular material having a minimum sand equivalent value of 30. The sand should be placed in a zone that extends a minimum of 6 inches below and 12 inches above the pipe for the full trench width. The bedding material should be compacted to a minimum of 90 percent of the maximum dry density. Trench backfill above pipe bedding may consist of approved, on-site or import soils placed in lifts no greater than 8 inches loose thickness and compacted to 90 percent of the maximum dry density but no more than 92 percent of the maximum dry density. In order to achieve 95 percent compaction of aggregate base, compaction of the upper 6 inches of pavement subgrade soils to 95 percent may be required and is considered acceptable. Jetting of pipe bedding or trench backfill materials is not permitted.

4.7.7 Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, perched groundwater, drought, or other factors and may cause unacceptable settlement or heave of pavements, sidewalks, curbs, gutters and other structures supported over these materials. The soils encountered during our investigation have a low expansion potential. However, based on previous work in the area and regional information, medium to highly expansive soils may be encountered with the limits of the project. The recommendations presented herein are intended to reduce the effects of the expansive

nature of the site soils. The potential for negative impacts of expansive soils cannot be completely eliminated unless they are completely removed from the site or chemically altered.

5.0 ADDITIONAL SERVICES

5.1 ADDITIONAL GEOTECHNICAL INVESTIGATION

Our authorized scope included limited geotechnical investigation. Conditions could vary between the locations explored. We do not anticipate encountering adverse bedding conditions during grading. However, if adverse bedding conditions are encountered, redesign of proposed slopes may be necessary resulting in delays during construction. To reduce the risk of construction delays, confirmation borings could be excavated through the top of each proposed cut slope prior to construction. Kleinfelder can provide a proposal for additional scope and fee if this option is desired. Kleinfelder should be retained to provide full-time observation and geologic mapping during construction of all slopes constructed for this project.

5.2 PLANS AND SPECIFICATIONS REVIEW

We recommend that Kleinfelder perform a general review of the project plans and specifications before they are finalized to verify that our geotechnical recommendations have been properly interpreted and implemented during design. If we are not accorded the privilege of performing this review, we can assume no responsibility for misinterpretation of our recommendations.

5.3 CONSTRUCTION OBSERVATION AND TESTING

The construction process is an integral design component with respect to the geotechnical aspects of a project. Because geotechnical engineering is an inexact science due to the variability of natural processes, and because we sample only a limited portion of the soils affecting the performance of the proposed structure, unanticipated or changed conditions can be encountered during grading. Proper geotechnical observation and testing during construction are imperative to allow the geotechnical engineer the opportunity to verify assumptions made during the design process. Therefore, we recommend that Kleinfelder be retained during the construction of the proposed improvements to observe compliance with the design concepts and geotechnical recommendations, and to allow design changes in the event that

subsurface conditions or methods of construction differ from those assumed while completing this study.

Our services are typically needed at the following stages of grading.

- after demolition;
- during grading;
- after the overexcavation, but prior to scarification;
- during utility trench backfill;
- during base placement and site paving; and
- after excavation for foundations.

6.0 LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

The scope of services was limited to performing 11 borings. It should be recognized that definition and evaluation of subsurface conditions are difficult. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. The conclusions of this assessment are based on our field investigations, laboratory analysis, and engineering evaluations.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service, which provide information for their purposes at acceptable levels of risk. The client and key members of the design team should discuss the issues covered in this report with Kleinfelder, so that the issues are understood and applied in a manner consistent with the owner's budget, tolerance of risk and expectations for future performance and maintenance.

Recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is possible that soil, rock, or groundwater conditions could vary between or beyond the points explored. If soil, rock, or groundwater conditions are encountered during construction that differ from those described herein, the client is responsible for ensuring that Kleinfelder is notified immediately so that we may reevaluate the recommendations of this report. If the scope of the proposed construction changes from that described in this report, the conclusions and recommendations contained in this report are not considered valid unless the changes

are reviewed, and the conclusions of this report are modified or approved in writing, by Kleinfelder.

As the geotechnical engineering firm that performed the geotechnical evaluation for this project, Kleinfelder should be retained to confirm that the recommendations of this report are properly incorporated in the design of this project, and properly implemented during construction. This may avoid misinterpretation of the information by other parties and will allow us to review and modify our recommendations if variations in the soil conditions are encountered. As a minimum Kleinfelder should be retained to provide the following continuing services for the project:

- Review the project plans and specifications, including any revisions or modifications;
- Observe and evaluate the site earthwork operations to confirm subgrade soils are suitable for construction of pavements and placement of engineered fill;
- Confirm engineered fill is placed and compacted per the project specifications.

The scope of services for this subsurface exploration and geotechnical report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.

Kleinfelder cannot be responsible for interpretation by others of this report or the conditions encountered in the field. Kleinfelder must be retained so that all geotechnical aspects of construction will be monitored on a full-time basis by a representative from Kleinfelder, including site preparation, preparation of foundations, installation of piles, and placement of engineered fill and trench backfill. These services provide Kleinfelder the opportunity to observe the actual soil, rock, and groundwater conditions encountered during construction and to evaluate the applicability of the recommendations presented in this report to the site conditions. If Kleinfelder is not retained to provide these services, we will cease to be the engineer of record for this project and will assume no responsibility for any potential claim during or after construction on this project. If changed site conditions affect the recommendations presented herein, Kleinfelder must also be retained to perform a supplemental evaluation and to issue a revision to our original report.

This report, and any future addenda or reports regarding this site, may be made available to bidders to supply them with only the data contained in the report regarding subsurface conditions and laboratory test results at the point and time noted. Bidders may not rely on interpretations, opinions, recommendations, or conclusions contained in the report. Because of the limited nature of any subsurface study, the contractor may encounter conditions during construction which differ from those presented in this report. In such event, the contractor should promptly notify the owner so that Kleinfelder's geotechnical engineer can be contacted to confirm those conditions. We recommend the contractor describe the nature and extent of the differing conditions in writing and that the construction contract include provisions for dealing with differing conditions. Contingency funds should be reserved for potential problems during earthwork. Furthermore, the contractor should be prepared to handle contamination conditions encountered at this site, which may affect the excavation, removal, or disposal of soil; dewatering of excavations; and health and safety of workers.

7.0 REFERENCES

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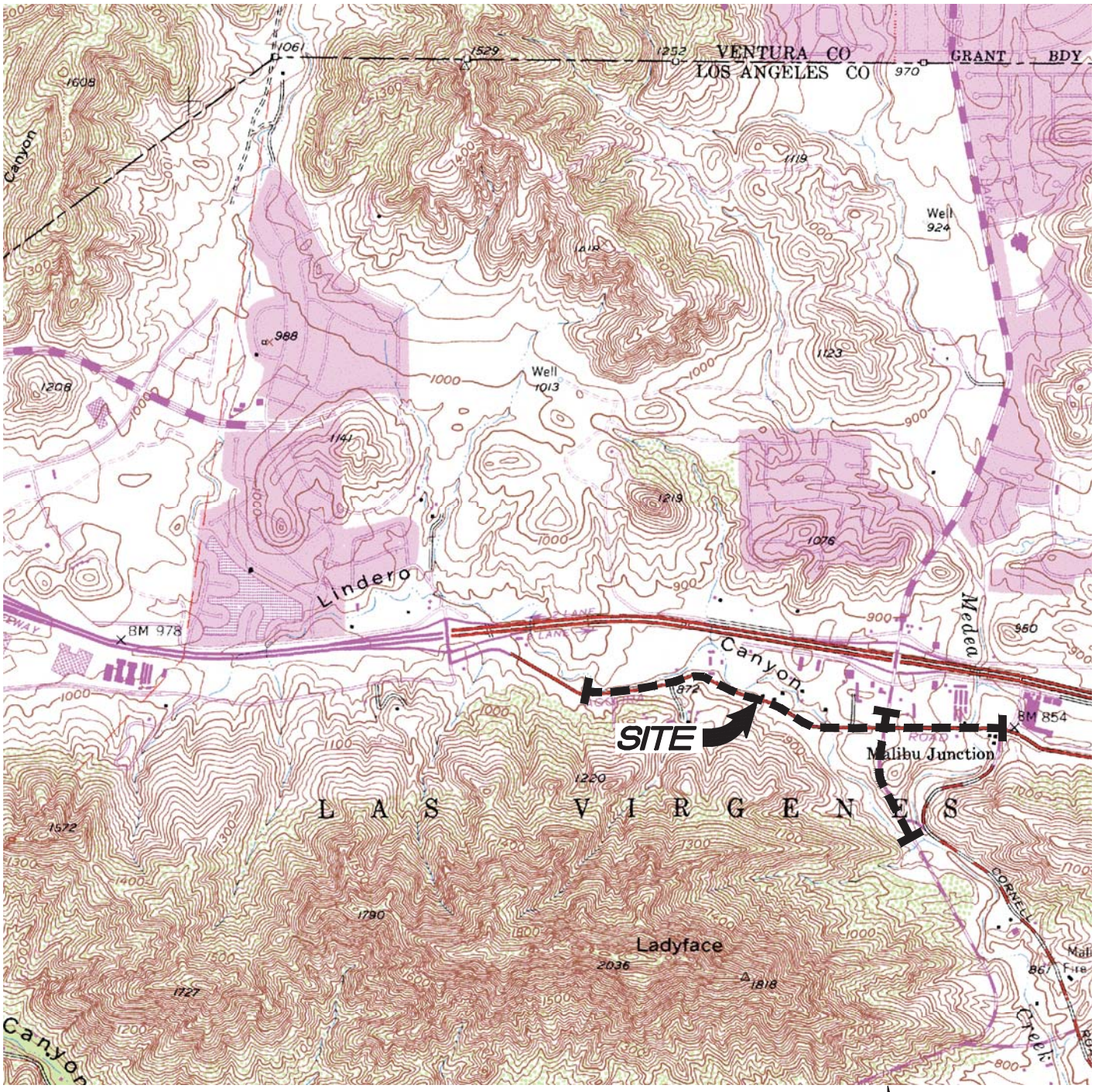
PLATES



SOURCE: U.S.G.S. 7.5' Topographic series, Thousand Oaks, California Quadrangle 1950, Photorevised 1981.

N

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APPROXIMATE SCALE (feet)

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DRAWN BY:	DMF
CHECKED BY:	JDW
FILE NAME:	113541p1.dwg

SITE LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
1

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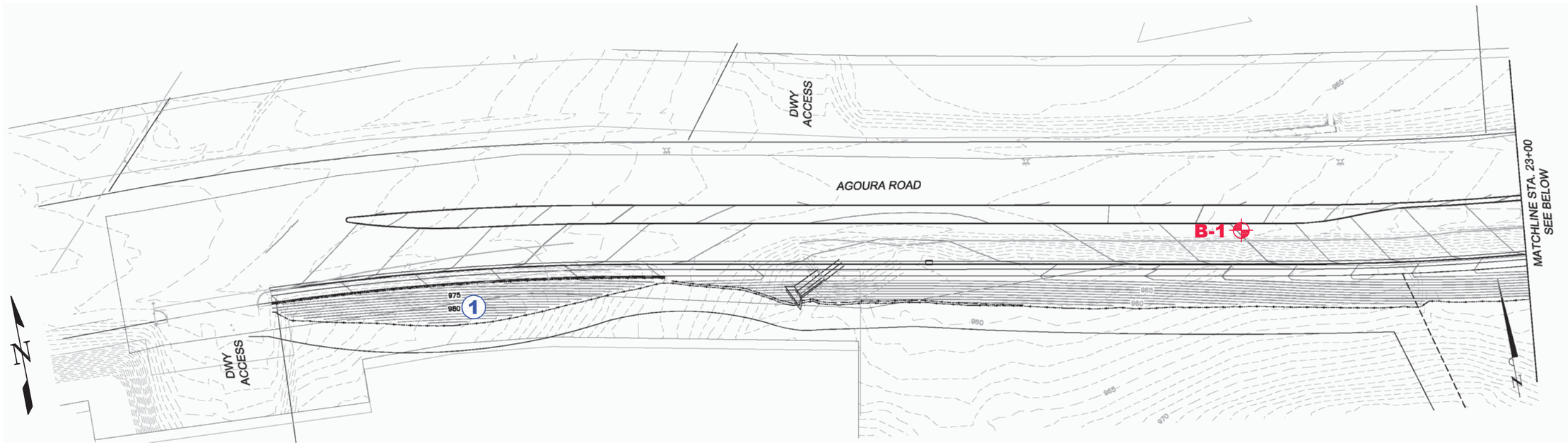

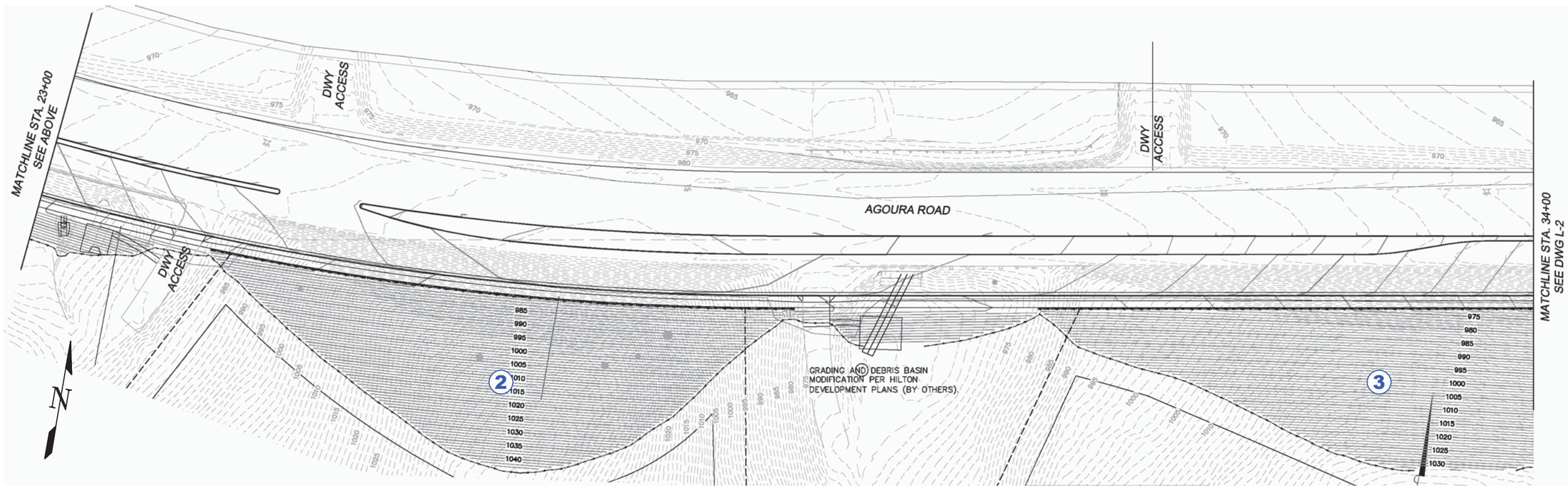

EXPLANATION

B-1 APPROXIMATE SOIL BORING LOCATION

3 SLOPE NUMBER

80 40 0 80

APPROXIMATE SCALE (feet)

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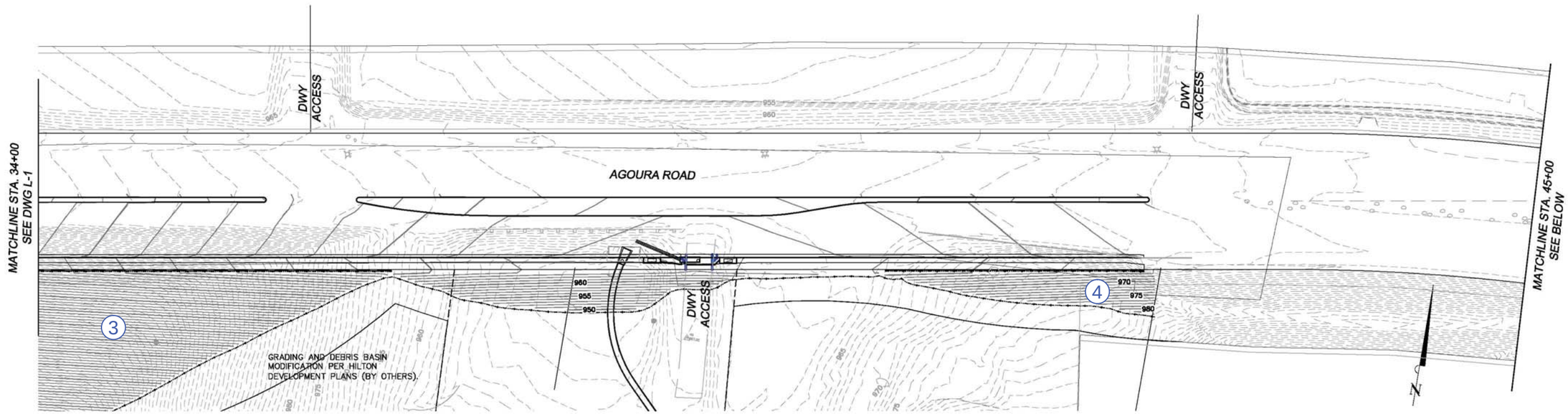
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE **2A**



N

80 40 0 80

APPROXIMATE SCALE (feet)

EXPLANATION

(4) SLOPE NUMBER

REFERENCE: BASE MAP PROVIDED BY KIMLEY HORN AND ASSOCIATES, INC., UNDATED

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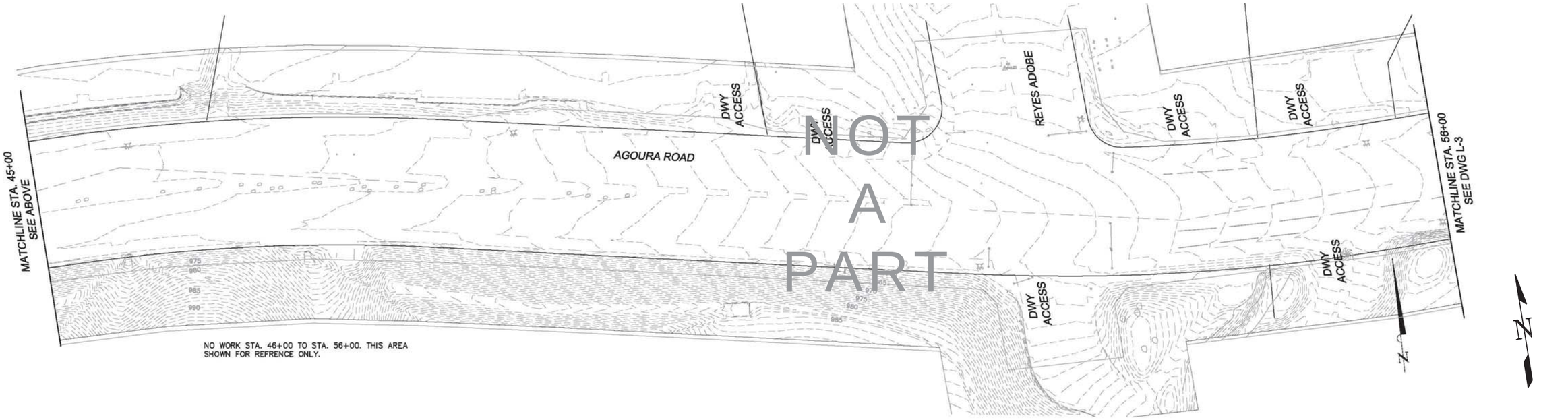
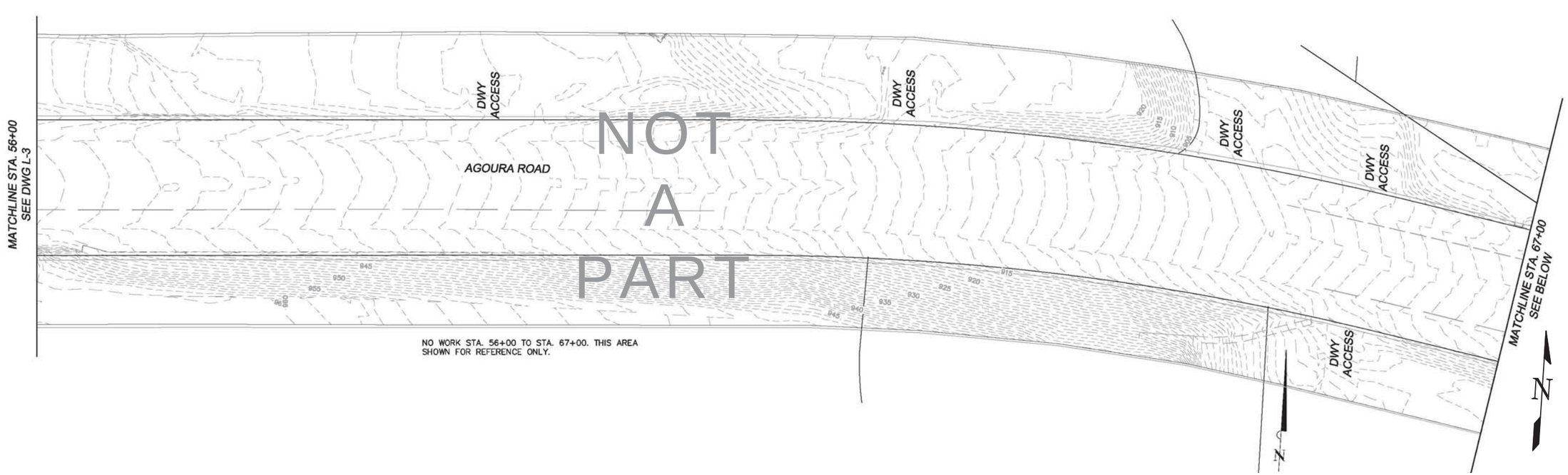
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2B





80 40 0 80

APPROXIMATE SCALE (feet)

REFERENCE: BASE MAP PROVIDED BY KIMLEY HORN AND ASSOCIATES, INC., UNDATED

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BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2C

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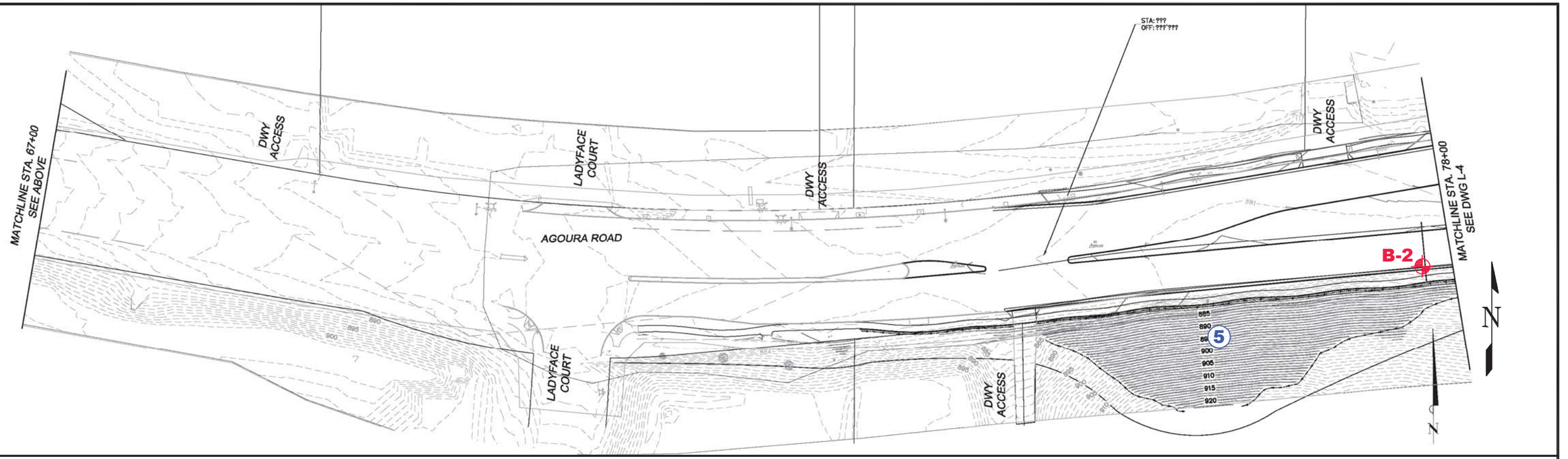

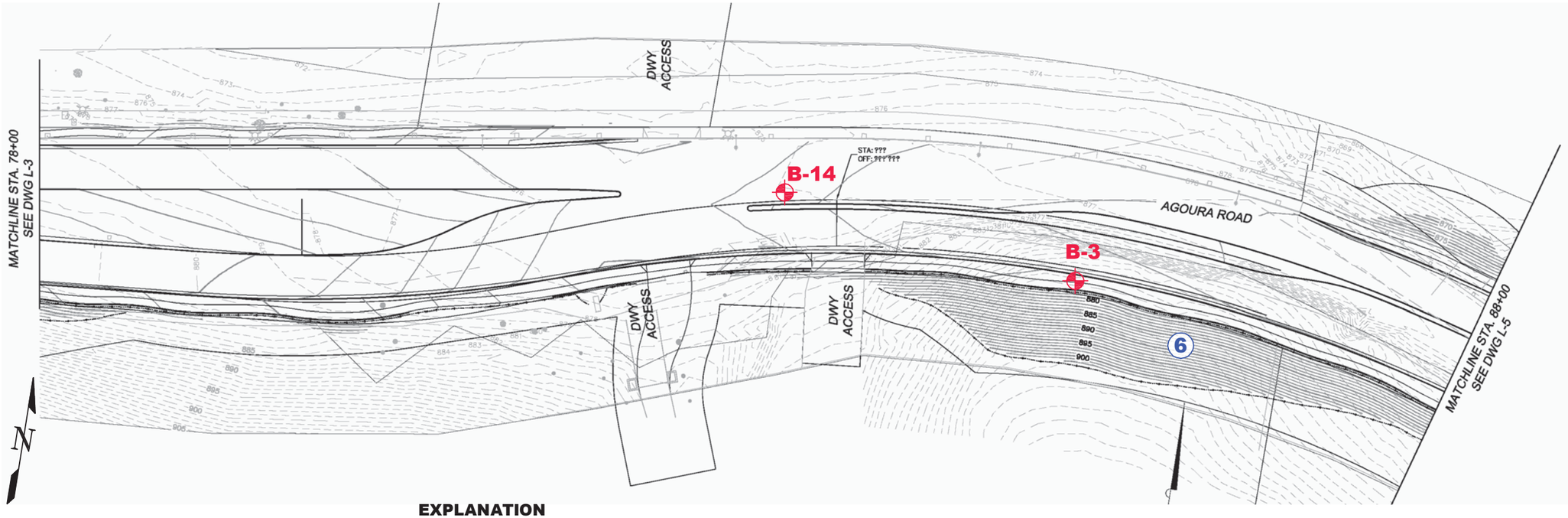

80 40 0 80
APPROXIMATE SCALE (feet)

EXPLANATION

B-3 APPROXIMATE SOIL BORING LOCATION

6 SLOPE NUMBER

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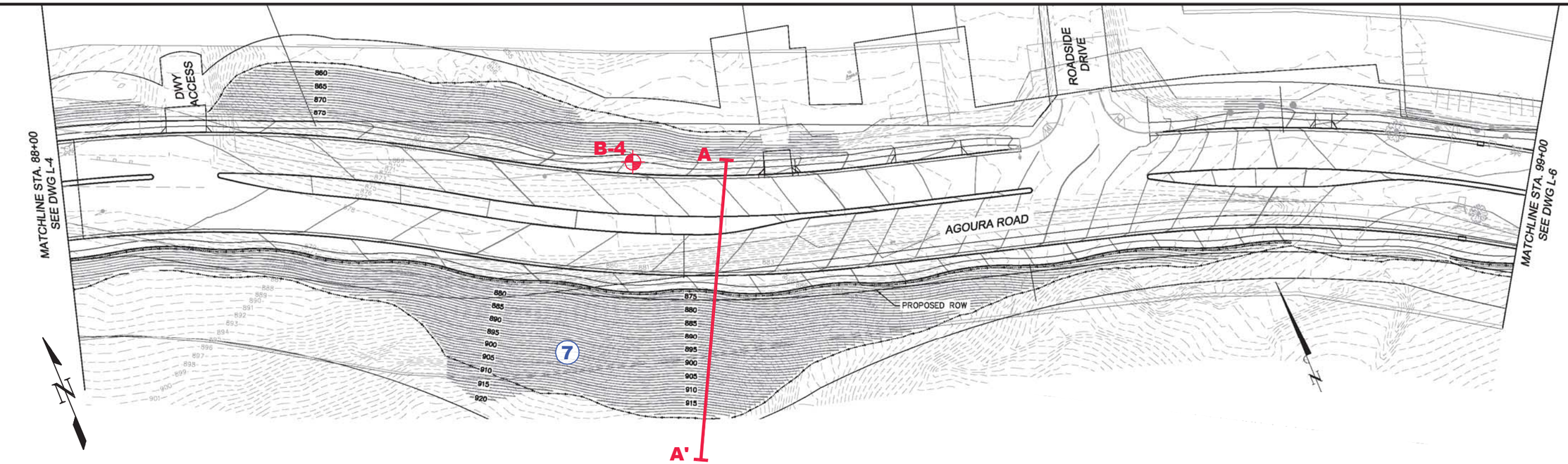
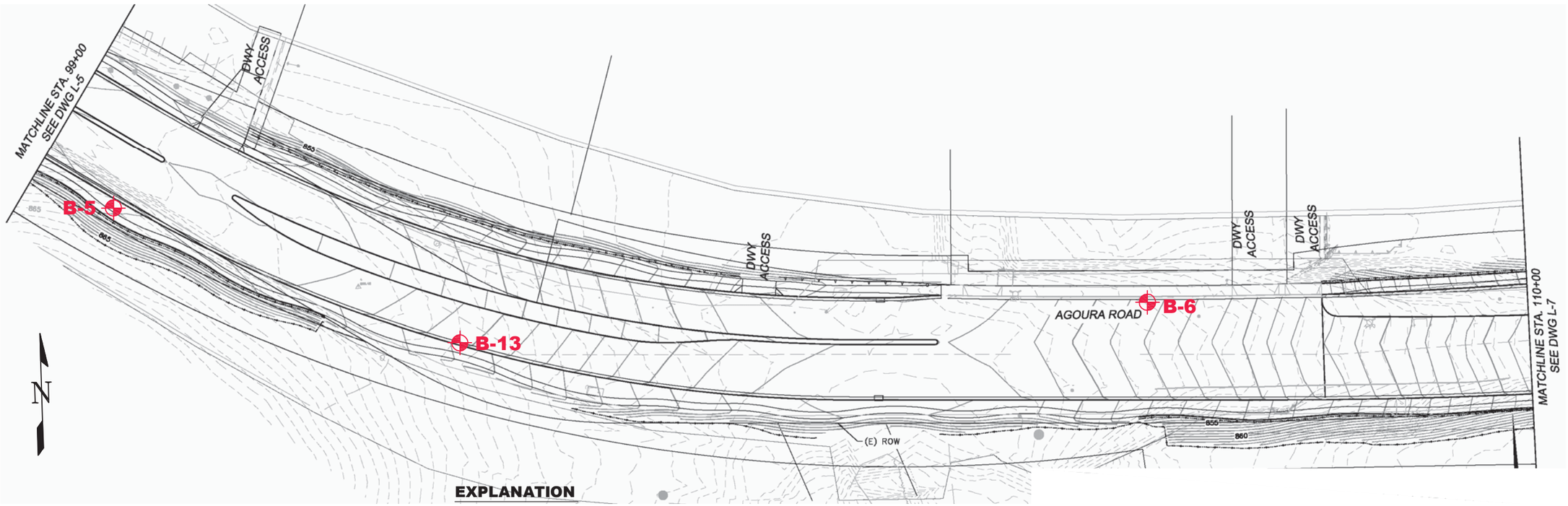
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2D





EXPLANATION

B-13 — APPROXIMATE SOIL BORING LOCATION

7 — SLOPE NUMBER

A — A' — CROSS-SECTION LOCATION

80 40 0 80

APPROXIMATE SCALE (feet)

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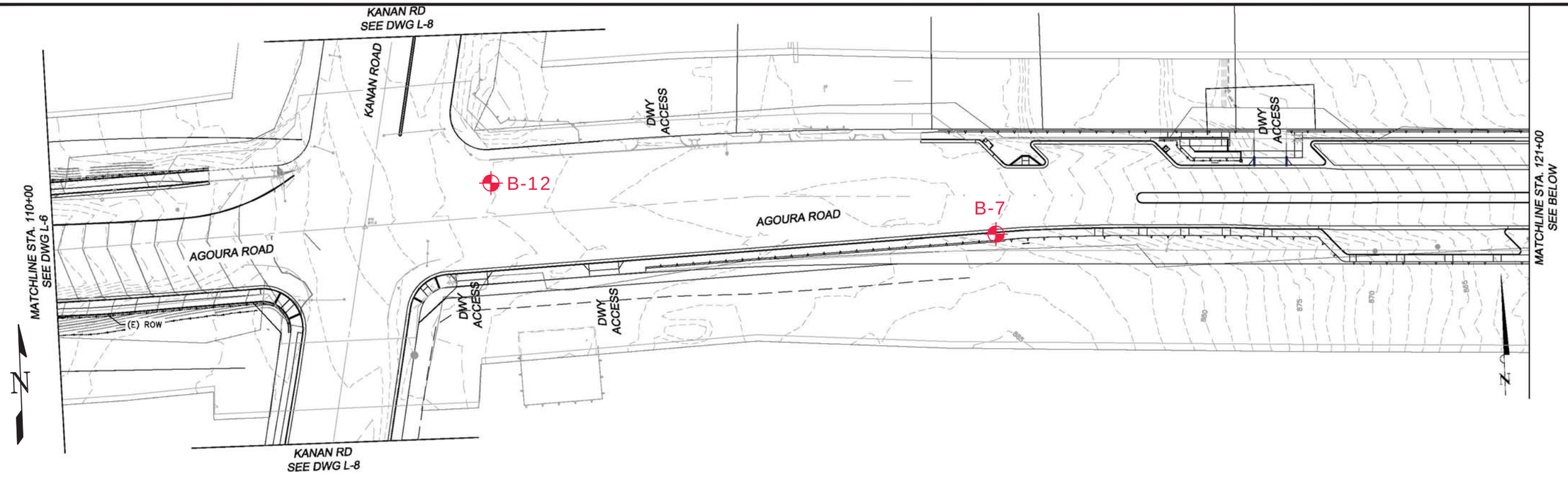
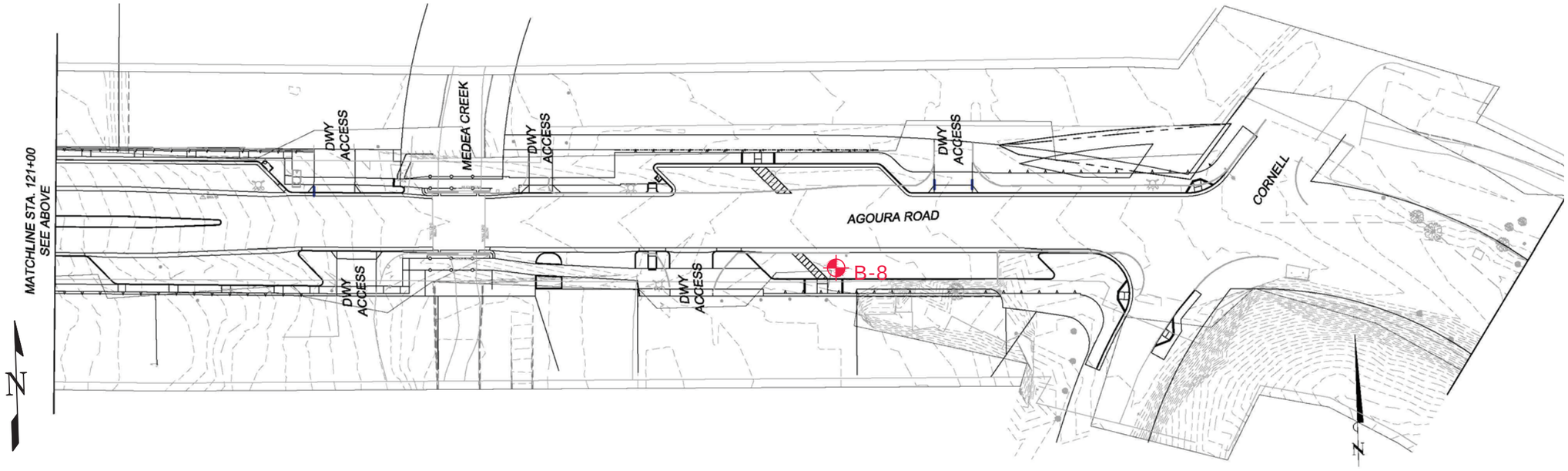
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2E





EXPLANATION

B-12 APPROXIMATE SOIL BORING LOCATION

80 40 0 80
APPROXIMATE SCALE (feet)

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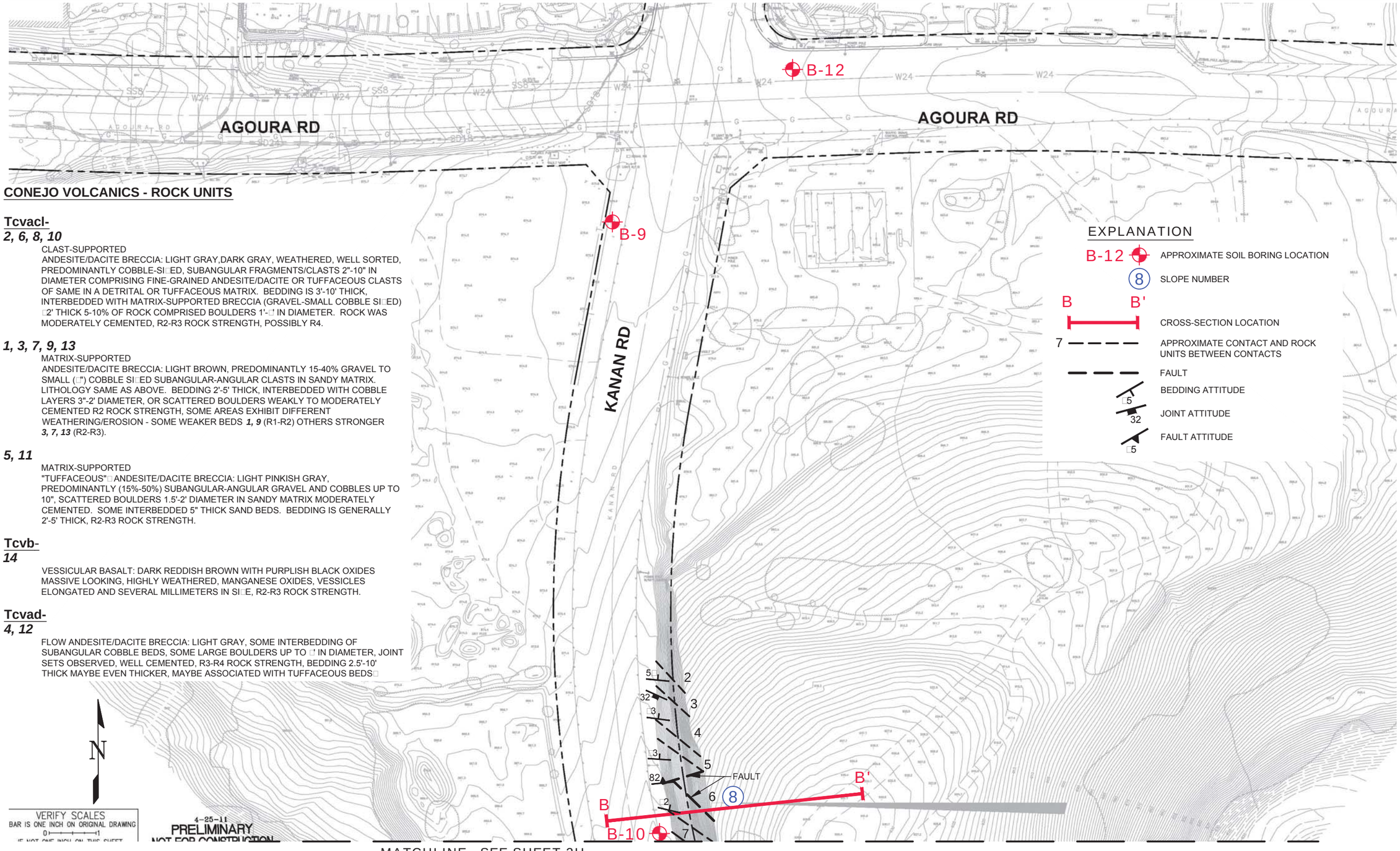
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2F



CONEJO VOLCANICS - ROCK UNITS

Tcvacl-
2, 6, 8, 10

CLAST-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT GRAY,DARK GRAY, WEATHERED, WELL SORTED, PREDOMINANTLY COBBLE-SI□ED, SUBANGULAR FRAGMENTS/CLASTS 2"-10" IN DIAMETER COMPRISING FINE-GRAINED ANDESITE/DACITE OR TUFFACEOUS CLASTS OF SAME IN A DETRITAL OR TUFFACEOUS MATRIX. BEDDING IS 3'-10' THICK, INTERBEDDED WITH MATRIX-SUPPORTED BRECCIA (GRAVEL-SMALL COBBLE SI□ED) □2' THICK 5-10% OF ROCK COMPRISED BOULDERS 1'-□' IN DIAMETER. ROCK WAS MODERATELY CEMENTED, R2-R3 ROCK STRENGTH, POSSIBLY R4.

1, 3, 7, 9, 13

MATRIX-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT BROWN, PREDOMINANTLY 15-40% GRAVEL TO SMALL (□") COBBLE SI□ED SUBANGULAR-ANGULAR CLASTS IN SANDY MATRIX. LITHOLOGY SAME AS ABOVE. BEDDING 2'-5' THICK, INTERBEDDED WITH COBBLE LAYERS 3"-2' DIAMETER, OR SCATTERED BOULDERS WEAKLY TO MODERATELY CEMENTED R2 ROCK STRENGTH, SOME AREAS EXHIBIT DIFFERENT WEATHERING/EROSION - SOME WEAKER BEDS ***1, 9*** (R1-R2) OTHERS STRONGER ***3, 7, 13*** (R2-R3).

5, 11

MATRIX-SUPPORTED
"TUFFACEOUS"□ ANDESITE/DACITE BRECCIA: LIGHT PINKISH GRAY, PREDOMINANTLY (15%-50%) SUBANGULAR-ANGULAR GRAVEL AND COBBLES UP TO 10", SCATTERED BOULDERS 1.5'-2' DIAMETER IN SANDY MATRIX MODERATELY CEMENTED. SOME INTERBEDDED 5" THICK SAND BEDS. BEDDING IS GENERALLY 2'-5' THICK, R2-R3 ROCK STRENGTH.

Tcvb-
14

VESSICULAR BASALT: DARK REDDISH BROWN WITH PURPLISH BLACK OXIDES MASSIVE LOOKING, HIGHLY WEATHERED, MANGANESE OXIDES, VESSICLES ELONGATED AND SEVERAL MILLIMETERS IN SI□E, R2-R3 ROCK STRENGTH.

Tcvad-
4, 12

FLOW ANDESITE/DACITE BRECCIA: LIGHT GRAY, SOME INTERBEDDING OF SUBANGULAR COBBLE BEDS, SOME LARGE BOULDERS UP TO □' IN DIAMETER, JOINT SETS OBSERVED, WELL CEMENTED, R3-R4 ROCK STRENGTH, BEDDING 2.5'-10' THICK MAYBE EVEN THICKER, MAYBE ASSOCIATED WITH TUFFACEOUS BEDS□

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET

4-25-11
PRELIMINARY
NOT FOR CONSTRUCTION

MATCHLINE - SEE SHEET 2H

80 40 0 80
APPROXIMATE SCALE (feet)

REFERENCE: BASE MAP PROVIDED BY AECOM, DATED 04/25/11

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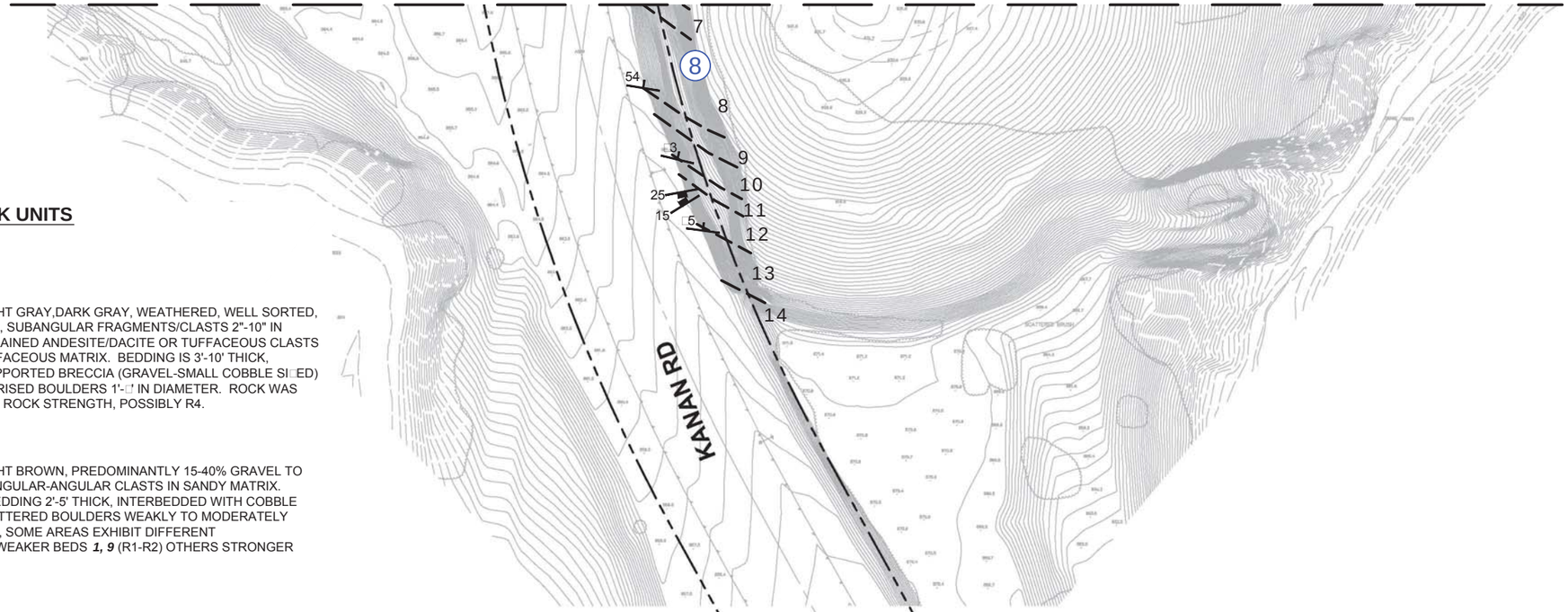
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2G

MATCHLINE - SEE SHEET 2G



CONEJO VOLCANICS - ROCK UNITS

Tcvacl-
2, 6, 8, 10

CLAST-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT GRAY,DARK GRAY, WEATHERED, WELL SORTED, PREDOMINANTLY COBBLE-SI□ED, SUBANGULAR FRAGMENTS/CLASTS 2"-10" IN DIAMETER COMPRISING FINE-GRAINED ANDESITE/DACITE OR TUFFACEOUS CLASTS OF SAME IN A DETRITAL OR TUFFACEOUS MATRIX. BEDDING IS 3'-10' THICK, INTERBEDDED WITH MATRIX-SUPPORTED BRECCIA (GRAVEL-SMALL COBBLE SI□ED) □2' THICK 5-10% OF ROCK COMPRISED BOULDERS 1'-□' IN DIAMETER. ROCK WAS MODERATELY CEMENTED, R2-R3 ROCK STRENGTH, POSSIBLY R4.

1, 3, 7, 9, 13

MATRIX-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT BROWN, PREDOMINANTLY 15-40% GRAVEL TO SMALL (□") COBBLE SI□ED SUBANGULAR-ANGULAR CLASTS IN SANDY MATRIX. LITHOLOGY SAME AS ABOVE. BEDDING 2'-5' THICK, INTERBEDDED WITH COBBLE LAYERS 3"-2' DIAMETER, OR SCATTERED BOULDERS WEAKLY TO MODERATELY CEMENTED R2 ROCK STRENGTH, SOME AREAS EXHIBIT DIFFERENT WEATHERING/EROSION - SOME WEAKER BEDS ***1, 9*** (R1-R2) OTHERS STRONGER ***3, 7, 13*** (R2-R3).

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MATRIX-SUPPORTED
"TUFFACEOUS"□ANDESITE/DACITE BRECCIA: LIGHT PINKISH GRAY, PREDOMINANTLY (15%-50%) SUBANGULAR-ANGULAR GRAVEL AND COBBLES UP TO 10", SCATTERED BOULDERS 1.5'-2' DIAMETER IN SANDY MATRIX MODERATELY CEMENTED. SOME INTERBEDDED 5" THICK SAND BEDS. BEDDING IS GENERALLY 2'-5' THICK, R2-R3 ROCK STRENGTH.

Tcvb-
14

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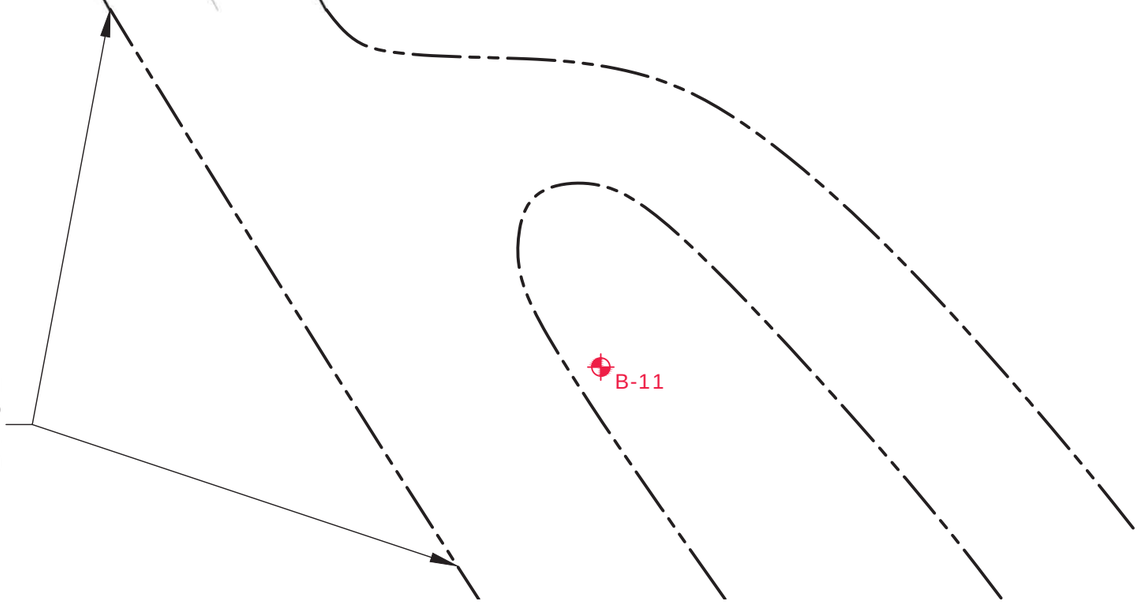
Tcvad-
4, 12

FLOW ANDESITE/DACITE BRECCIA: LIGHT GRAY, SOME INTERBEDDING OF SUBANGULAR COBBLE BEDS, SOME LARGE BOULDERS UP TO □' IN DIAMETER, JOINT SETS OBSERVED, WELL CEMENTED, R3-R4 ROCK STRENGTH, BEDDING 2.5'-10' THICK MAYBE EVEN THICKER, MAYBE ASSOCIATED WITH TUFFACEOUS BEDS□

APPROXIMATE LOCATION OF KANAN ROAD (NOT PROVIDED BY CLIENT, INFERRED FROM MAPS)



N

80 40 0 80
APPROXIMATE SCALE (feet)

EXPLANATION

- B-11 — APPROXIMATE SOIL BORING LOCATION
- 8 — SLOPE NUMBER
- 14 — APPROXIMATE CONTACT AND ROCK UNITS BETWEEN CONTACTS
- FAULT
- 5 — BEDDING ATTITUDE
- 32 — JOINT ATTITUDE

REFERENCE: BASE MAP PROVIDED BY AECOM, DATED 04/25/11

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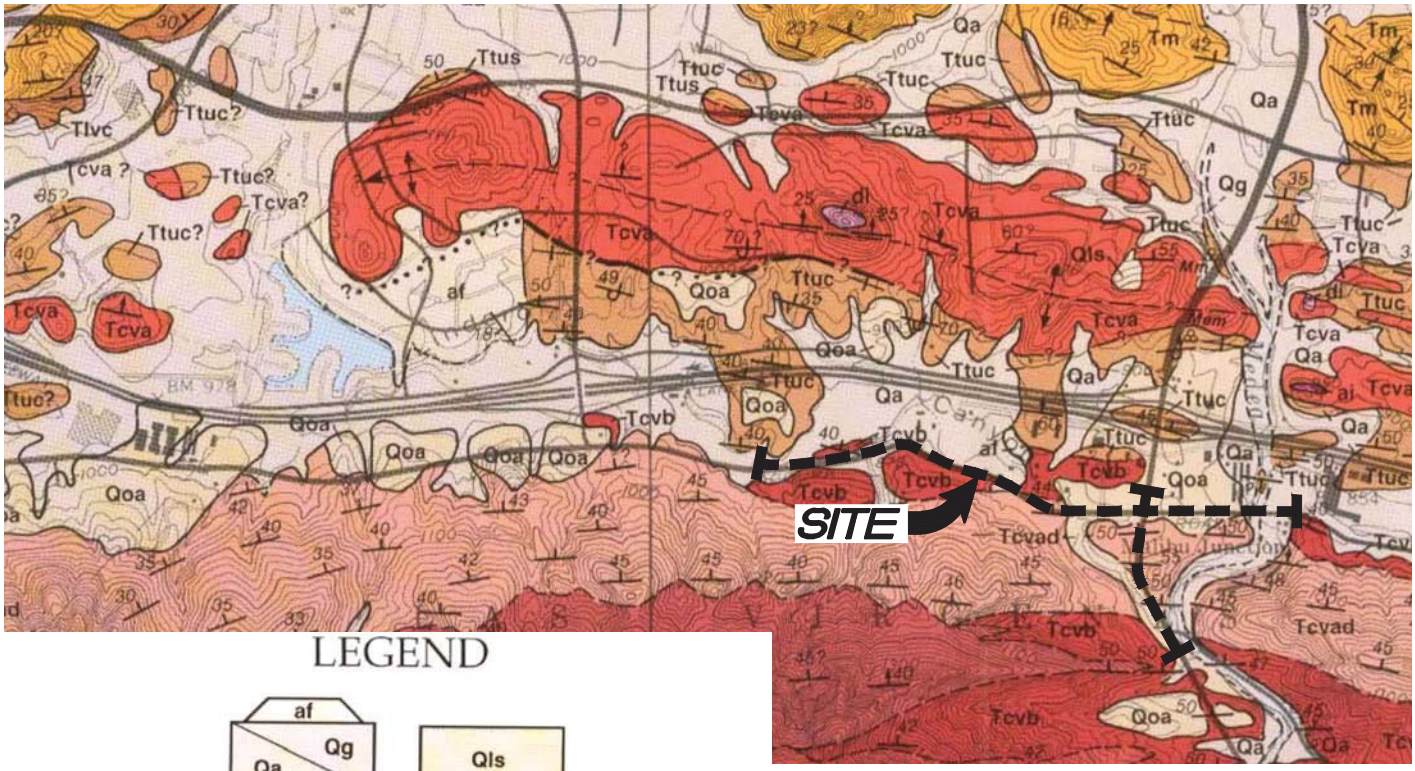
BORING LOCATION MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
2H



SOURCE: U.S.G.S. 7.5' Topographic series, Thousand Oaks, California Quadrangle 1950, Photorevised 1981. Dibblee Geologic series, dated 1993.

LEGEND

af / Qg / Qa

Qls

SURFICIAL SEDIMENTS

unconsolidated detrital sediments, undissected to partly dissected

Qg *gravel and sand of major stream channels*
af *artificial cut and fill*
Qa *alluvial gravel, sand and clay of valley areas*
Qls *landslide debris*

Qc / Qoa

OLDER SURFICIAL SEDIMENTS

unconsolidated to weakly consolidated alluvial sediments, dissected where elevated; late Pleistocene age

Qoa *older dissected alluvial gravel*
Qc *talus fan gravel and sand, locally indurated*

Tcvbb / Tcva / Tcvs / Tcvad / Tcvar / Tcvab / Tcvbv / Tcvbp / Tcvb

EXTRUSIVE ROCKS

Tcvad *andesite-dacite breccia of Westlake (designated as* Tcvab *in Calabasas quadrangle of Dibblee 1992); light colored (light pinkish gray to light brown), composed of moderately to poorly sorted, mostly cobble-boulder sized angular fragments of light colored, very fine grained feldspathic andesite-dacite in semi-coherent, detrital or tuffaceous (?) matrix of same rock; crudely stratified; in eastern exposures well stratified and many fragments subrounded; in western exposures near Lake Sherwood some of lower part of breccia is firmly indurated to form prominent, resistant outcrops; unit gradational into* Tcva; *probably deposited subaerially as laharic (rock and mudflow) and reworked detritus from nearby volcanic source to west; prominently exposed near Westlake Dam; lithologically similar to and may be equivalent to more coherent unit* Tcvdb *in Triunfo Pass and Newbury Park quadrangles (Dibblee and Ehrenspeck 1990a and b)*

Tcvb *basaltic flows and breccias, black to dark gray, weather dark olive-brown, fine grained, massive to vaguely bedded, incoherent and crumbly where weathered, weakly resistant to erosion; range from basalt to basaltic andesite composed of plagioclase feldspar (average* An_{50}*) and ferromagnesian minerals (hypersthene or augite, rarely olivine, [Weigand 1982]), in places amygdaloidal; in a few places, mostly in northwestern area, includes a few thin lenses up to a few meters thick of dark gray basaltic sandstone and siltstone; probably deposited subaerially, possibly in part under shallow sea*

N

2,000 1,000 0 2,000

APPROXIMATE SCALE (feet)

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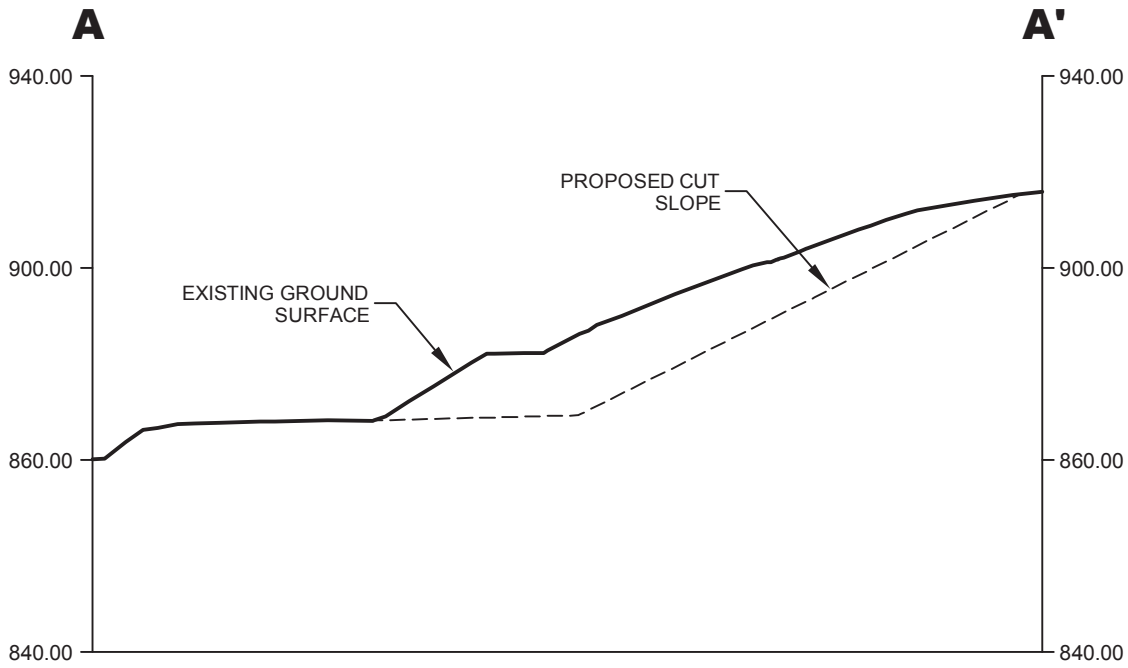
REGIONAL GEOLOGIC MAP

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
3

ATTACHED IMAGES: Images: Thousand Oaks Quad geology (LA Ventura Counties) Dibblee DF-49.png
ATTACHED XREFS:
DIAMOND BAR, CA
CAD FILE: L:\2011\CADD\113541\Agoura-Kanan_GEO\ LAYOUT: 1
PLOTTED: 18 May 2011, 2:51pm, dfahrney



40 20 0 40

APPROXIMATE SCALE (feet)

ATTACHED IMAGES: Images: temp-delete_scan CS-B_pl4.jpg
ATTACHED XREFS:
DIAMOND BAR, CA

CAD FILE: L:\2011\CADD\113541\Agoura-Kanan_GEO\ LAYOUT: 4A

PLOTTED: 26 May 2011, 5:09pm, dfahrney

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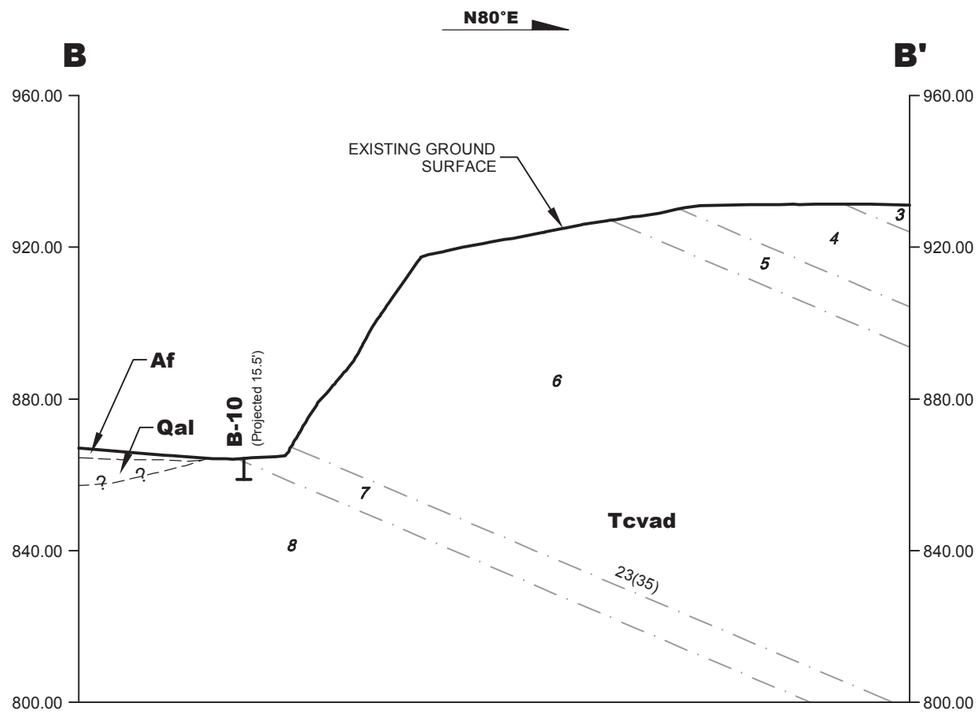
CROSS-SECTION A-A'

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE

4A



NOTE: LOCATION OF GEOLOGIC CONTACTS ON CROSS-SECTION ARE APPROXIMATE

EXPLANATION

af ARTIFICIAL FILL

Qal ALLUVIUM, CIRCLED WHERE BURIED

_ _ _ _?_ GEOLOGIC CONTACT, QUERIED WHERE INFERRED.

CONEJO VOLCANICS - ROCK UNITS

Tcvacl-
2, 6, 8, 10

CLAST-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT GRAY,DARK GRAY, WEATHERED, WELL SORTED, PREDOMINANTLY COBBLE-SIZED, SUBANGULAR FRAGMENTS/CLASTS 2"-10" IN DIAMETER COMPRISING FINE-GRAINED ANDESITE/DACITE OR TUFFACEOUS CLASTS OF SAME IN A DETRITAL OR TUFFACEOUS MATRIX. BEDDING IS 3'-10' THICK, INTERBEDDED WITH MATRIX-SUPPORTED BRECCIA (GRAVEL-SMALL COBBLE SIZED) ~2' THICK 5-10% OF ROCK COMPRISED BOULDERS 1'-7' IN DIAMETER. ROCK WAS MODERATELY CEMENTED, R2-R3 ROCK STRENGTH, POSSIBLY R4.

1, 3, 7, 9, 13

MATRIX-SUPPORTED
ANDESITE/DACITE BRECCIA: LIGHT BROWN, PREDOMINANTLY 15-40% GRAVEL TO SMALL (6") COBBLE SIZED SUBANGULAR-ANGULAR CLASTS IN SANDY MATRIX. LITHOLOGY SAME AS ABOVE. BEDDING 2'-5' THICK, INTERBEDDED WITH COBBLE LAYERS 3"-2' DIAMETER, OR SCATTERED BOULDERS WEAKLY TO MODERATELY CEMENTED R2 ROCK STRENGTH, SOME AREAS EXHIBIT DIFFERENT WEATHERING/EROSION - SOME WEAKER BEDS ***1, 9*** (R1-R2) OTHERS STRONGER ***3, 7, 13*** (R2-R3).

5, 11

MATRIX-SUPPORTED
"TUFFACEOUS"? ANDESITE/DACITE BRECCIA: LIGHT PINKISH GRAY, PREDOMINANTLY (15%-50%) SUBANGULAR-ANGULAR GRAVEL AND COBBLES UP TO 10", SCATTERED BOULDERS 1.5'-2' DIAMETER IN SANDY MATRIX MODERATELY CEMENTED. SOME INTERBEDDED 5" THICK SAND BEDS. BEDDING IS GENERALLY 2'-5' THICK, R2-R3 ROCK STRENGTH.

Tcvb-
14

VESSICULAR BASALT: DARK REDDISH BROWN WITH PURPLISH BLACK OXIDES MASSIVE LOOKING, HIGHLY WEATHERED, MANGANESE OXIDES, VESSICLES ELONGATED AND SEVERAL MILLIMETERS IN SIZE, R2-R3 ROCK STRENGTH.

Tcvad-
4, 12

FLOW ANDESITE/DACITE BRECCIA: LIGHT GRAY, SOME INTERBEDDING OF SUBANGULAR COBBLE BEDS, SOME LARGE BOULDERS UP TO 7' IN DIAMETER, JOINT SETS OBSERVED, WELL CEMENTED, R3-R4 ROCK STRENGTH, BEDDING 2.5'-10' THICK MAYBE EVEN THICKER, MAYBE ASSOCIATED WITH TUFFACEOUS BEDS?

40 20 0 40
APPROXIMATE SCALE (feet)

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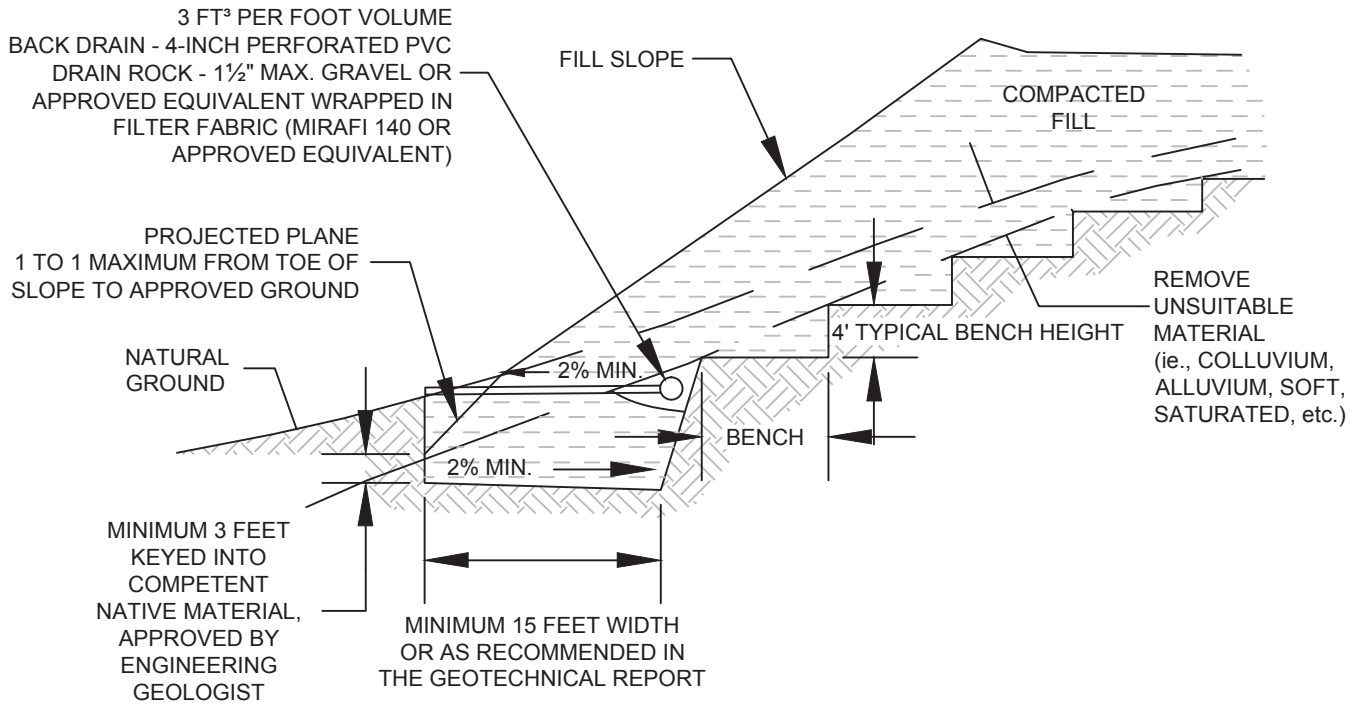
CROSS-SECTION B-B'

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
4B

BENCHING DETAILS



NOTES:

1) LOWEST BENCH: DEPTH AND WIDTH SUBJECT TO FIELD CHANGE BASED ON CONSULTANT'S INSPECTION.

2) SUBDRAINAGE: BACK DRAINS MAY BE ELIMINATED AT THE DISCRETION OF THE GEOTECHNICAL CONSULTANT, BASED ON FIELD CONDITIONS.

3) SUBDRAIN INSTALLATION: SUBDRAIN PIPE SHALL BE INSTALLED WITH PERFORATIONS DOWN, OR AT LOCATIONS DESIGNATED BY THE GEOTECHNICAL CONSULTANT. OUTLET PIPE SHALL BE NON-PERFORATED PIPE.

4) SUBDRAIN TYPE: SUBDRAIN TYPE SHALL BE SCHEDULE 40 PVC PIPE OR AN APPROVED EQUIVALENT.

PLOTTED: 18 May 2011, 2:59pm, dfahrney
CAD FILE: L:\2011\CADD\113541\Agoura-Kanan_GEO\ LAYOUT: 1
ATTACHED IMAGES:
ATTACHED XREFS:
DIAMOND BAR, CA

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DRAWN BY:	DMF
CHECKED BY:	JDW
FILE NAME:	113541p5.dwg

BENCHING DETAILS

AGOURA ROAD AND KANAN ROAD
WIDENING PROJECT
CITY OF AGOURA HILLS, CALIFORNIA

PLATE
5

APPENDIX A

Field Explorations

APPENDIX A
Field Explorations

The subsurface exploration program for the proposed project consisted of excavating and logging a total of 11 hollow-stem auger borings and three pavement cores (called out as Borings B-12 through B-14). The borings were drilled with a truck-mounted drill rig equipped with 8-inch diameter hollow-stem augers, provided by Cal Pac Drilling of Calimesa, California. The approximate locations of the borings are shown on Plates 2A through 2H, Boring Location Map.

The logs of the borings are presented as Plates A-2 through A-12, Log of Borings. An explanation to the logs is presented on Plates A-1a and A-1b, Explanation of Logs. The logs of borings present a description of the earth materials encountered, samples obtained, and show field and laboratory tests performed. The logs also show the boring number, drilling date, boring elevation and the name of the logger and drilling subcontractor. A Kleinfelder staff professional logged the borings utilizing 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. Bulk and drive samples of representative earth materials were obtained from the borings at maximum intervals of approximately 5 feet. At the conclusion of drilling, each boring was backfilled with soil cuttings. Borings in paved areas were patched with concrete.

A California sampler was used to obtain relatively undisturbed drive samples of the soil encountered. This sampler consists of a 3 inch O.D., 2.5 inch I.D. split barrel shaft that is driven a total of 18 inches into the soil at the bottom of the boring. The soil was retained in six 1-inch brass rings for laboratory testing. The sampler was driven using a 140-pound automatic hammer falling 30 inches. The total number of hammer blows required to drive the sampler the final 12 inches is termed the blow count and is recorded on the Logs of Borings. Where the sample was driven less than 12 inches, the number of blows to drive the sample for each 6-inch segment, or portion thereof, is shown on the logs.

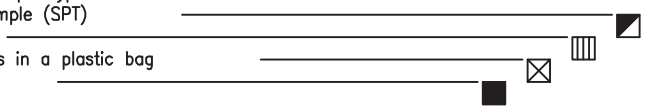
Bulk samples of the sub-surface soils were directly retrieved from the soil cuttings produced by the auger blades.

Date Drilled:	Water Depth:
Drilled By:	Date Measured:
Drilling Method:	Reference Elevation:
Logged By:	Datum:

Elevation (feet) Depth	Sample	Sample No.	Blow Count (Blows/ft.)	Graphic Log	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		1	6			108	10	DS, SE
		2	12					GS
5								
	(1)	(2)	(3)	(4)	(5)	(6)	(6)	(7)

NOTES ON FIELD INVESTIGATION

1. SAMPLE – Graphical representation of sample type as shown below.
   - Split Spoon – Standard Penetration Test Sample (SPT)
   - Drive Sample – California Sample (Cal)
   - Bulk Sample – Obtained by collecting cuttings in a plastic bag
   - Tube Sample – Shelby/Pitcher Tube Sample



2. SAMPLE NO. – Sample Number

3. BLOWS/FT – Number of blows required to advance sampler 1 foot (unless a lesser distance is specified). Samplers in general were driven into the soil at the bottom of the hole with a standard (140 lb) hammer dropping a standard 30 inches. Drive samples collected in bucket auger borings may be obtained by dropping non–standard weight from variable heights. When a SPT sampler is used the blow count conforms to ASTM D–1586.

   SCR/RQD – Sample Core Recovery (SCR) in percent (%) and Rock Quality Designation (RQD) in percent (%). RQD is defined as the percentage of core in each run which the spacing between natural fractures is greater than 4 inches. Mechanical breaks of the core are not considered.

4. GRAPHIC LOG – Standard symbols for soil and rock types, as shown on plate A–1b.

5. GEOTECHNICAL DESCRIPTION

   Soil – Soil classifications are based on the United Soil Classification System per ASTM D–2987, and designations include consistency, moisture, color and other modifiers. Field descriptions have been modified to reflect results of laboratory analyses where deemed appropriate.

   Rock – Rock classifications generally include a rock type, color, moisture, mineral constituents, degree of weathering, alteration, and the mechanical properties of the rock. Fabric, lineations, bedding spacing, foliations, and degree of cementation are also presented where appropriate.

   Description of soil origin or rock formation is placed in brackets at the beginning of the description where applicable, for example, Residual Soil.

6. DRY DENSITY, MOISTURE CONTENT: As estimated by laboratory or field testing.

7. ADDITIONAL TESTS – (Indicates sample tested for properties other than the above):

MAX – Maximum Dry Density	SG – Specific Gravity	PP – Pocket Penetrometer
GS – Grain Size Distribution	HA – Hydrometer Analysis	WA – Wash Analysis
SE – Sand Equivalent	AL – Atterberg Limits	DS – Direct Shear
EI – Expansion Index	RV – R–Value	CP – Collapse Potential
CHEM – Sulfate and Chloride Content, pH, Resistivity	CN – Consolidation	UC – Unconfined Compression
PM – Permeability	CU – Consolidation Undrained Triaxial	T – Torvane
UU – Unconsolidated Undrained Triaxial	CD – Consolidated Drained Triaxial	PI – Plasticity Index

8. ATTITUDES – Orientation of rock discontinuity observed in bucket auger boring or rock core, expressed in strike/dip and dip angle, respectively, preceeded by a one–letter symbol denoting nature of discontinuity as shown below.

   B: Bedding Plane J: Jointing C: Contact F: Fault S: Shear

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487)

PRIMARY DIVISIONS			GROUP SYMBOLS	SECONDARY DIVISIONS
COURSE GRAINED SOILS MORE THAN HALF OF MATERIALS IS LARGER THAN #200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COURSE FRACTION IS LARGER THAN #4 SIEVE	CLEAN GRAVELS (LESS THAN) 5% FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVEL WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF OF COURSE FRACTION IS SMALLER THAN #4 SIEVE	CLEAN SANDS (LESS THAN) 5% FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS MORE THAN HALF OF MATERIALS IS SMALLER THAN #200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50		ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDS OR SILTS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
	HIGHLY ORGANIC SOILS		PT	PEAT, MUCK AND OTHER HIGHLY ORGANIC SOILS
TYPICAL FORMATIONAL MATERIALS	SANDSTONES		SS	
	SILTSTONES		SH	
	CLAYSTONES		CS	
	LIMESTONES		LS	
	SHALE		SL	

CONSISTENCY CRITERIA BASED ON FIELD TESTS

RELATIVE DENSITY – COARSE – GRAIN SOIL

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

CONSISTENCY– FINE–GRAIN SOIL

CONSISTENCY	SPT (# blows/ft)	TORVANE UNDRAINED SHEAR STRENGTH (tsf)	POCKET ** PENETROMETER UNCONFINED COMPRESSIVE STRENGTH (tsf)
Very Soft	<2	<0.13	<0.25
Soft	2 – 4	0.13 – 0.25	0.25 – 0.5
Medium Stiff	4 – 8	0.25 – 0.5	0.5 – 1.0
Stiff	8 – 15	0.5 – 1.0	1.0 – 2.0
Very Stiff	15 – 30	1.0 – 2.0	2.0 – 4.0
Hard	>30	>2.0	>4.0

* NUMBER OF BLOWS OF 140 POUND HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1 3/8 INCH I.D.) SPLIT BARREL SAMPLER (ASTM-1586 STANDARD PENETRATION TEST)

** UNCONFINED COMPRESSIVE STRENGTH IN TONS/SQ.FT. READ FROM POCKET PENETROMETER

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

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EXPLANATION OF LOGS

PLATE
A-1b

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	970 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		G1	N/A		**Asphaltic Concrete (AC):** approximately 8 inches thick; aggregate base not observed		14.3	RV = 26 CHEM, MAX
					Sandy Lean Clay (CL): brown to yellowish brown, moist, fine to coarse sand, fine gravel, chunks of asphalt			
965 5					**Silty Sand with Gravel (SM):** gray to reddish brown, moist, dense, fine to coarse sand, fine to coarse gravel up to 2-inch diameter			
		1	46			111	15.3	GS, HA, WA = 33%
					Silty Gravel with Sand (GM): mottled gray, dark gray, moist, medium dense, fine to coarse sand, fine gravel			
960 10								
		2A				100	15.8	GS, WA = 25%
		2B	37			102	17.4	

Boring terminated at a depth of 11.5 ft below existing site grade.
Groundwater was not encountered.
Boring was backfilled with soil cuttings and capped with concrete.

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PLATE
A-2

PROJECT NO. 113541

LOG OF BORING B-1

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/17/11

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	Hand Auger	Elevation:	881 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
880		G1	N/A		**Gravelly Silt (ML):** dark brown, moist to wet, gravel up to 2-inch diameter		23.5	GS, HA, WA = 52%
					Boring terminated at a depth of 1.7 ft below existing site grade. Tried hand augering in 3 locations, all reached refusal at 1.7 ft on a gravel layer. Groundwater was not encountered. Boring was backfilled with soil cuttings.			

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PLATE
A-3

PROJECT NO. 113541

LOG OF BORING B-2

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/17/11

Date Drilled:	12/14/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/14/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	888 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		G1	N/A		**Artificial Fill:** **Sandy Gravel (GP):** brown/grey, slightly moist, gravel to 3-inch diameter			
885					**Silty Sand/ Clayey Sand (SM/SC):** yellowish brown, dry to moist, very dense, fine to coarse sand			
5		1	50/5"		**Bedrock:** **Conejo Volcanics:** Andesite/Dacite Breccia, gray, very dense, moderately cemented, cobble sized clasts, detrital matrix, subangular clasts, recovered as sand with gravel	104	18.9	
880								
10		2	60/6"			95	10.5	WA = 26% LL = NP
875								
15		3	50/4"		-- becomes mottled black, yellow brown	100	19.6	

Boring terminated at a depth of 15.3 ft below existing site grade.
Groundwater was not encountered.
Boring was backfilled with soil cuttings.

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Agoura Road and Kanan Road Widening Project
City of Agoura Hills, California

PLATE
A-4

PROJECT NO. 113541

LOG OF BORING B-3

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/22/11

Date Drilled:	12/15/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/15/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	871 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
870		G1	N/A		**Sandy Clay (CL):** olive brown to olive gray, moist, fine to coarse sand, few fine gravel		14.5	GS, HA, WA = 53%
5					**Clayey Sand (SC):** yellowish brown, dry to moist, medium dense, fine to coarse sand			
865		1	37		**Sandy Clay (CL):** dark gray mottled with red, moist, hard	105	12.4	DS
10					**Clayey Sand/Sandy Lean Clay (SC/CL):** yellowish brown, dry, dense/ very hard, fine to coarse sand			
860		2A 2B	52			103	16.2	
15		3	50/4"		**Bedrock:** **Conejo Volcanics:** Andesite/Dacite Breccia, gray, very dense, moderately cemented, cobble sized clasts, detrital matrix, subangular clasts, recovered as silty gravel and clayey gravel			
855								
20		4	50/4"					
					Boring terminated at a depth of 20.3 ft below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings.			

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PLATE
A-5

PROJECT NO. 113541

LOG OF BORING B-4

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/22/11

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	855 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		G1	N/A		**Sandy Clay with Gravel (CL):** olive brown, dry to moist, fine to coarse sand, fine gravel		16.2	GS, HA, WA = 50%
850 5		1	90/10"		**Bedrock:** **Conejo Volcanics:** Andesite/Dacite Breccia, gray, very dense, moderately cemented, cobble sized clasts, detrital matrix, subangular clasts, recovered as clayey sand, silty sand with gravel, and silty gravel with sand	105	17.4	DS
845 10		2A 2B	50/5"			100	21.0	
840 15		3	50/4"					
					Boring terminated at a depth of 15.3 ft below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings.			

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PLATE
A-6

PROJECT NO. 113541

LOG OF BORING B-5

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/23/11

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	848 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
845		G1	N/A		**Clayey Sand (SC):** yellowish brown, moist, fine to coarse sand, fine gravel		11.9	GS, HA, WA = 33% RV = 18 MAX
5		1	76		**Sandy lean Clay/ Clayey Sand (CL/SC):** light brownish gray, olive yellow, moist, hard/ very dense, fine to coarse sand	112	14.2	EI = 40
840								
10		2A 2B	75/11"		-- white stringers	109	18.6	

Boring terminated at a depth of 11.4 ft below existing site grade.
Groundwater was not encountered.
Boring was backfilled with soil cuttings.

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PLATE
A-7

PROJECT NO. 113541

LOG OF BORING B-6

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/19/11

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	881 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
880		G1	N/A		**Clayey Sand (SC):** yellowish brown, olive brown, moist, fine to coarse sand, few fine gravel		11.7	GS, HA, WA = 35% CHEM
5 875		1	52		**Silty Sand (SM):** yellowish brown, gray, moist, dense, medium to coarse sand, trace fine gravel	106	12.9	
10 870		2	53		-- becomes mottled yellow, white, gray, yellowish brown, fine to coarse sand, 2-inch diameter gravel in sampler shoe	100	12.8	

Boring terminated at a depth of 11.5 ft below existing site grade.
Groundwater was not encountered.
Boring was backfilled with soil cuttings.

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PLATE
A-8

PROJECT NO. 113541

LOG OF BORING B-7

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/17/11

Date Drilled:	12/13/10	Water Depth:	Not Encountered
Drilled By:	Cal Pac Drilling	Date Measured:	12/13/2010
Drilling Method:	L 10 T Hollow-Stem Auger	Elevation:	848 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		G1	N/A		**Asphaltic Concrete (AC):** approximately 4 inches thick; aggregate base not observed		19.4	GS, HA, WA = 46%
845					**Clayey Sand (SC):** dark brown, mottled with yellowish brown, moist, fine to coarse sand, trace gravel up to 3-inch diameter, organic material			
5					-- laminated gravel layer, some gravel, trace cobbles up to 4-inch diameter			
		1	21		**Silty Sand (SM):** yellowish brown, dry to moist, medium dense, gravel up to 1-inch diameter			
840					**Clayey Sand with Gravel (SC):** yellowish brown, mottled with yellow, olive, brown black, moist, very dense, coarse sand, gravel up to 2-inch diameter			
10		2A 2B	75/11"					
					Encountered hand auger refusal at 3.1 feet, moved over and advanced this boring. Boring terminated at a depth of 11.4 feet below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings and capped with concrete.			

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PLATE
A-9

PROJECT NO. 113541

LOG OF BORING B-8

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB AGOURA RD WIDENING GINT.GPJ KA_RDLND.GDT 5/17/11

Date Drilled:	4/26/11	Water Depth:	Not Encountered
Drilled By:	CalPac Drilling	Date Measured:	4/26/2011
Drilling Method:	Hollow Stem Auger	Elevation:	843 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		1			**Artificial Fill:**			RV=5, PI=24
		2			**Clayey Sand (SC):** brown to yellow brown, moist, fine to coarse sand, trace fine gravel			
840					**Sandy Clay (CL):** mottled olive gray and olive yellow, fine to medium sand, moist, firm			
		3			**Native:**			
5		4	23		**Silty Sand (SM):** light grayish brown, moist, medium dense, fine to coarse grained, with fine gravel, weakly cemented, some iron oxide staining			
835					**Bedrock:**			
10		5	20, 70		**Conejo Volcanics:** Andesite/Dacite Breccia, gray, very dense, moderately cemented, cobble sized clasts, detrital matrix, subangular clasts			
					Boring terminated at a depth of 11 ft below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings.			

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Agoura Road and Kanan Road Widening Project
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PLATE
A-10

PROJECT NO. 113541

LOG OF BORING B-9

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB KANAN ROAD GINT.GPJ KA_RDLND.GDT 5/18/11

Date Drilled:	4/26/11	Water Depth:	Not Encountered
Drilled By:	CalPac Drilling	Date Measured:	4/26/2011
Drilling Method:	Hollow Stem Auger	Elevation:	876 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
875				**Asphaltic Concrete (AC):** approximately 12 inches thick; aggregate base not observed			
		1		**Artificial Fill:** **Clayey Sand (SC):** brown, moist, fine to coarse sand, with gravel up to 2-inch diameter			MAX, DS
5		2		**Bedrock:** **Conejo Volcanics:** Andesite/Dacite Breccia, gray, very dense, moderately cemented, cobble sized clasts, detrital matrix, subangular clasts			
870				Boring terminated at a depth of 5.5 ft below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings and capped with quickset concrete.			
10							
865							

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Agoura Road and Kanan Road Widening Project
City of Agoura Hills, California

PLATE
A-10

PROJECT NO. 113541

LOG OF BORING B-10

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB KANAN ROAD GINT.GPJ KA_RDLND.GDT 5/19/11

Date Drilled:	4/26/11	Water Depth:	Not Encountered
Drilled By:	CalPac Drilling	Date Measured:	4/26/2011
Drilling Method:	Hollow Stem Auger	Elevation:	864 feet (approx.)
Logged By:	K. Sarwold	Datum:	MSL

Elevation (feet) Depth	Sample Type	Sample Number	Blows per Foot	Graphic Log	SOIL DESCRIPTION AND CLASSIFICATION	Dry Density (pcf)	Moisture Content (%)	Additional Tests
		1			**Artificial Fill:** **Silty Sand (SM):** yellow to olive yellow, dry, fine to coarse sand, with gine gravel			MAX
					Asphaltic Concrete (AC): approximately 6 inches thick, aggregate base not observed			
860					**Artificial Fill:**			
5		2	29 17		**Clayey Sand (SC):** brown to yellow brown, moist, medium dense, fine to coarse sand, with fine gravel	87	15.7	
					Native: **Clayey Sand (SC):** brown to yellow brown, moist, medium dense, fine to coarse sand, with fine gravel. -- brown, increase in clay content			
		3			-- coarse gravel observed.	105	12.3	
					Boring terminated at a depth of 11.5 ft below existing site grade. Groundwater was not encountered. Boring was backfilled with soil cuttings.			

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Agoura Road and Kanan Road Widening Project
City of Agoura Hills, California

PLATE
A-12

PROJECT NO. 113541

LOG OF BORING B-11

Drafted By: Reviewed By:

Legend To Logs On Plate A-1

Note: The boundaries between soil types shown on the logs are approximate as the transition between different soil layers may be gradual.

GEOTECH DB KANAN ROAD GINT.GPJ KA_RDLND.GDT 5/19/11

APPENDIX B

Laboratory Testing

APPENDIX B
Laboratory Testing

GENERAL

Laboratory tests were performed on selected samples as an aid in classifying the soils and to evaluate physical properties of the soils that may affect foundation design and construction procedures. The tests were performed in general conformance with the current ASTM or California Department of Transportation (Caltrans) standards. A description of the laboratory-testing program is presented below.

Laboratory tests were performed on representative relatively undisturbed and bulk soil samples to estimate engineering characteristics of the various earth materials encountered. Testing was performed in accordance with one of the following references:

1. Lambe, T. William, Soil Testing for Engineers, Wiley, New York, 1951
2. Laboratory Soils Testing, U.S. Army, Office of the Chief of Engineers, Engineering Manual No. 1110-2-1906, November 30, 1970
3. ASTM Standards for Soil Testing, latest revisions
4. State of California Department of Transportation, Standard Test Methods, latest revisions.

LABORATORY MOISTURE AND DENSITY DETERMINATIONS

Natural moisture content and dry density tests were performed on selected soil samples collected. Moisture content was evaluated in general accordance with ASTM Test Method D 2216; dry unit weight was evaluated using procedures similar to ASTM Test Method D 2937. The results are presented on the Logs of Borings and are summarized in Table B-1, Moisture Content and Unit Weight.

WASH SIEVE

The percent passing the #200 sieve of nine soil samples was performed by wash sieving in accordance with ASTM Standard Test Method D422-63. The test results are summarized in Table B-2, Wash Sieve Test Results.

SIEVE ANALYSIS

Sieve analyses were performed on eight samples of the materials encountered at the site to evaluate the grain size distribution characteristics of the soils and to aid in their classification. The tests were performed in general accordance with ASTM Test Method D 422. The test results are presented as Plates B-1 and B-2, Grain Size Distribution.

HYDROMETER

Hydrometer testing was performed on eight selected soil samples to determine the gradation characteristics of the fine grain soil passing the #200 sieve, and to aid in the classification of the soil. The tests were performed in general accordance with ASTM Test Method D 422. Results of the testing are presented on Plates B-1 and B-2.

EXPANSION INDEX

Expansion index testing was performed on one bulk samples of the near-surface soils to evaluate their expansion characteristics. The test was performed in accordance with UBC Standard No. 18-2, Expansion Index Test Method. The test result is presented in Table B-3, Expansion Index Test Results and may be compared to the table presented below to qualitatively evaluate the expansion potential of the near-surface site soils.

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

PLASTICITY INDEX

Plasticity index testing was performed on two selected samples of the on-site soils to determine plasticity characteristics and to aid in the classification of the soil. The tests were performed in accordance with ASTM Standard Test Method D 4318. The results are presented on Plate B-3, Plasticity Index Test.

DIRECT SHEAR

Direct shear testing was conducted on three samples to evaluate the shear strength parameters of representative on-site soils. The sample from B-10 was taken from a bulk sample and remolded to 90% relative compaction for the test. Each sample was tested in a saturated state in general accordance with ASTM Test Method D3080-90. The test results are presented on Plate B-4 through B-6, Direct Shear Test.

MAXIMUM DENSITY/OPTIMUM MOISTURE TEST

Four maximum density/optimum moisture tests were performed on select bulk samples of the on-site soils to determine compaction characteristics. The tests were performed in accordance with ASTM Standard Test Method D-1557-91. The test results are presented in Table B-4, Maximum Density / Optimum Moisture Test Results.

R-VALUE TEST

Three resistance value (R-value) tests were performed to evaluate support characteristics of the near-surface onsite soils. R-value testing was performed in accordance with Caltrans Standard Test Method 301. The test results are presented in Table B-5, R-Value Test Results.

CORROSIVITY TESTS

A series of chemical tests were performed on two representative soil samples collected from the borings to estimate pH, sulfate content, chloride content, and electrical resistivity. The test results may be used by a qualified corrosion engineer to evaluate the general corrosion potential with respect to the construction materials. The results of the tests are presented in Table B-6, Corrosion Test Results.

Table B-1
Moisture Content and Unit Weight

Boring	Depth (ft)	Moisture Content (%)	Dry Unit Weight (pcf)
B – 1	0 – 5	14.3	--
B – 1	6	15.3	111
B – 1	10.5	15.8	100
B – 1	11	17.4	102
B – 2	0 – 1.6	23.5	--
B – 3	5.5	18.9	104
B – 3	11	10.5	95
B – 3	15	19.6	100
B – 4	0 – 4	14.5	--
B – 4	6	12.4	105
B – 4	11	16.2	103
B – 5	0 – 5	16.2	--
B – 5	6	17.4	105
B – 5	10.5	21.0	100
B – 6	1 – 5	11.9	--
B – 6	6	14.2	112
B – 6	11	18.6	109
B – 7	0 – 5	11.7	--
B – 7	6	12.9	106
B – 8	11	12.8	100
B – 8	0.3 – 5	19.4	--
B – 11	6	15.7	87
B – 11	11	12.3	105

– denotes dry unit weight test was not performed due to sample disturbance

Table B-2
Wash Sieve Test Results

Boring	Depth (ft)	Percent Passing No. 200 Sieve
B – 1	6	33
B – 1	11	25
B – 2	0 – 1.5	52
B – 3	10	26
B – 4	0 – 4	53
B – 5	0 – 5	50
B – 6	1 – 5	33
B – 7	0 – 5	35
B – 8	1 – 4	46

Table B-3
Expansion Index Test Results

Boring	Depth (ft)	Expansion Index	Expansion Potential
B – 6	6	40	Low

Table B-4
Maximum Density/Optimum Moisture Test Results

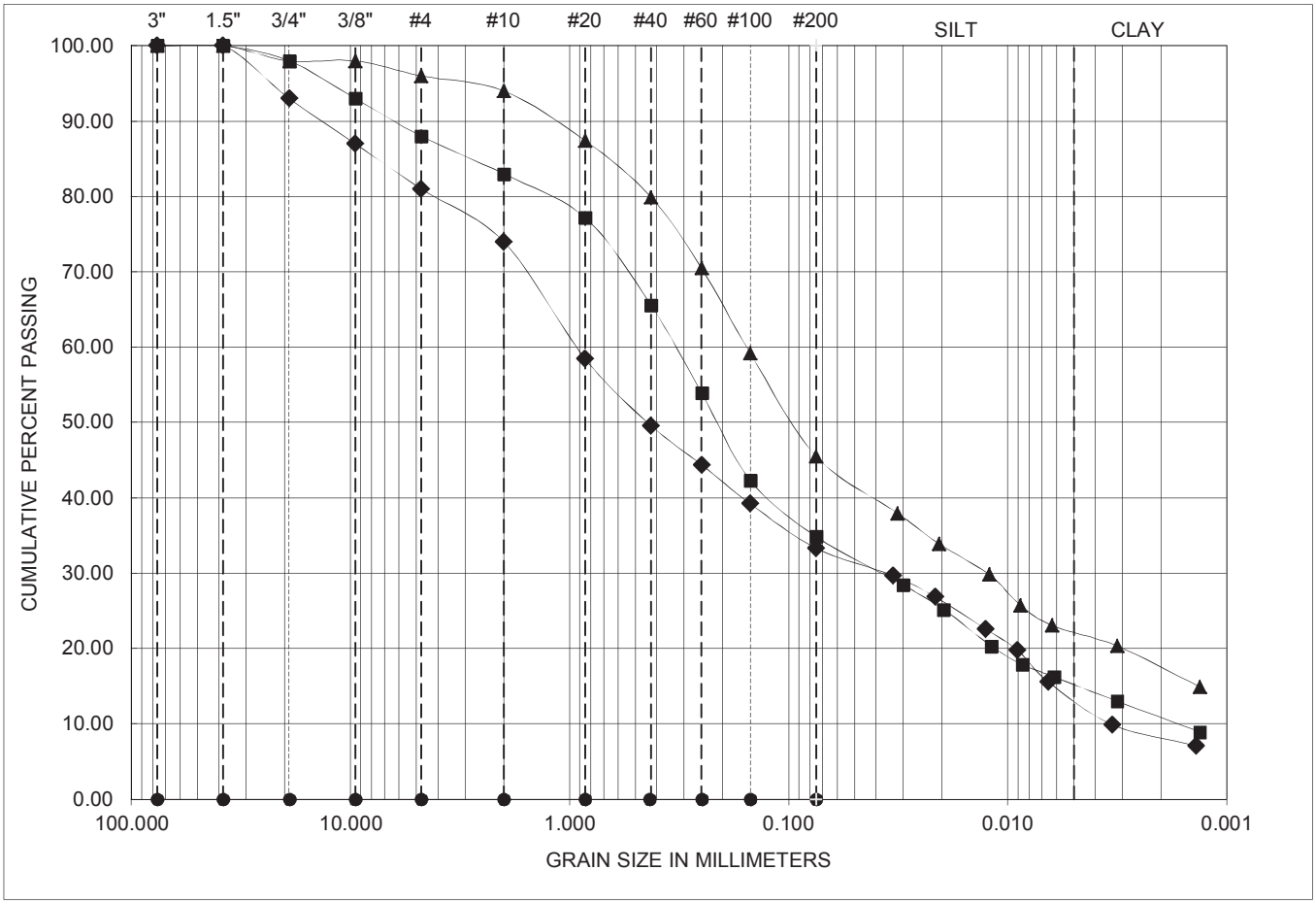
Boring	Depth (ft)	Maximum Density (pcf)	Optimum Moisture (%)
B – 1	1 – 5	113.7	14.9
B – 6	1 – 5	119.2	13.6
B – 10	1 – 3	120.0	12.0
B – 11	1 – 3.5	123.4	5.8

Table B-5
R-Value Test Results

Boring	Approximate Depth (ft)	R-Value
B – 1	1 – 5	26
B – 6	1 – 5	18
8	0.5 – 3.5	23
B – 9	1.5 – 4	5
B-12	0.5 - 2	16
B-13	2 - 3	13
B-14	1.5 - 3	15

Table B-6
Corrosion Test Results

Boring	Depth (ft)	pH	Sulfate (ppm)	Chloride (ppm)	Resistivity (ohm-cm)
B – 1	1 – 5	8.5	14	174	920
B – 7	0 – 5	8.0	32	138	460



COBBLE	GRAVEL	SAND	SILT	CLAY

SYMBOL	SAMPLE IDENTIFICATION			PERCENTAGES			ATTERBERG LIMITS			SOIL CLASSIFICATION	USCS TOTAL SAMPLE
	BORING NO.	SAMPLE NO.	DEPTH (ft.)	GRAVEL	SAND	FINES	LL	PL	PI		
♦	B-6	G1	1-5	19	48	33.3	--	--	--	Clayey Sand w/Gravel	SC
■	B-7	G1	0-5	12	53	34.9	--	--	--	Clayey Sand	SC
▲	B-8	G1	0-5	4	51	45.5	--	--	--	Clayey Sand	SC

Performed in general accordance with ASTM D 422

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Agoura Road and Kanan Road Widening Project

City of Agoura Hills, California

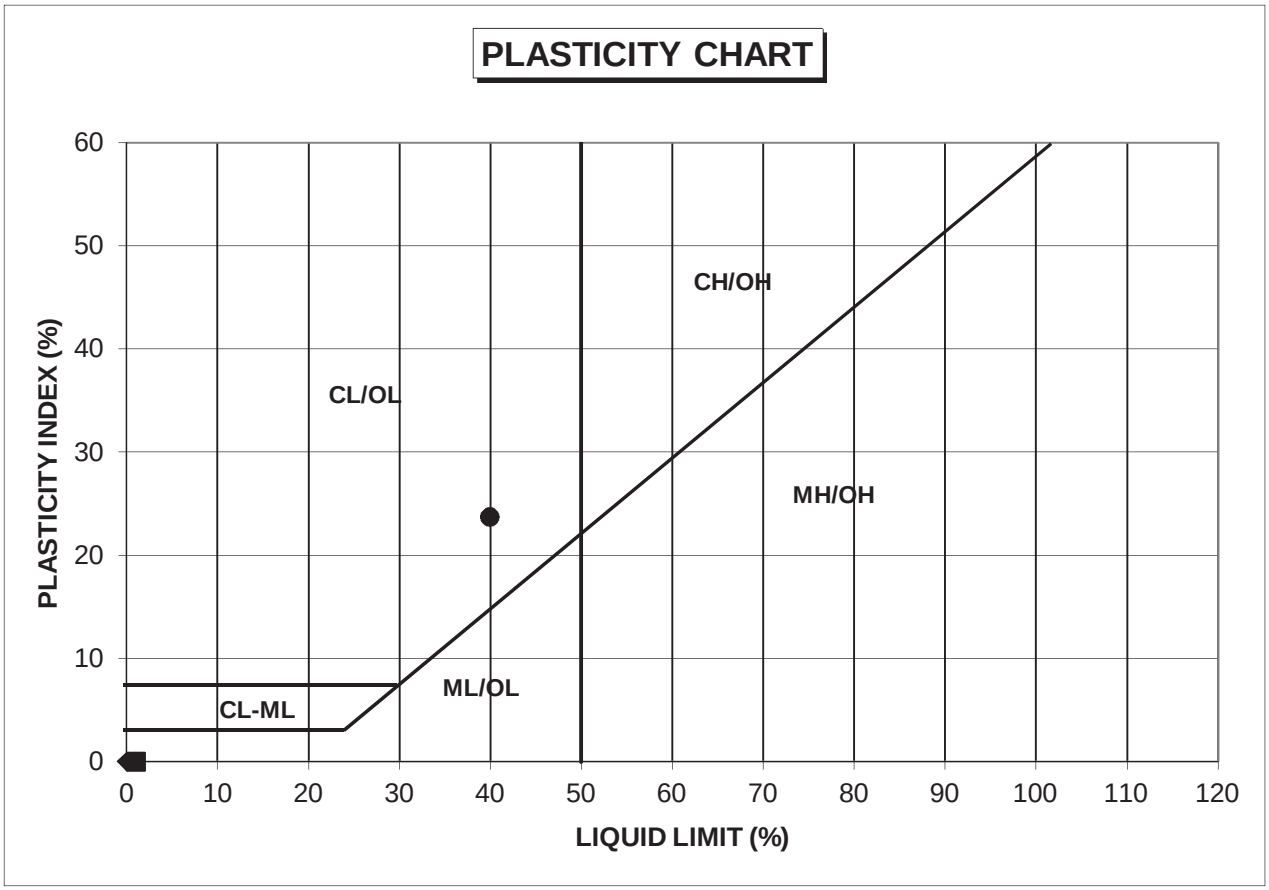
PLATE

B-2

PROJECT NO 113541

GRAIN SIZE DISTRIBUTION

PLASTICITY CHART



SYMBOL	SAMPLE IDENTIFICATION			ATTERBERG LIMITS			SOIL CLASSIFICATION	USCS TOTAL SAMPLE
	BORING NO.	SAMPLE NO.	DEPTH (ft)	LL	PL	PI		
♦	B-3	2	11	NP	NP	NP	SILTY SAND	SM
●	B-9	2	1.5-4.0	40	16	24	CLAY	CL

Performed in general accordance with ASTM D 4318

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO. 113541

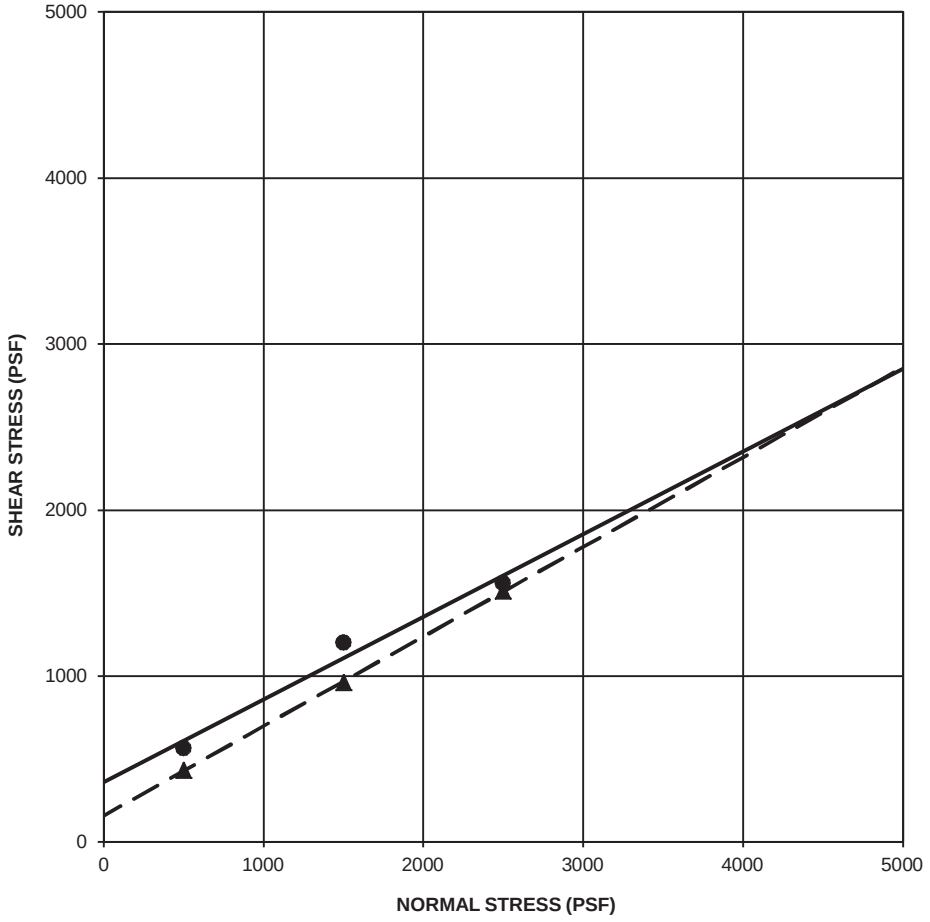
Agoura Road and Kanan Road Widening Project

City of Agoura Hills, California

PLASTICITY INDEX TEST

PLATE

B-3



SYMBOL		BORING NO.	SAMPLE NO.	DEPTH (ft)	COHESION (psf)	FRICTION ANGLE (deg)	SOIL CLASSIFICATION	USCS TOTAL SAMPLE
PEAK*	●	B-4	1	6	360	26	Sandy Clay	CL
ULTIMATE*	▲	B-4	1	6	160	28	Sandy Clay	CL

INITIAL MOISTURE(%):	16.8
INITIAL DRY DENSTIY(PCF):	105
FINAL MOISTURE(%):	26.6

Normal Stress (psf)	500	1500	2500
Peak Stress (psf)	564	1200	1560
Ultimate Stress (psf)	432	960	1512

Performed in general accordance with ASTM D 3080

KLEINFELDER
Bright People. Right Solutions.

Agoura Road and Kanan Road Widening Project

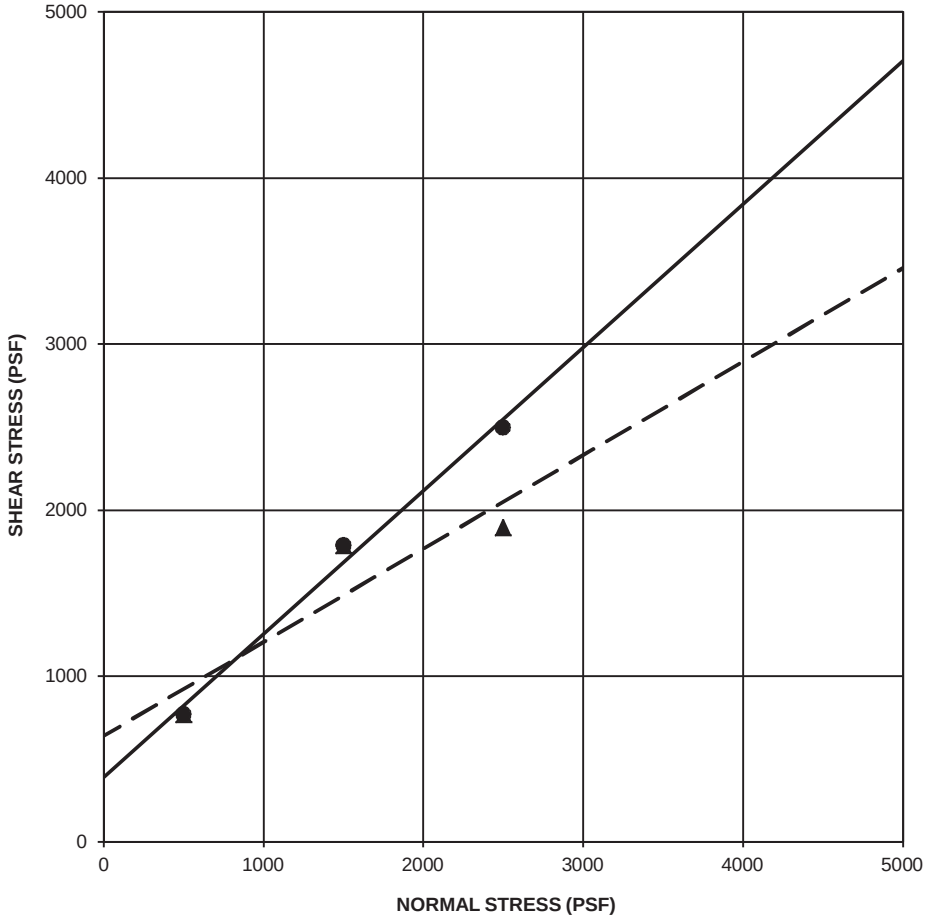
City of Agoura Hills, California

PLATE

B-4

PROJECT NO. **113541**

DIRECT SHEAR TEST



SYMBOL		BORING NO.	SAMPLE NO.	DEPTH (ft)	COHESION (psf)	FRICTION ANGLE (deg)	SOIL CLASSIFICATION	USCS TOTAL SAMPLE
PEAK*	●	B-5	1	6	390	41	Clayey Sand with Gravel	SC
ULTIMATE*	▲	B-5	1	6	640	29	Clayey Sand with Gravel	SC

INITIAL MOISTURE(%):	17.4
INITIAL DRY DENSTIY(PCF):	105
FINAL MOISTURE(%):	37.9

Normal Stress (psf)	500	1500	2500
Peak Stress (psf)	768	1788	2496
Ultimate Stress (psf)	768	1788	1896

Performed in general accordance with ASTM D 3080

KLEINFELDER
Bright People. Right Solutions.

Agoura Road and Kanan Road Widening Project

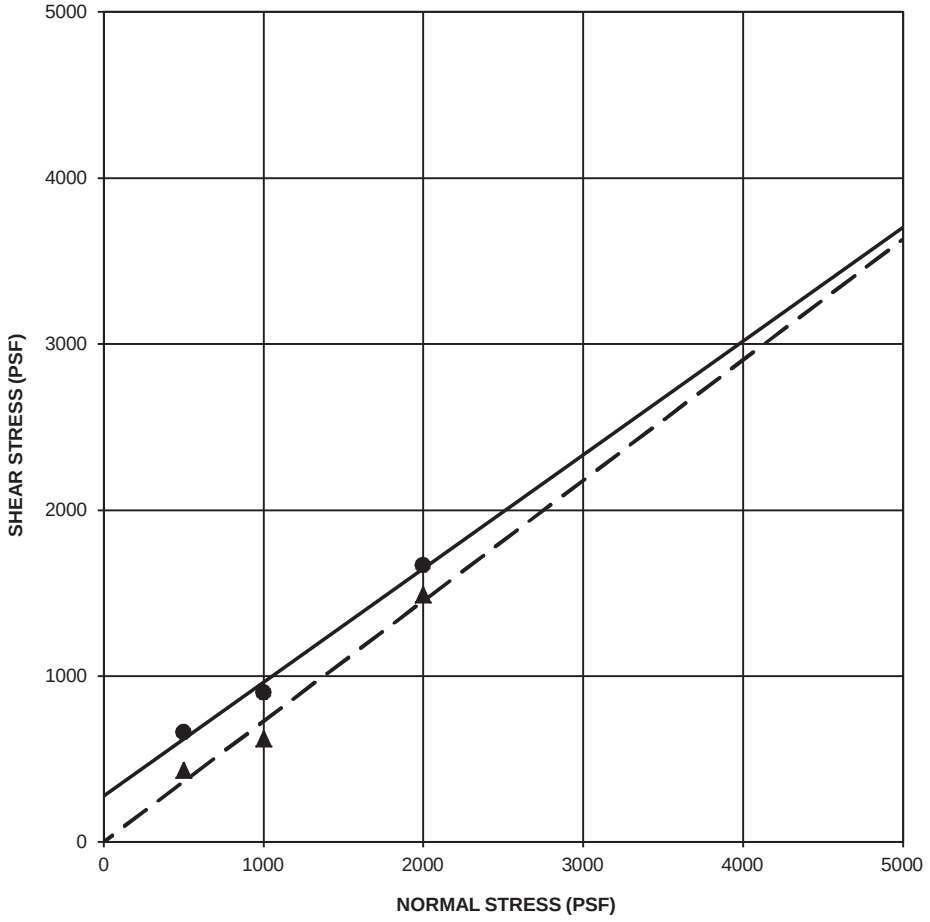
City of Agoura Hills, California

PLATE

B-5

PROJECT NO. **113541**

DIRECT SHEAR TEST



SYMBOL		BORING NO.	SAMPLE NO.	DEPTH (ft)	COHESION (psf)	FRICTION ANGLE (deg)	SOIL CLASSIFICATION	USCS TOTAL SAMPLE
PEAK*	●	B-10	1	1-3	280	34	Clayey Sand	SM
ULTIMATE*	▲	B-10	1	1-3	0	36	Clayey Sand	SM

INITIAL MOISTURE(%):	12.0
INITIAL DRY DENSTIY(PCF):	120
FINAL MOISTURE(%):	17.8

Normal Stress (psf)	500	1000	2000
Peak Stress (psf)	660	900	1668
Ultimate Stress (psf)	432	624	1488

Sample tested was remolded to 90 percent of the ASTM D 1557 Maximum Dry Density - Optimum Moisture Content Result
Performed in general accordance with ASTM D 3080

KLEINFELDER
Bright People. Right Solutions.

Agoura Road and Kanan Road Widening Project

City of Agoura Hills, California

PLATE

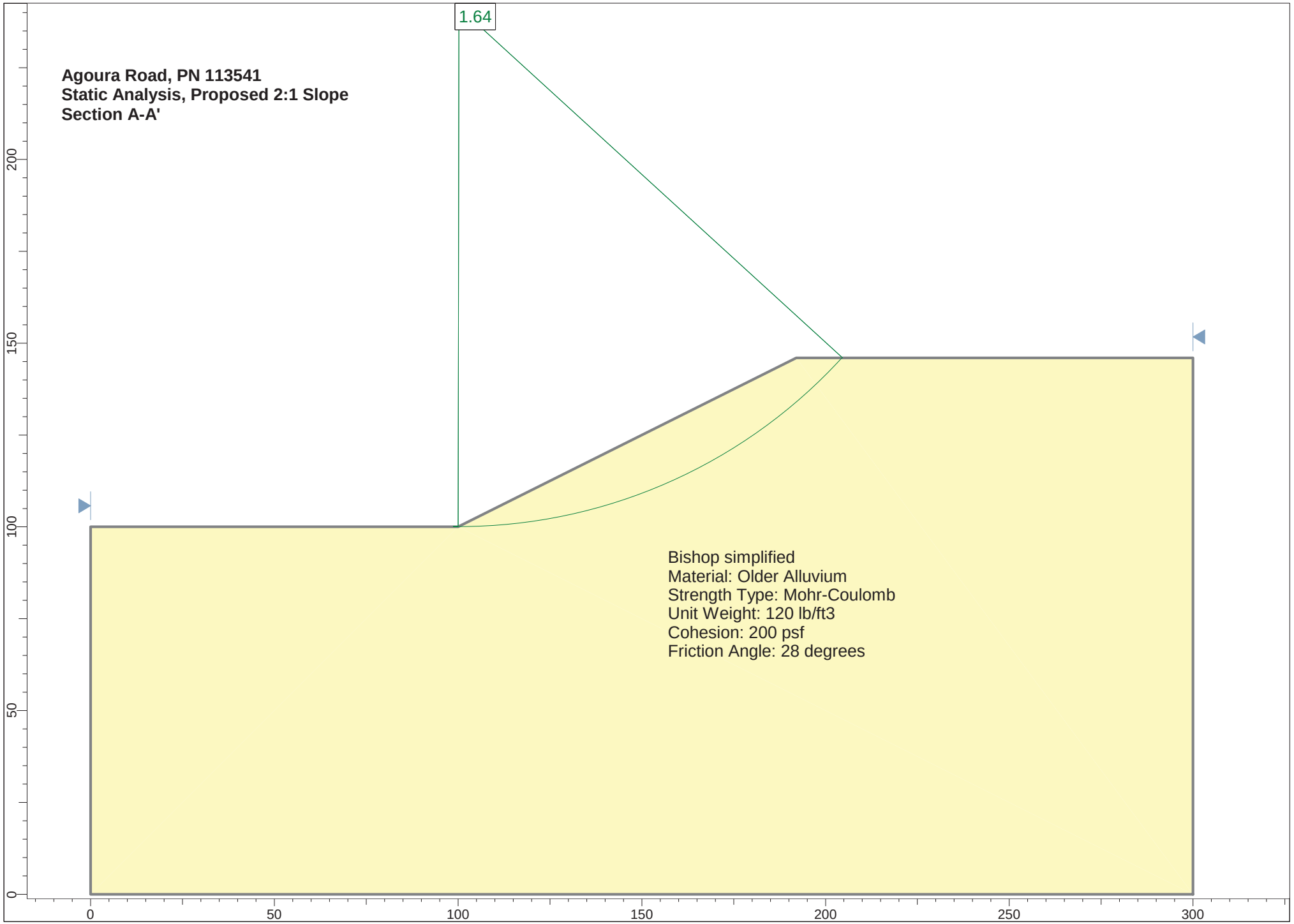
B - 6

PROJECT NO. **113541**

DIRECT SHEAR TEST

APPENDIX C

Slope Stability Analysis


1.64
Agoura Road, PN 113541
Static Analysis, Proposed 2:1 Slope
Section A-A'
Bishop simplified
Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
0
50
100
150
200
250
300

Slide Analysis Information

Document Name

File Name: Section A-A Agoura Road

Project Settings

Project Title: SLIDE - An Interactive Slope Stability Program
Failure Direction: Right to Left
Units of Measurement: Imperial Units
Pore Fluid Unit Weight: 62.4 lb/ft3
Groundwater Method: Water Surfaces
Data Output: Standard
Calculate Excess Pore Pressure: Off
Allow Ru with Water Surfaces or Grids: Off
Random Numbers: Pseudo-random Seed
Random Number Seed: 10116
Random Number Generation Method: Park and Miller v.3

Analysis Methods

Analysis Methods used:
Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
Water Surface: None

Global Minimums

Method: bishop simplified
FS: 1.644170
Center: 100.244, 241.409
Radius: 141.400
Left Slip Surface Endpoint: 100.019, 100.009

Right Slip Surface Endpoint: 204.604, 146.000
Resisting Moment=1.35847e+007 lb-ft
Driving Moment=8.26233e+006 lb-ft

Valid / Invalid Surfaces

Method: bishop simplified
Number of Valid Surfaces: 112145
Number of Invalid Surfaces: 66
Error Codes:
Error Code -108 reported for 63 surfaces
Error Code -109 reported for 3 surfaces

Error Codes

The following errors were encountered during the computation:

-108 = Total driving moment
or total driving force < 0.1. This is to
limit the calculation of extremely high safety
factors if the driving force is very small
(0.1 is an arbitrary number).

-109 = Soiltype for slice base not
located. This error should occur very rarely,
if at all. It may occur if a very low number of
slices is combined with certain soil geometries,
such that the midpoint of a slice base is
actually outside the soil region,even though
the slip surface is wholly within the soil region.

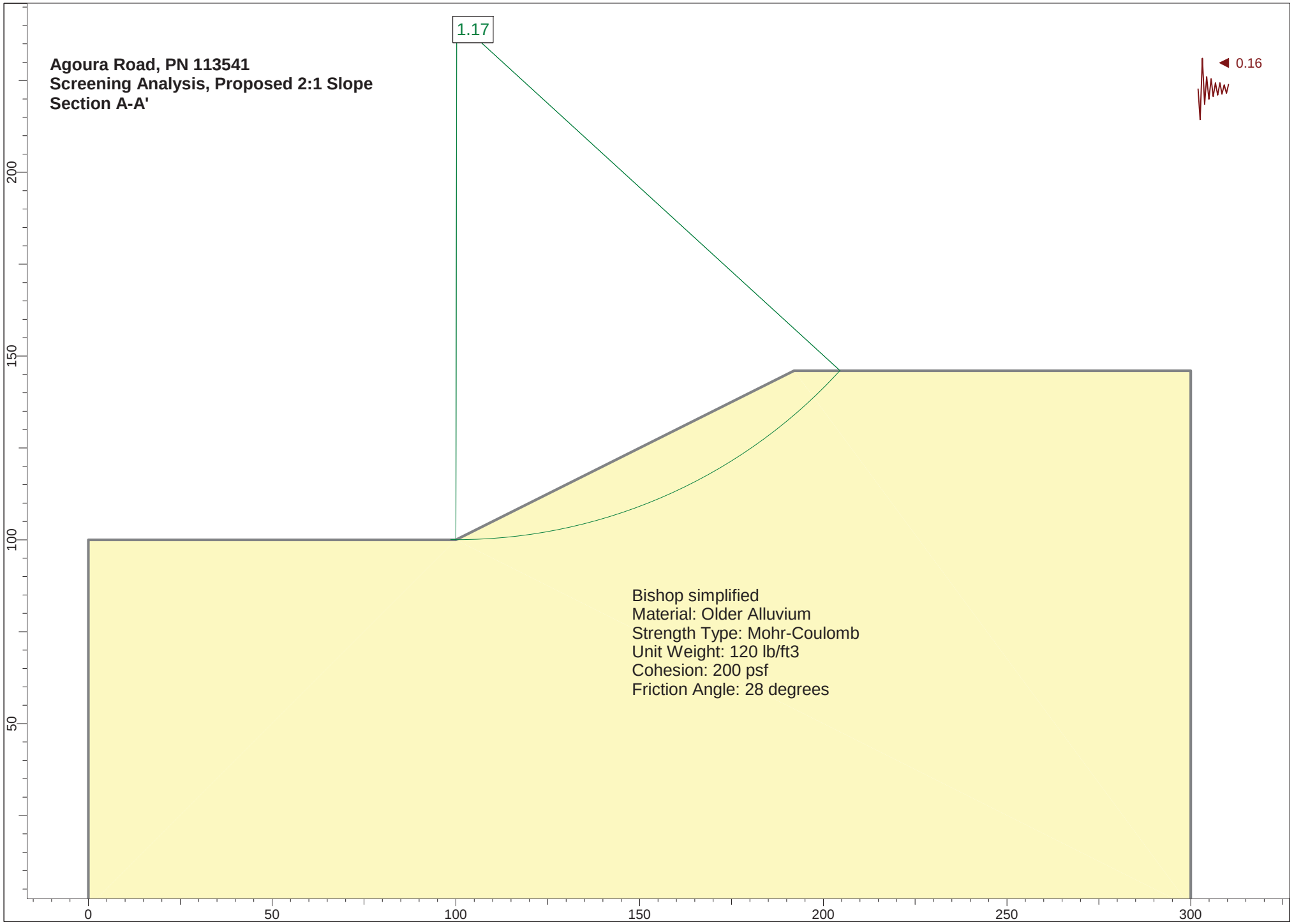
List of All Coordinates

Search Grid

72.994	180.769
150.851	180.769
150.851	307.103
72.994	307.103

External Boundary

300.000	0.000
300.000	146.000
192.000	146.000
100.000	100.000
0.000	100.000
0.000	0.000


Agoura Road, PN 113541
Screening Analysis, Proposed 2:1 Slope
Section A-A'
1.17
0.16
Bishop simplified
Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
0
50
100
150
200
250
300
50
100
150
200

Slide Analysis Information

Document Name

File Name: Section A-A Agoura Road SA

Project Settings

Project Title: SLIDE - An Interactive Slope Stability Program
Failure Direction: Right to Left
Units of Measurement: Imperial Units
Pore Fluid Unit Weight: 62.4 lb/ft3
Groundwater Method: Water Surfaces
Data Output: Standard
Calculate Excess Pore Pressure: Off
Allow Ru with Water Surfaces or Grids: Off
Random Numbers: Pseudo-random Seed
Random Number Seed: 10116
Random Number Generation Method: Park and Miller v.3

Analysis Methods

Analysis Methods used:
Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Loading

Seismic Load Coefficient (Horizontal): 0.16

Material Properties

Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
Water Surface: None

Global Minimums

Method: bishop simplified

FS: 1.168050
Center: 100.244, 241.409
Radius: 141.400
Left Slip Surface Endpoint: 100.019, 100.009
Right Slip Surface Endpoint: 204.604, 146.000
Resisting Moment=1.29176e+007 lb-ft
Driving Moment=1.10591e+007 lb-ft

Valid / Invalid Surfaces

Method: bishop simplified
Number of Valid Surfaces: 112208
Number of Invalid Surfaces: 3
Error Codes:
Error Code -109 reported for 3 surfaces

Error Codes

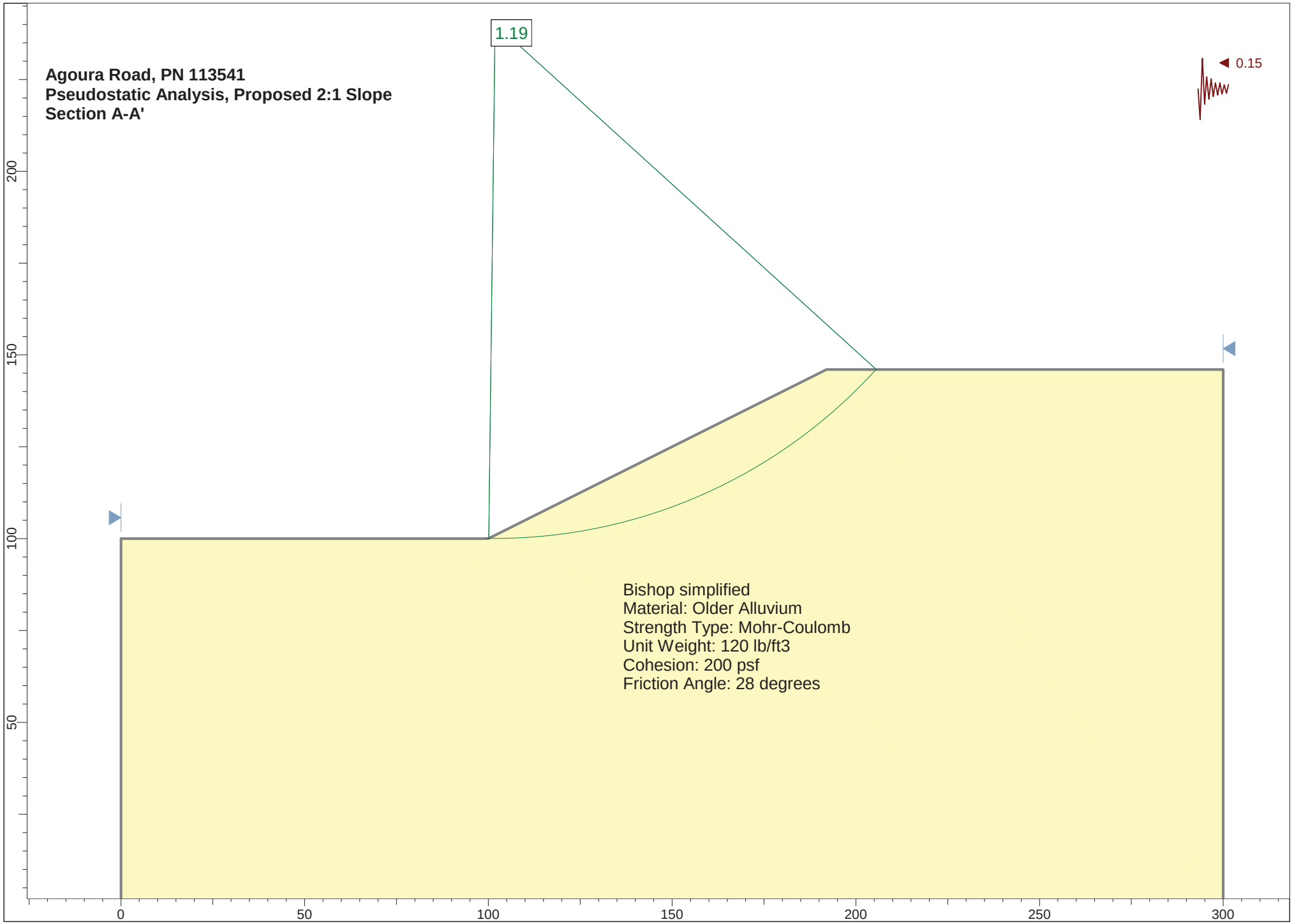
The following errors were encountered during the computation:

-109 = Soiltype for slice base not
located. This error should occur very rarely,
if at all. It may occur if a very low number of
slices is combined with certain soil geometries,
such that the midpoint of a slice base is
actually outside the soil region,even though
the slip surface is wholly within the soil region.

List of All Coordinates

External Boundary

300.000	0.000
300.000	146.000
192.000	146.000
100.000	100.000
0.000	100.000
0.000	0.000


Agoura Road, PN 113541
Pseudostatic Analysis, Proposed 2:1 Slope
Section A-A'
1.19
0.15
Bishop simplified
Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
0
50
100
150
200
250
300
50
100
150
200

Slide Analysis Information

Document Name

File Name: Section A-A Agoura Road PS

Project Settings

Project Title: SLIDE - An Interactive Slope Stability Program
Failure Direction: Right to Left
Units of Measurement: Imperial Units
Pore Fluid Unit Weight: 62.4 lb/ft3
Groundwater Method: Water Surfaces
Data Output: Standard
Calculate Excess Pore Pressure: Off
Allow Ru with Water Surfaces or Grids: Off
Random Numbers: Pseudo-random Seed
Random Number Seed: 10116
Random Number Generation Method: Park and Miller v.3

Analysis Methods

Analysis Methods used:
Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Loading

Seismic Load Coefficient (Horizontal): 0.15

Material Properties

Material: Older Alluvium
Strength Type: Mohr-Coulomb
Unit Weight: 120 lb/ft3
Cohesion: 200 psf
Friction Angle: 28 degrees
Water Surface: None

Global Minimums

Method: bishop simplified

FS: 1.190670
Center: 101.801, 240.146
Radius: 140.120
Left Slip Surface Endpoint: 100.073, 100.036
Right Slip Surface Endpoint: 205.581, 146.000
Resisting Moment=1.33153e+007 lb-ft
Driving Moment=1.1183e+007 lb-ft

Valid / Invalid Surfaces

Method: bishop simplified
Number of Valid Surfaces: 112208
Number of Invalid Surfaces: 3
Error Codes:
Error Code -109 reported for 3 surfaces

Error Codes

The following errors were encountered during the computation:

-109 = Soiltype for slice base not
located. This error should occur very rarely,
if at all. It may occur if a very low number of
slices is combined with certain soil geometries,
such that the midpoint of a slice base is
actually outside the soil region,even though
the slip surface is wholly within the soil region.

List of All Coordinates

External Boundary

300.000	0.000
300.000	146.000
192.000	146.000
100.000	100.000
0.000	100.000
0.000	0.000

APPENDIX D

Pertinent Data from Previous Reports

Hilton

GeoSoils Consultants, Inc.

Geotechnical Engineering * Engineering Geology

PLATE SH-QA

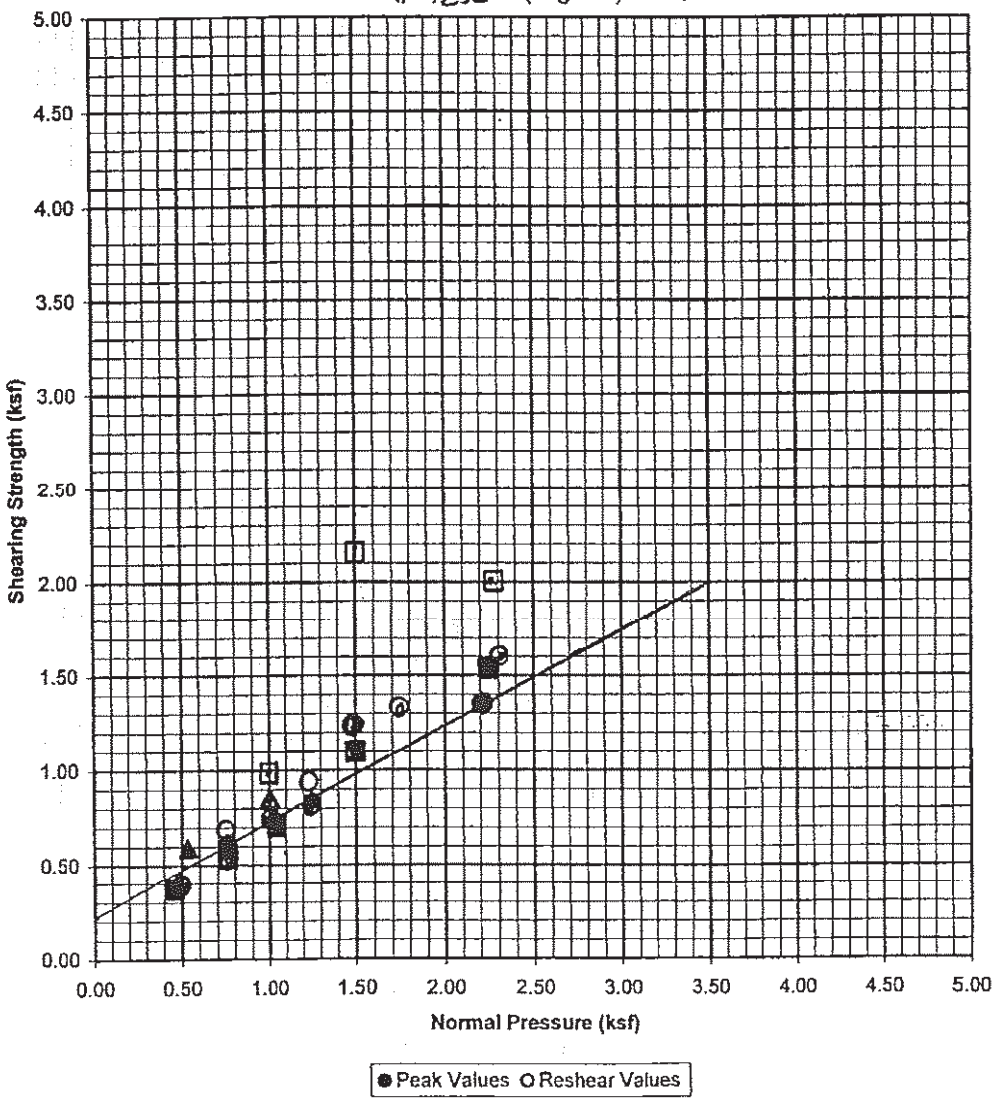
Shear Test Diagram

Peak

C(psf): Phi (degrees):

Reshear

C(psf)≥250 Phi (degrees): 29



● Cut slope #1

■ cut slope #2

▲ B-6 @ 10'

⊙ B-8 @ 30'

Hilton

GeoSoils Consultants, Inc.

Geotechnical Engineering * Engineering Geology

PLATE SH-F.11

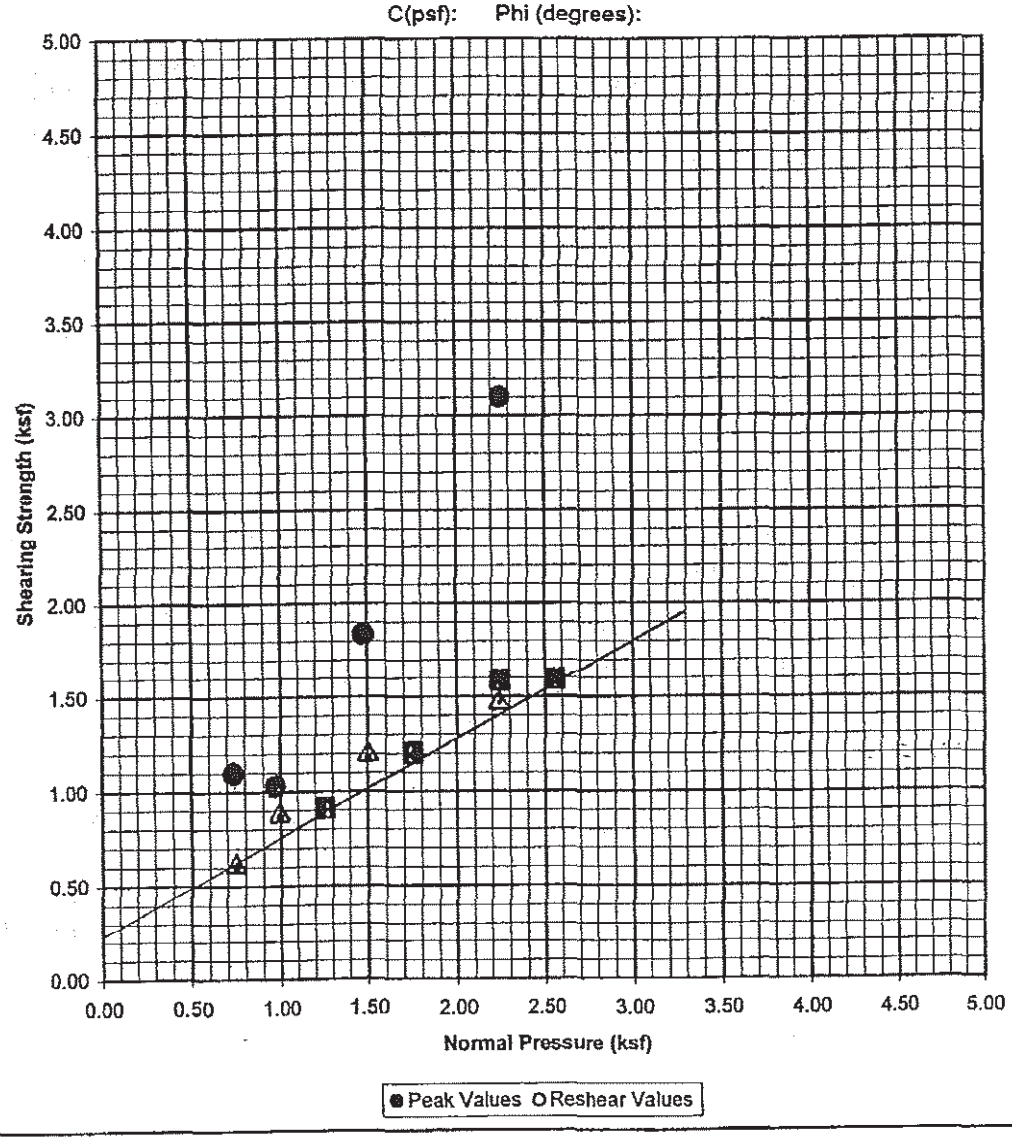
Shear Test Diagram

Peak

C(psf): Phi (degrees):

Reshear

C(psf): Phi (degrees):



● B-1 @ 10'

△ B-2 @ 5'

■ B-7 @ 5'

Existing Fill.

April, 4, 2016
Project No. 150702.4

Mr. Justin Gatza
Kimley-Horn
660 South Figueroa Street, Suite 2050
Los Angeles, CA 90017

TWINING

OFFICE
562.426.3355

FAX
562.426.6424

WEB
twininginc.com

Subject: Geotechnical Recommendations
Proposed Kanan Road/ Agoura Road Ultimate Intersection Improvements
City of Agoura Hills, California

References: Fugro West, Inc., 2008. Geotechnical Study, Agoura Hills Roundabout, Agoura Hills, California, Project No. 3044.071, dated July 25.

Kleinfelder, 2012, Geotechnical Investigation Report, Agoura Road and Kanan Road Widening Project, City of Agoura Hills, California, dated May 25.

Leighton, 2016, Agoura Road Widening Project; Review of Tensar Proposed Pavement Section Redesign, dated February 18.

Kimley-Horn, 2015, Design Drawings for Kanan Road and Agoura Road Intersection Improvements, dated July 2.

Dear Mr. Gatza:

Twining, Inc. (Twining) is pleased to present our geotechnical recommendations for the proposed Kanan Road and Agoura Road Ultimate Intersection Improvements project in the City of Agoura Hills, California. The proposed improvements include widening the existing roads, constructing new center medians, striping, HMA pavement and flexible vehicular brick paving, short retaining walls, and relocating existing oak trees.

To prepare this report, we have performed a site reconnaissance to observe surface conditions in October, 2015. We reviewed above-referenced geotechnical reports and civil drawings. The current site conditions are essentially as described in the 2012 Kleinfelder report.

Based on our review of previous geotechnical reports, subgrade soils under the existing pavement consist of clayey sand and sandy clay. The clayey soils have a low R- value ranging from 5 to 16. It is our understanding that geotextile enhancement to reduce the overall pavement structural section is proposed.

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

RECOMMENDATIONS TO SUBGRADE GEOTEXTILE ENHANCEMENT

It is our understanding that the following pavement structural section with geotextile enhancement (listed in vertical descending order) is proposed:

- 1-5/8" Asphalt Rubber Hot Mix (ARHM)
- 4.5" Hot Mixed Asphalt (HMA)
- 6" Class 2 Aggregate Base (AB)
- Sheet-layer of Tensar TX5 geogrid
- 6" Class 2 Aggregate Base (AB)
- Sheet-layer of Tensar TX5 geogrid
- Scarification of 6" of native subgrade and proof-rolling and compacted to 95%

We have reviewed this pavement structural section in accordance with Caltrans Highway Design Manual, and concluded this design is adequate for a Traffic Index (TI) of 9.5 from a geotechnical standpoint.

We have also performed the analysis for the proposed flexible vehicular brick paving in accordance with Design Guide for Vehicular Brick Pavements (Brick Industry Association, 2003). The following pavement structural section with geotextile enhancement (listed in vertical descending order) is recommended:

- 2-5/8" Brick Paver (Minimum thickness)
- 3/4" Bituminous Setting Bed
- 2" HMA (Minimum thickness)
- 6" Class 2 Aggregate Base (AB)
- Sheet-layer of Tensar TX5 geogrid
- 6" Class 2 Aggregate Base (AB)
- Sheet-layer of Tensar TX5 geogrid
- Scarification of 6" of native subgrade and proof-rolling and compacted to 95%

Prior to placement of geogrid, the exposed native subgrade should be proof-rolled and inspected by Twining. Additional removals may be recommended if loose or soft soils are exposed. The exposed ground surface should then be scarified to a depth of approximately 6 inches and watered or dried, as needed, to achieve generally consistent moisture contents at or near the optimum moisture content. The scarified materials should then be compacted to 95 percent relative compaction in accordance with the latest version of ASTM Test Method D1557.

RECOMMENDATIONS FOR RETAINING WALLS

It is our understanding that short retaining walls are proposed along the north side of Agoura Road. For a cantilevered wall that is free to rotate at the top, the following active pressures can be used for structural design.

Backslope ratio (Horizontal : Vertical)	Active Pressure in terms of EFP (pcf)
Level	30
3 : 1	37
2 : 1	46

The recommended design lateral earth pressure is calculated assuming that a drainage system will be installed behind the walls and that external hydrostatic pressure will not develop behind the wall. The values presented above do not include surcharge loads. The additional horizontal pressure acting on the wall can be estimated as approximately 30% of the magnitude of the vertical surcharge pressure for the "active" conditions.

Adequate backdrain system (i.e. drain pipe or weepholes) is essential in order to provide a free-drained backfill condition and to limit hydrostatic buildup behind walls. The walls should be appropriately waterproofed in accordance with the recommendations of the project design engineer. The backdrain consisting of a 4-inch-diameter perforated pipe encased in 1 square foot per foot of ¾-inch open-graded crushed rock wrapped in suitable non-woven filter fabric (Mirafi 140N or equivalent) should be placed continuously along the bottom of the retaining side of the wall. The pipe should be sloped at least 1 percent and discharge through a solid pipe to an appropriate outlet. A weephole should consist of a 3-inch-diameter solid PVC pipe encased in a minimum 1-cubic-foot, 3/4-inch drain rock, with center-to-center spacing of 15 feet.

Any imported backfill material should consist of granular, non-expansive material with an expansion index no greater than 30, and should be approved by the project geotechnical engineer prior to importing to the site.

The wall footing should be at least 18 inches in width and 12 inches in depth below the lowest adjacent grade. A soil bearing capacity of 2,000 psf can be used for design. Bearing capacity can increase 300 psf for each additional foot of width and 450 psf for additional foot of depth to a maximum allowable capacity of 3,500 psf. The allowable bearing values may be increased by one-third when considering wind or earthquake loading. Allowable coefficient of friction can be assumed to be 0.3, and lateral passive resistance in terms of equivalent fluid pressure (EFP) of 300 pcf can be used for design.

The excavated footing subgrade should be inspected by Twining. Additional removals and/or compaction may be required if loose or soft soils are exposed.

RECOMMENDATIONS FOR TRANSPLANT OF OAK TREES

Several oak trees will be transplanted to the new location near the intersection of Kanan Road and Cornell Road. We recommend an arborist supervise the oak trees transplant operations. The holes created by the removal of trees should be backfilled with compacted fill. The holes should be inspected by a geotechnical engineer to ensure all the loose materials are removed prior to placement of backfill. As an alternative, Controlled-Low-Strength-Material (CLSM) may be used to backfill holes deeper than 3 feet. In such a case, we recommend the hole be backfilled with CLSM consisting of 2-sack cement slurry up to 2 feet below the proposed subgrade, and then capped with compacted fill to the subgrade elevation.

Based on our field observations, a descending slope is located at the west side of the proposed transplant location on the west shoulder of Kanan Road. We recommend a minimum 3 feet setback

distance from the drip line of trees to the top of the slope be provided. An arborist should be retained to evaluate the site topographical and horticultural soil conditions as well as supervise the transplant operations.

LIMITATIONS

The recommendations and opinions expressed in this report are based on Twining, Inc.'s review of available background documents, and on information obtained from our recent field observations. 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.

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.

We trust that this information meets your needs at this time. Please do not hesitate to contact the undersigned with any questions at 562-426-3355.

Respectfully submitted,
TWINING, INC.

Sean C. Lin, GE 2921
Chief Geotechnical Engineer

Appendix 4.8-1

Greenhouse Gas Emissions Assessment

Kimley»Horn

Greenhouse Gas Emissions Assessment

Agoura Village Specific Plan Update Project

City of Agoura Hills, California

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Mr. Ryan Chiene
714.705.1343

August 2023

TABLE OF CONTENTS

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
AQMD	Air Quality Management District
CARB	California Air Resource Board
CCR	California Code of Regulations
CAAP	City of Agoura Hills Climate Action Adaptation Plan
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH_4	Methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	metric tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	Perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Government
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Agoura Village Specific Plan Update Project's Kanan Road/Agoura Road Ultimate Intersection Improvements Component (Intersection Component). The purpose of this GHG Emissions Assessment is to evaluate the potential Intersection Component construction and operational emissions and determine the level of impact the Intersection Component would have on the environment.

1.1 Project Location

The Intersection Component site is in the City of Agoura Hills (City), which is located along the U.S. Route 101 (US 101). **Exhibit 1: Regional Vicinity Map**, depicts the Intersection Component site in a regional context.

Exhibit 2: Local Vicinity Map, depicts the Intersection Component site in a local context and indicates the Intersection Component site is generally comprised of three discontiguous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

The Intersection Component area comprises approximately 6.1 acres in the AVSP area's north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange; see **Exhibit 4: Proposed Kanan Road/Agoura Road Intersection**. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area.

1.2 Project Description

The Agoura Hills City Council adopted the AVSP (2008 AVSP) and certified the supporting updated Final Revised and Recirculated Program Environmental Impact Report (Certified PEIR) (State Clearinghouse [SCH] No. 2003111051) on October 22, 2008 (Resolution 08-1503). One of the AVSP's proposed components was a roundabout at the Kanan Road/Agoura Road intersection, which was evaluated throughout the Certified PEIR as the Preferred Alternative.

In September 2014, the City Council voted to discontinue the Kanan Road/Agoura Road roundabout as the Preferred Alternative because of the large amount of property outside of the existing right-of-way ("ROW") which the City would need to acquire to construct the roundabout. Hence, to limit ROW acquisitions, the City Council authorized the design of a widened standard four-leg signalized intersection as the ultimate configuration.

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The intersection's high use and visibility make the Intersection Component a challenging and sensitive priority for the City.

The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines, among others, as depicted on **Exhibit 3: Proposed Kanan Road/Agoura Road Intersection**, and

described below. **Exhibit 4: Proposed Kanan Road/Agoura Road Intersection Improvements** provides a close-up view of the proposed improvements by segment. Although the Agoura Village Gateway Monuments would be constructed at a later date by others, the environmental impacts from the City Gateway Entry Monuments and Agoura Village Gateway Monuments are analyzed herein, including construction effects, to provide a conservative analysis.

Intersection and Roadway Improvements

Modified road alignments, including road elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional queuing capacity at all intersection approaches. The through lanes would vary between 10 and 13 feet wide. The proposed widened pavement improvements would generally match the existing Kanan Road and Agoura Road pavement structural sections, as further detailed below.

a. **North Leg:** Improvements on the north leg would occur within the 100-foot ROW and would extend from the Kanan Road/Agoura Road intersection to approximately 50 to 60 feet north. Improvements would be limited to new pedestrian curb ramps, relocation of traffic signals, landscape buffers, full-depth asphalt replacement, and a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection. The existing lane geometry would remain, with two northbound through lanes and five southbound lanes including two left-turn pockets, two through lanes, and one right turn pocket lane.

b. **South Leg:** Improvements on the south leg would extend from the Kanan Road/Agoura Road intersection to approximately 250 feet south. Improvements include full depth asphalt replacement, asphalt milling[1] and overlay, creation of a new right-turn pocket lane, relocation of existing utilities and traffic signals, and new pedestrian curb ramps and 12-foot sidewalk along northbound lanes. The northbound geometry would include a 12-foot left-turn lane, two through lanes ranging from 12 to 13 feet, and a new right-turn pocket lane measuring 13 feet wide. The existing ROW would be relocated further east to accommodate the proposed improvements. The two existing 15-foot southbound though lanes would remain. The south leg would also include utility undergrounding; see *Underground Utility Improvements*, below.

c. **East Leg:** Improvements on the east leg would extend from the Kanan Road/Agoura Road intersection to approximately 530 feet east, terminating at the existing landscaped median on Agoura Road, near the vacant lot at 29125 Agoura Road. The existing eastbound and westbound six-foot Class II bike lane[2] would remain. Improvements include full depth asphalt replacement, asphalt milling and overlay, new green conflict striping,[3] relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 10 feet to the south to allow for the bike lane and sidewalk to each be widened by one foot, and new landscape buffers. A Southern California Edison transformer would need to be relocated to the south to avoid the newly widened sidewalk. A striped median ranging in width from 10 to 21 feet is also proposed. Left-turn access to the Speedway Gas Station would be maintained. Eastbound lanes would retain two 11-foot through lanes, eventually merging into one through lane to the Intersection Component terminus.

[1] Asphalt milling (also called pavement milling) refers to grinding and removing the topmost layer of asphalt pavement. This is often done to keep pavement from getting too high from years of asphalt resurfacing and also prevents drainage problems.

[2] Class II bike lanes are one-way facilities that dedicate some of the roadway ROW to bicyclists.

[3] A conflict zone is an area where the bicycle path and vehicle path intersect. The green colored pavement within a bicycle lane is meant to increase the visibility of the facility, identify potential areas of conflict between bicycle, vehicle, and pedestrian, and reinforces priority to bicyclists in conflict areas.

Westbound lanes geometry would remain the same. One westbound through lane would expand to provide one 14-foot right-turn pocket lane and one 11-foot through lane, with the existing six-foot bike lane with new green conflict striping in between. The westbound lane would terminate at the Kanan Road/Agoura Road intersection with the 12-foot right-turn pocket lane, the existing six-foot bike lane with new green conflict striping, the existing 11-foot through lane, and the existing 11-foot left-turn pocket at the Kanan Road/Agoura Road intersection.

d. **West Leg:** Improvements on the west leg would extend from the Kanan Road/Agoura Road intersection to approximately 400 feet west, terminating just west of the existing AT&T driveway located west of the Tavern Tomoko & Ladyface Brewery and the existing driveways for the Agoura Pointe Shopping Center. Improvements include full depth asphalt replacement, asphalt mill and overlay, new green conflict striping for existing eastbound bike lane, relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of the ROW by 7 feet to the south to accommodate new 11-foot right-turn pocket lane. Eastbound lanes would feature two 11-foot left-turn pocket lanes, one 11-foot through lane, six-foot Class II bike lane, and new 12-foot right-turn pocket lane. Westbound lanes would feature a 11-foot through lane with seven-foot Class II bike lane. Approximately 190 feet west of the Kanan Road/Agoura Road intersection, a set of stairs would be created to connect the westbound sidewalk to the Agoura Pointe Shopping Center parking lot. The development of the stairway connection would remove the existing parking spot and would open into the parking lot. The parking spot would be replaced with a landing zone and would be surrounded by the existing island with an oak tree to the east and a landscape buffer to the west. Three mature oak trees, two of which are located north of Agoura Road and one which is located south of Agoura Road, would be protected and remain in place as part of the Intersection Component.

Ancillary improvements such as minor utility modifications/relocations would be required to accommodate the above improvements; see also the *Underground Utility Improvements* section below. Existing pedestrian and street lighting would also be relocated; however, no new pedestrian or street lighting would be added.

Signage Improvements

The Intersection Component includes entryway and statement signage (i.e., the City Gateway Entry Monuments and Agoura Village Gateway Monuments) on Kanan Road and Agoura Road. The new signage would adhere to AVSP Chapter 2: Land Use, Regulations, and Guidelines, Section F: Design Guidelines, as applicable. The signage improvements are comprised of the City Gateway Entry Monuments and Agoura Village Gateway Monuments.

In total, six Agoura Village Gateway Monuments and two City Gateway Entry Monuments are proposed, as described below. The Agoura Village Gateway Monuments would be up to approximately 10 feet tall, and up to approximately 10 feet wide by 10 feet long. A 15-foot wide landscaped buffer would be provided surrounding the base of the Agoura Village Gateway Monuments. Thus, the total base footprint of the Agoura Village Gateway Monuments with the landscaped buffer would be approximately 1,600 SF each.

The City Gateway Entry Monuments would be up to 15 feet tall, and up to 24 feet wide by 24 feet long. A 5-foot landscaped buffer would be provided surrounding the base of the City Gateway Entry Monuments. Thus, the total base footprint of the City Gateway Entry Monuments with the landscaped buffer would be approximately 1,156 SF each.

- **Agoura Village Gateway Monument East and West Locations:** Four monuments are proposed on Agoura Road at the two locations depicted on Exhibit 4 (two for each location, offset from each other on either side of the road). These are intended to establish the character of the AVSP area;
- **Agoura Village Gateway Monument South Locations:** Two monuments are proposed on Kanan Road at the location depicted on Exhibit 4 (two for this location, offset from each other on either side of the road) to establish the AVSP area's southern boundary. The proposed locations would be approximate with the conceptual driveway locations of the proposed developments east and west of Kanan Road; and
- **City Gateway Entry Monument Locations:** Two monuments are proposed on Kanan Road at the locations depicted on Exhibit 4 near the Kanan Road/Cornell Road intersection. These are intended to approximately establish the City's southern limit.

The new signage, along with other aesthetic improvements from new landscaping islands, activated pedestrian corners, and street furnishings are intended to contribute and define a unique "gateway for the City." Minor lighting would be provided at the pilasters and monuments for illumination and safety purposes.

Underground Utility Improvements
The Intersection Component proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see **Exhibit 4** and **Exhibit 5**.

The lighting poles that include luminaires will remain in place, and all other utility poles, excluding one located on northbound Kanan Road, will also remain in place. Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations will be determined during final engineering design.

Further details concerning undergrounding the utilities is provided under the *Construction and Phasing* Section below.

Drainage and Water Quality
Under existing conditions within the Intersection Component area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under Intersection Component conditions, these inlets would be relocated to accommodate the widening of Agoura Road. The associated drain lines would be extended; however, flows would remain generally unchanged.

Construction and Phasing
The Intersection Component improvements are proposed to occur in a single phase, except the Agoura Village Gateway Monuments, which would be constructed at a later date by others.[4] Prior to the start of construction, the City will need to purchase the ROW and coordinate temporary construction easements. This process will be approximately 6 to 9 months. After the purchase and receipt of the easements, construction will start and is anticipated to occur over approximately 12 months, beginning as early as November 2024 and ending as early as November 2025. The proposed improvements would be located mostly within existing City ROW but would require partial permanent acquisitions and temporary

[4] For purposes of the analysis, it is conservatively assumed that the construction activities would occur in a single phase to present the most conservative (e.g., highest) daily maximum construction emissions.

construction easements (TCE) from adjacent properties; see **Table 1: Intersection Component Proposed Right-of-Way**. As indicated in **Table 1**, approximately 0.18 acres of permanent property acquisitions and approximately 6.04 acres of temporary construction easements are required for the Intersection Component. The Agoura Village Gateway Monuments and City Gateway Entry Monuments would be located in approximate areas within the marked areas in **Exhibit 4**; therefore, the areas for improvements are approximate. It should be noted that the Intersection Component would not result in acquisitions or TCE for the Agoura Village Gateway Monuments; if and when the properties that are identified for the Agoura Village Gateway Monuments are developed, then the ROW/easements would occur.

Table 1: Intersection Component - Proposed Right-of-Way

Parcel	Required Permanent Property Acquisitions	Required Temporary Construction Easements (TCE)
City Right of Way	--	5.33
2061-032-021	0.04	--
2061-031-020	0.14	0.16
2061-004-034	--	0.20
2061-032-022	--	0.02
2061-032-028	--	0.11
2061-007-905	--	0.07
2061-029-004	--	0.02
2061-004-046	--	0.04
2061-032-025	--	0.09
Source: Kimley-Horn, 2022.		

To underground the two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, the Intersection Component would require approximately 1,105 linear feet of trenching approximately 4.5 feet deep and 2.5 feet wide, generally between Agoura Road and Cornell Road. The light poles that include luminaires will remain in place, and all other utility poles, excluding one located on northbound Kanan Road, will also remain in place. Undergrounding the power lines would involve removing the existing overhead utility lines and one pole located on northern Kanan Road approximately 150 feet south of the Kanan Road/Agoura Road intersection, installing conduit and substructures (e.g., transformers on concrete pads), installing cable through the conduits, and backfilling.

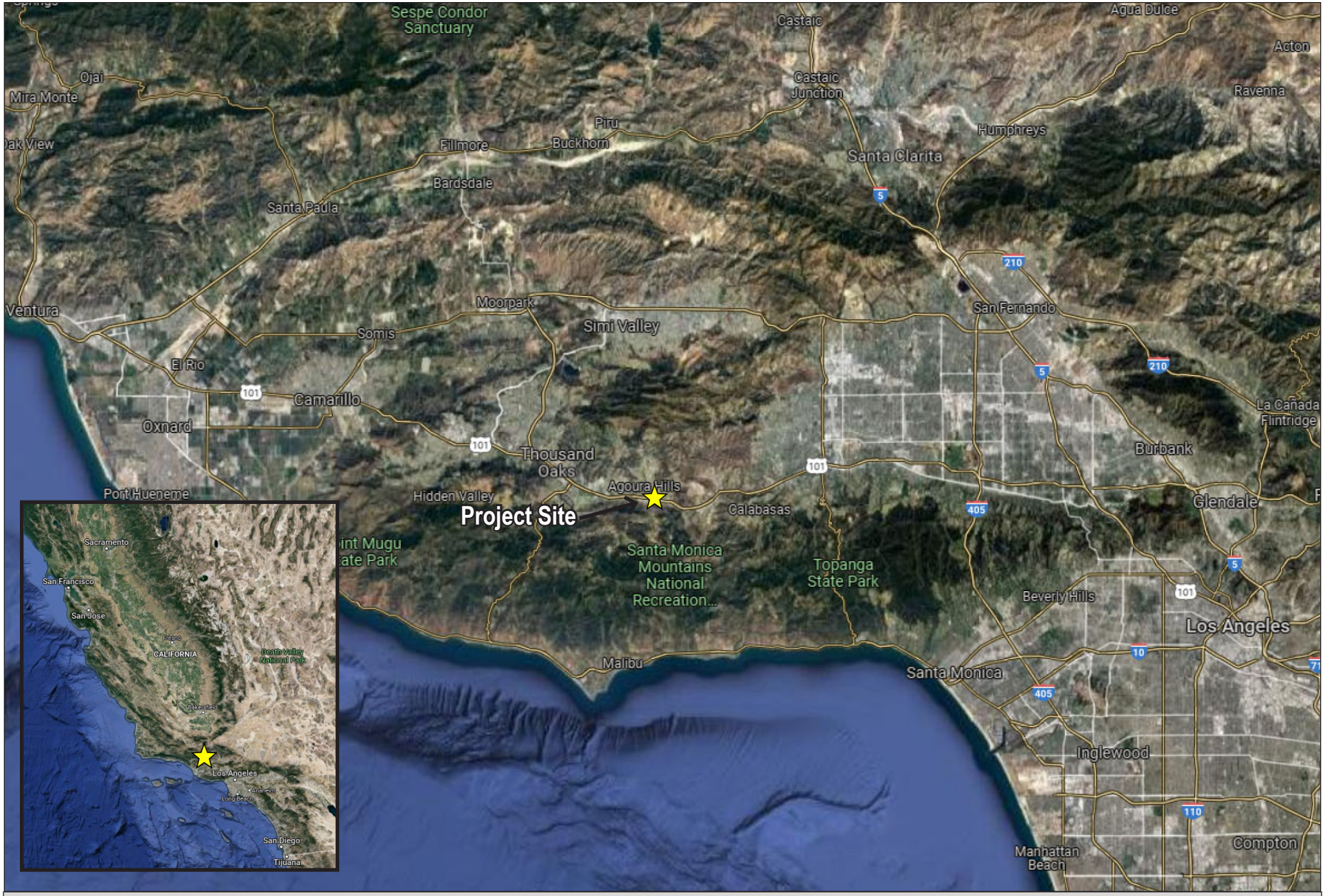


EXHIBIT 1: REGIONAL VICINITY MAP

Agoura Village Specific Plan Update Project

NOT TO SCALE

Kimley»Horn

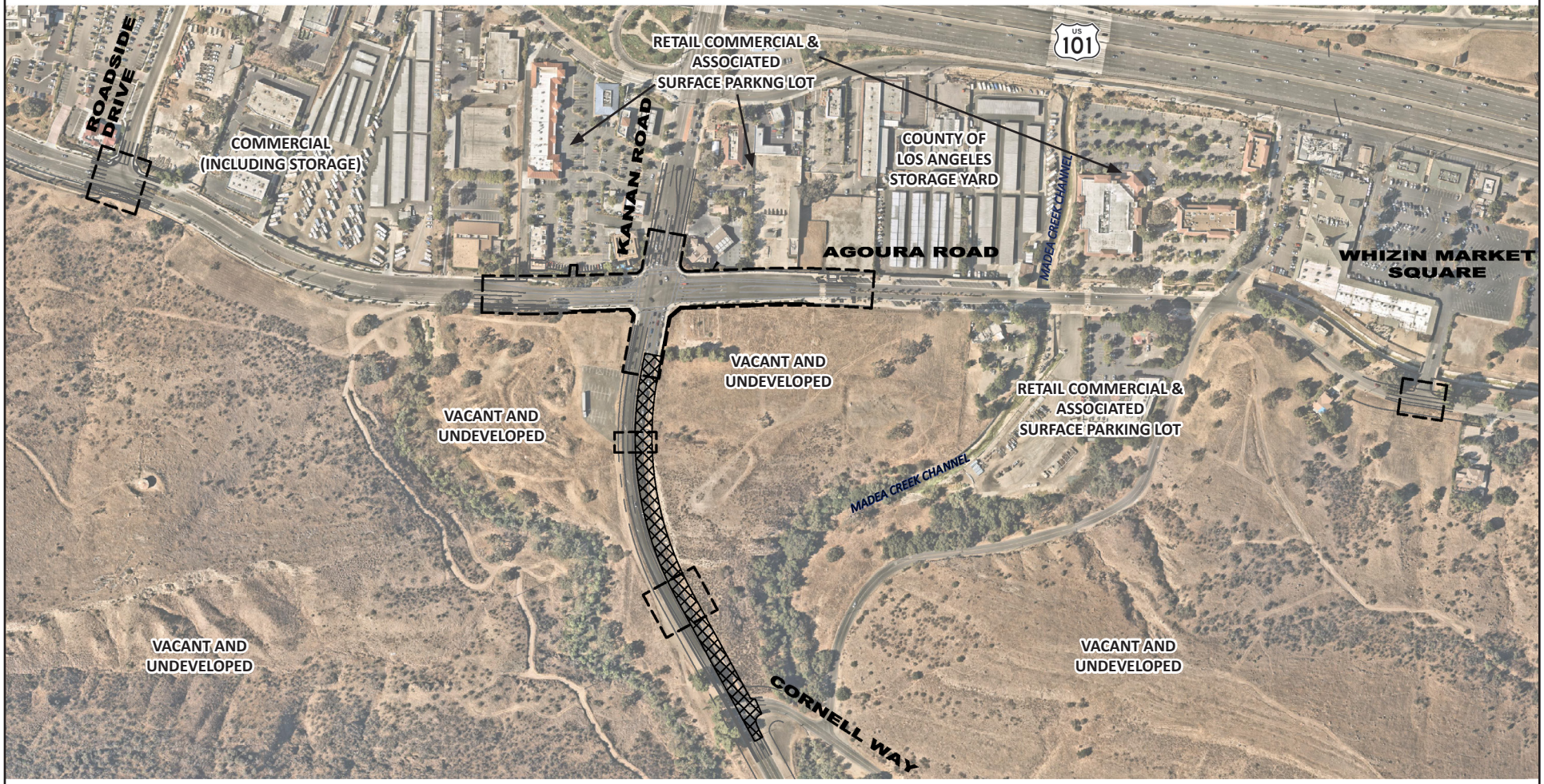
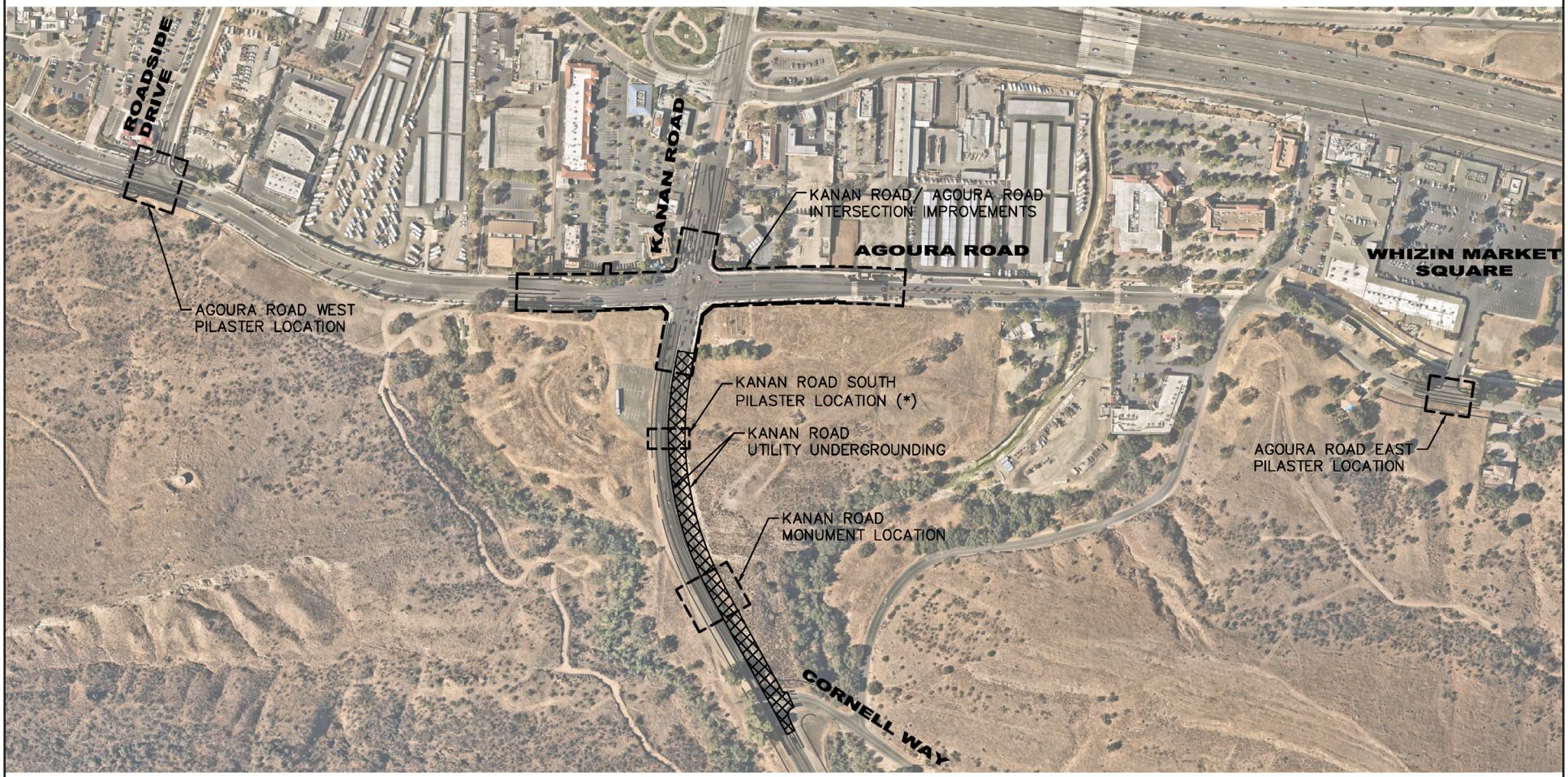


EXHIBIT 2: LOCAL VICINITY MAP

Agoura Village Specific Plan Update Project

SCALE: 1" = 300'

Kimley»Horn



LEGEND

(*) – APPROXIMATE LOCATION. WILL BE DETERMINED WHEN DRIVEWAYS ARE APPROVED.

EXHIBIT 3: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION

Agoura Village Specific Plan Update Project

SCALE: 1" = 300'

Kimley»Horn

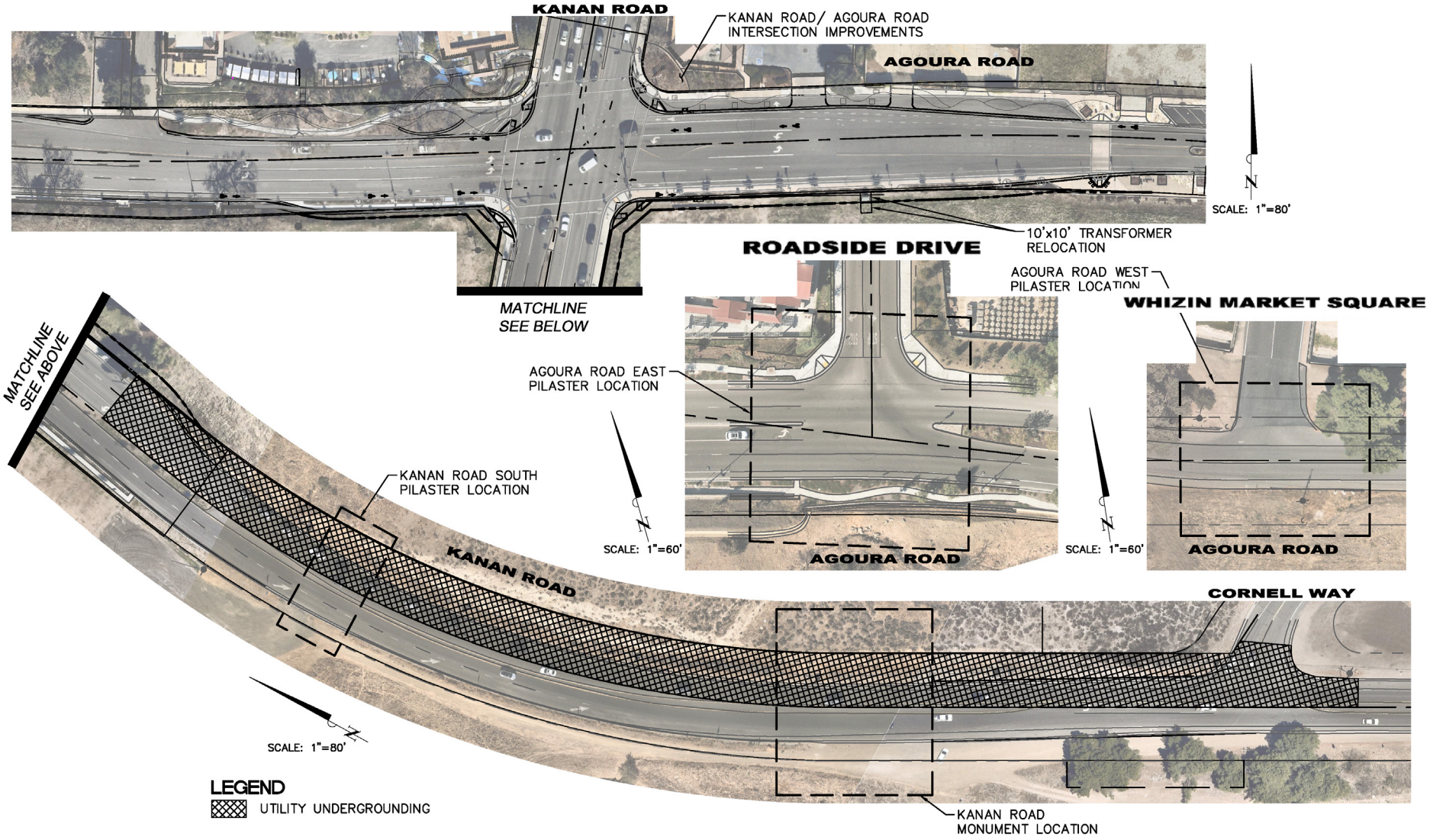


EXHIBIT 4: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION IMPROVEMENTS

Agoura Village Specific Plan Update Project

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Greenhouse Gases and Climate Change

Certain gases in the Earth's atmosphere classified as GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the Earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the Earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere[5]. **Table 2: Description of Greenhouse Gases** describes the primary GHGs attributed to global climate change, including their physical properties.

[5] Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis*, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 2: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluoro-carbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, (https://www.epa.gov/ghgemissions/overview-greenhouse-gases), accessed 2-5-2020; U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021,

and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks. It should be noted that the EPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 mpg), canceling any future strengthening (currently 54.5 mpg by 2026).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

On September 27, 2019, the U.S. EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.)[6] The SAFE Rule (Part One) revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the U.S. EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration repealed SAFE Rule Part One, effective January 28, 2022 and is reconsidering Part Two.

In December 2021, the U.S. EPA finalized federal GHG emissions standards for passenger cars and light trucks for Model Years 2023 through 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and are based on sound science and grounded in a rigorous assessment of current and future technologies. The updated standards will result in avoiding more than three billion tons of GHG emissions through 2050.[7]

3.2 State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for coordination and oversight of State and local air pollution control programs. Various Statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 369 gross million metric tons (MMT) of carbon dioxide equivalent ($MMCO_2e$) in 2020.[8]

[6] U.S. EPA and NHTSA, Federal Register, Vol. 84, No. 188, *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program*, September 27, 2019. Available at: https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf. Accessed: July 2023.

[7] U.S. EPA, *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026,* 2021. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed: July 2023.

[8] California Air Resources Board, *Current California GHG Emissions Inventory Data, 2000-2020 GHG inventory (2022 Edition)*, https://ww2.arb.ca.gov/ghg-inventory-data, accessed July 2023.

The transportation sector is the State's largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State's legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the legislation's major provisions.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

California Air Resource Board Scoping Plan

CARB adopted the Scoping Plan to achieve AB 32 goals. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[9] The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program.[10] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key Scoping Plan elements include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a Statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard

[9] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[10] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate Statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

(amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).

- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.
- The California Sustainable Freight Action Plan was developed in 2016 and provides a vision for California's transition to a more efficient, more economically competitive, and less polluting freight transport system. This transition of California's freight transport system is essential to supporting the State's economic development in coming decades while reducing pollution.
- CARB's Mobile Source Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The mobile Source Strategy includes increasing ZEV buses and trucks.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 $MMTCO_2e$ to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. By 2016, California had reduced GHG emissions below 1990 levels, achieving AB 32's 2020 goal four years ahead of schedule.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan[11]. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions.

Adopted December 15, 2022, CARB's *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. To achieve the targets of AB 1279, the 2022 Scoping Plan relies on existing and emerging fossil fuel alternatives and clean technologies, as well

[11] California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 9, 2018.

as carbon capture and storage. Specifically, the 2022 Scoping Plan focuses on zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen. The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (i.e., Climate Action Plan) consistent with CEQA Guidelines § 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation. Specifically, the 2022 Scoping Plan aims to rapidly move towards zero-emission transportation (i.e., electrifying cars, buses, trains, and trucks), which constitutes California's single largest source of GHGs. The regulations that impact the transportation sector are adopted and enforced by CARB on vehicle manufacturers and are outside the jurisdiction and control of local governments. The 2022 Scoping Plan accelerates development of new regulations as well as amendments to strengthen regulations and programs already in place.

Included in the 2022 Scoping Plan is a set of Local Actions (2022 Scoping Plan Appendix D) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects.[12] CARB specifically states that Appendix D does not address other land uses (e.g., Rural Commercial and Light Manufacturing).[13] However, CARB plans to explore new approaches for other land use types in the future.[14]

As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)
Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

Senate Bill 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet AB 32's GHG reduction goals. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

Assembly Bill 1493 (Pavley Regulations and Fuel Efficiency Standards)

[12] California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*, *Appendix D: Local Actions*.
[13] Ibid.
[14] Ibid.

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for passenger vehicle and light duty truck model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new passenger vehicles area anticipated to emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

Senate Bill 1368 (Emission Performance Standards)
SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

Senate Bill 1078, SB 107, and SBX1-2 (Renewable Electricity Standards)
SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 (2006) changed the due date to 2010 instead of 2017. On November 17, 2008, then Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2 codified the 33 percent by 2020 target.

Senate Bill 350 (Clean Energy and Pollution Reduction Act of 2015)
Signed into law on October 7, 2015, SB 350 implements Executive Order B-30-15's goals. The SB 350 objectives are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Assembly Bill 398 (Market-Based Compliance Mechanisms)
Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

Senate Bill 150 (Regional Transportation Plans)
Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below 1990 levels by 2030). SB 150 creates a process to include communities in

discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

Senate Bill 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)
Signed into law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

AB 1346 (Air Pollution: Small Off-Road Engines)

Signed into Law in October 2021, AB 1346 requires CARB, to adopt cost-effective and technologically feasible regulations to prohibit engine exhaust and evaporative emissions from new small off-road engines, consistent with federal law, by July 1, 2022. The bill requires CARB to identify and, to the extent feasible, make available funding for commercial rebates or similar incentive funding as part of any updates to existing applicable funding program guidelines to local air pollution control districts and air quality management districts to implement to support the transition to zero-emission small off-road equipment operations.

AB 1279 (The California Climate Crisis Act)

AB 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO^2 removal solutions and carbon capture, utilization, and storage technologies.

SB 1020 (100 Percent Clean Electric Grid)

Signed on September 16, 2022, SB 1020 provides additional goals for the path to the 2045 goal of 100 percent clean electricity retail sales. It creates a target of 90 percent clean electricity retail sales by 2035 and 95 percent clean electricity retail sales by 2040.

SB 905 (Carbon Sequestration Program)

Signed on September 16, 2022, SB 905 establishes regulatory framework and policies that involve carbon removal, carbon capture, utilization, and sequestration. It also prohibits the injecting of concentrated carbon dioxide fluid into a Class II injection well for the purpose of enhanced oil recovery.

Executive Orders Related to GHG Emissions
California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Issued on June 1, 2005, Executive Order S-3-05 established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. Executive Order B-30-15 also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions to 40 percent below 1990 levels by 2030.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing Statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant State agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Executive Order N-79-20. Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing

volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

CARB Advanced Clean Truck Regulation. CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales are required to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

3.3 Regional

South Coast Air Quality Management District Thresholds

The Project site is located in the South Coast Air Basin (SCAB), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (AQMD), which is responsible for developing rules and regulations to bring the area into attainment of ambient air quality standards, formed a GHG California Environmental Quality Act (CEQA) Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the South Coast AQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency.

With the tiered approach, the Project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. On December 5, 2008, the South Coast AQMD Governing Board adopted an interim GHG significance threshold of 10,000 metric tons of CO_2e ($MTCO_2e$) per year for industrial projects (stationary source). The Working Group indicated that the 10,000 $MTCO_2e$ per year threshold applies to both emissions from construction and operational phases plus indirect emissions (electricity, water use). The South Coast

AQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Southern California Association of Governments

On September 3, 2020, the Southern California Association of Government's (SCAG's) Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals.

The RTP/SCS includes strategies to support local planning and projects that serve short trips, promote transportation investments, investments in active transportation, more walkable and bikeable communities, reduce GHG emissions, and support building physical infrastructure such as local and regional bikeways, sidewalk and safe routes to school pedestrian improvements, and regional greenways. The RTP/SCS contains over 4,000 transportation projects, ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices for everyone. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding.

The plan accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve state GHG emissions reduction goals and Federal Clean Air Act (FCAA) requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently.

3.4 Local

City of Agoura Hills General Plan

The City of Agoura Hills General Plan contains the following goals and policies that address greenhouse gases as part of the Natural Resources Element:

Goal NR-10: **Greenhouse Gas Reduction.** Reduce emissions from all activities within the City boundaries to help mitigate the impact of climate change.

Policy NR-10.1: **Climate Change.** Comply with all state requirements regarding climate change and greenhouse gas reduction and review the progress toward meeting the emission reductions targets.

Policy NR-10.2: **Regional Coordination.** Ensure that that any plans prepared by the City, including the General Plan, are aligned with, and support any regional plans to help achieve reductions in greenhouse gas emissions.

Policy NR-10.3: **Outreach and Education.** Partner with local agencies and organizations to coordinate outreach and education regarding the effects of greenhouse gas emissions and climate change.

City of Agoura Hills Climate Action and Adaptation Plan[15]

The City of Agoura Hills Climate Action and Adaptation Plan (CAAP) contains goals and policies that address GHGs. The most relevant goal to the Project is *Goal 7: Decrease Greenhouse Gas Emissions through Reducing Vehicle Miles Traveled.* However, the proposed City actions to achieve these goals include transportation demand management (TDM) measures, a bicycle master plan, ride-sharing and bike-to-work programs, and fleet electrification; none of which are directly applicable to intersection improvement projects. Further, the Project involves roadway improvements and does not propose a trip-generating land use. Therefore, the Project would have no impact on the City's CAAP implementation.

[15] City of Agoura Hills, *City of Agoura Hills Climate Action and Adaptation Plan,* 2021.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 CEQA Thresholds and Significance Criteria

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project would have a significant effect on the environment if it would:

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

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. Amendments to the State CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions.[16] The analysis of this Intersection Component is based on the qualitative thresholds of significance set forth from Section VII of Appendix G to the CEQA Guidelines and compliance with applicable compliance regulations.

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (South Coast AQMD) formed a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency.

With the tiered approach, a project is compared with each tier's requirements sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

The South Coast AQMD has adopted a threshold of 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for industrial projects. During Working Group Meeting #7, it was explained that the industrial projects' threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). A threshold of 3,000 $MTCO_2e$ per year for non-industrial projects was proposed but has not been adopted. The South Coast AQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

4.2 Methodology

Global climate change is, by definition, a cumulative impact of GHG emissions. Therefore, there is no project-level analysis. The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from

[16] 14 California Code of Regulations, Section 15064.4a

human activities which almost doubled between 1970 and 2010 from approximately 27 gigatons (Gt) of CO_2/year to nearly 49 $GtCO_2$/year.[17] As such, the geographic extent of climate change and GHG emissions cumulative impact discussion is worldwide.

The Intersection Component's construction emissions were calculated using the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model version 9.0.0 (RCEM), which is consistent with the guidance provided by the South Coast AQMD for evaluating construction impacts from roadway projects. Details of the modeling assumptions and emission factors are provided in Appendix A: Greenhouse Gas Emissions Data. For construction, RCEM calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from RCEM. The Intersection Component's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles.

Due to the nature of the Intersection Component (intersection improvements), the Project would not contribute to or generate long-term GHG emissions. Thus, operational GHG emissions were not quantified and were analyzed qualitatively in this technical study.

[17] Intergovernmental Panel on Climate Change, *Climate Change 2014 Mitigation of Climate Change Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2014.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Greenhouse Gas Emissions

Threshold 5.1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Generally, the Intersection Component is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component and also with the conditions related to the roundabout proposed under the Certified PEIR. However, Intersection Component-related GHG emissions would include emissions from construction activities. The Intersection Component would result in direct emissions of CO_2, N_2O, and CH_4 from construction equipment and the transport of materials and construction workers to and from the Project site. The GHG emissions only occur during temporary construction activities and would be cease once construction is complete. The total GHG emissions generated during all phases of construction were combined and are shown in **Table 3: Construction-Related Greenhouse Gas Emissions**.

Table 3: Construction-Related Greenhouse Gas Emissions

Category	$MTCO_2e$
Total Construction Emissions	548
30-Year Amortized Construction	18
Source: RCEM version 9.0.0. Refer to **Appendix A: Greenhouse Gas Emissions Data** for model outputs.	

As shown, the Intersection Component would result in the generation of approximately 548 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over the lifetime of the Intersection Component (assumed to be 30 years), then added to the operational emissions.[18] The amortized Intersection Component construction emissions would be 18 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease.

In terms of operational GHG emissions, the Intersection Component involves roadway improvements and does not propose a trip-generating land use. The Intersection Component would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational GHG emissions. The Intersection Component does not propose any buildings and therefore would not generate permanent source or stationary source emissions. In addition, intersection improvements do not directly generate vehicle trips, a predominant source of GHG emissions. Rather, vehicle trips are generated by land use changes that may be indirectly influenced by transportation improvements. The Intersection Component would not result in increases in the rate of vehicle trips.

The Intersection Component would modify road alignments to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional cars to wait at all intersection approaches. The Intersection Component is considered necessary to reduce future congestion anticipated as approved development builds out. At the same time, the Intersection Component would reduce the amount of time vehicles idle at the Project intersection. The longer a vehicle idles in a single location, the

[18] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

more GHG emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling.

Therefore, neither construction nor operation of the Intersection Component would generate GHG emissions in excess of the South Coast AQMD's Tier 3 general reference threshold of 3,000 $MTCO_2e$ per year. The Intersection Component would relieve congestion, improve roadway operations, and would not directly generate new trips or GHG emissions. GHG impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.2 Greenhouse Gas Reduction Plan Compliance

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

City of Agoura Hills Climate Action and Adaptation Plan

The City approved the CAAP in 2021, which serves as a long-term plan for reducing GHG emissions and enhancing the community's resilience towards vulnerabilities and risks posed by climate change. By using energy more efficiently, harnessing renewable energy to power buildings, recycling waste, and enhancing access to sustainable transportation modes, implementation of the CAAP can keep dollars in local economy, create new green jobs, and improve community quality of life. The goals outlined in the CAAP are shown in **Table 4: City of Agoura Hills Climate Action and Adaption Plan Consistency**. As shown in **Table 4**, the Intersection Component would not conflict with the goals in the CAAP.

Table 4: City of Agoura Hills Climate Action and Adaptation Plan Consistency

CAAP Goals		Compliance	
GOAL 1:	Increase Energy Efficiency in Existing Residential Units	N/A:	This is not a residential project therefore this goal is not applicable.
GOAL 2:	Increase Energy Efficiency in New Residential Units	N/A:	This is not a residential project therefore this goal is not applicable.
GOAL 3:	Increase Energy Efficiency in Existing Commercial Units.	N/A:	This is not a commercial project therefore this goal is not applicable.
GOAL 4:	Increase Energy Efficiency in New Commercial Development.	N/A:	This is not a commercial project therefore this goal is not applicable.
GOAL 5:	Increase energy efficiency through water efficiency.	Consistent:	The Intersection Component involves the maintenance and preservation of landscaped medians, which involve irrigation systems that comply with Agoura Hills Municipal Code Division 8 – Guidelines for Landscaping, Planting, and Irrigation Plans.
GOAL 6:	Decrease Energy Demand through Reducing Urban Heat Island Effect.	Consistent:	The Intersection Component will plant new trees, which will help reduce heat absorption.
GOAL 7:	Decrease GHG Emissions Through a Reduction in VMT	Consistent:	This Intersection Component is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component. Further, the Intersection Component would not lead to induced vehicle travel and would result in no impact concerning VMT.

CAAP Goals		Compliance	
GOAL 8:	Decrease GHG Emissions through Reducing Solid Waste Generation.	N/A:	This is neither a residential nor a commercial project therefore this goal is not applicable.
GOAL 9:	Decrease GHG Emissions through Increased Clean Energy Use.	N/A:	The Intersection Component does not propose the construction of any buildings; therefore, this goal is not applicable.
Source: City of Agoura Hills, *Draft City of Agoura Hills Climate Action and Adaptation Plan*, March 2021.			

Consistency with the CARB 2022 Scoping Plan

As previously noted, CARB's 2022 Scoping Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the State's largest GHG contributors. The 2022 Scoping Plan intends to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions would be achieved through decarbonizing the electricity and industrial sectors.

Statewide strategies to reduce GHG emissions in the latest 2022 Scoping Plan include implementing SB 100, which would achieve 100 percent clean electricity by 2045; achieving 100 percent zero-emission vehicle sales in 2035 through Advanced Clean Cars II; and implementing the Advanced Clean Fleets regulation to deploy zero-emission electric vehicle buses and trucks. Additional transportation policies include the Off-Road Zero-Emission Targeted Manufacturer Rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer Rule, Clean Off-Road Fleet Recognition Program, and Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation. The 2022 Scoping Plan would continue to implement SB 375. GHGs would be further reduced through the Cap-and-Trade Program carbon pricing and SB 905. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon dioxide removal projects and technology.

As shown in **Table 3**, the Intersection Component would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable operational GHG emissions. Further, the Intersection Component would relieve congestion, improve roadway operations, and would not directly generate new trips or GHG emissions.

Therefore, the Intersection Component would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Intersection Component would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan.

Consistency with the CARB 2017 Scoping Plan

In December 2017, CARB approved the California's 2017 *Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Scoping Plan). This update focuses on implementation of a 40 percent reduction in GHGs by 2030 compared to 1990 levels. To achieve this, the 2017 Scoping Plan draws on a decade of successful programs that addresses the major sources of climate changing gases in every sector of the economy:

- *More Clean Cars and Trucks:* The plan sets out far-reaching programs to incentivize the sale of millions of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.

- *Increased Renewable Energy:* California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The 2017 Scoping Plan guides utilities to 50 percent renewables, as required under SB 350.
- *Slashing Super-Pollutants:* The plan calls for a significant cut in super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40 percent of global warming.
- *Cleaner Industry and Electricity:* California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions would continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.
- *Cleaner Fuels:* The Low Carbon Fuel Standard drives further development of cleaner, renewable transportation fuels to replace fossil fuels.
- *Smart Community Planning:* Local communities would continue developing plans which would further link transportation and housing policies to create sustainable communities.
- *Improved Agriculture and Forests:* The 2017 Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

Achieving the 2030 target under the 2017 Scoping Plan continues to spur the transformation of the California economy and fix its course securely on achieving an 80 percent reduction in GHG emissions by 2050, consistent with the global consensus of the scale of reductions needed to stabilize atmospheric GHG concentrations at 450 ppm CO_2e and reduce the likelihood of catastrophic climate change.

The Intersection Component includes roadway improvements to the Kanan Road and Agoura Road intersection. These improvements would address queuing deficiencies and improve roadway operations. The Intersection Component would only have short-term GHG emissions from construction and would not create operational GHG emissions. Thus, the Intersection Component would not conflict with the objectives listed in the 2017 Scoping Plan. A less than significant impact would occur in this regard.

SCAG Regional Transportation Plan/Sustainable Communities Strategy Consistency

The RTP/SCS accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve State GHG emissions reduction goals and FCAA requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions, and therefore Project comparison to the RTP/SCS is an appropriate indicator of whether the Intersection Component would inhibit the post-2020 GHG reduction goals promulgated by the State. The Intersection Component's consistency with the RTP/SCS goals is analyzed in detail in **Table 5: Regional Transportation Plan/Sustainable Communities Strategy Consistency**.

Table 5: Regional Transportation Plan/Sustainable Communities Strategy Consistency

SCAG Goals		Consistency	
GOAL 1:	Encourage regional economic prosperity and global competitiveness.	N/A:	This is not a project-specific policy and is therefore not applicable. However, the Intersection Component would facilitate travel and freight transport, thus contributing to regional economic prosperity.
GOAL 2:	Improve mobility, accessibility, reliability, and travel safety for people and goods.	Consistent:	This Project proposes transportation improvements to accommodate a widened intersection that would improve mobility, accessibility, reliability, and travel safety for people and goods. The Intersection Component would also include replacing and improving driveways and sidewalks to enhance accessibility for vehicles and for people.
GOAL 3:	Enhance the preservation, security, and resilience of the regional transportation system.	Consistent:	This Project proposes transportation improvements to create adequate room for additional cars that would help enhance the preservation, security, and resilience of the regional transportation system.
GOAL 4:	Increase person and goods movement and travel choices within the transportation system.	Consistent:	This Project proposes transportation improvements including roadway widening, the addition of bike lanes, and sidewalk improvements, which would improve mobility and travel choices for both persons and goods.
GOAL 5:	Reduce greenhouse gas emissions and improve air quality.	Consistent:	This Project is anticipated to result in beneficial impacts related to GHG, since it would reduce congestion and associated vehicle idling at the intersection, thus reducing GHG emissions as compared to conditions without the Intersection Component and the conditions with the proposed roundabout under the Certified PEIR.
GOAL 6:	Support healthy and equitable communities	Consistent:	As indicated in the *Kanan Road/Agoura Ultimate Intersection Improvements Project Air Quality Assessment* (Kimley-Horn, 2022), the Project would not exceed regional or localized thresholds for criteria pollutants. Based on the Friant Ranch decision, projects that do not exceed the SCAQMD's LSTs would not violate any air quality standards, contribute substantially to an existing or projected air quality violation, nor result in no criteria pollutant health impacts.
GOAL 7:	Adapt to a changing climate and support an integrated regional development pattern and transportation network.	Consistent:	The Intersection Component would replace the existing traffic signal system with a new system pursuant to current City of Agoura Hills and Caltrans standards. Therefore, the Intersection Component would adapt to support an integrated regional development pattern and transportation network.
GOAL 8:	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	Consistent:	The Intersection Component would replace the existing traffic signal system with a new system pursuant to current City of Agoura Hills and Caltrans standards.

SCAG Goals		Consistency	
GOAL 9:	Encourage development of diverse housing types in areas that are supported by multiple transportation options.	N/A:	This Project involves an intersection improvement and does not include housing.
GOAL 10:	Promote conservation of natural and agricultural lands and restoration of habitats.	Consistent:	This Intersection Component involves improvements of an existing intersection and roads, thus would not affect agricultural lands. The Intersection Component also includes Mitigation Measures to reduce impacts to natural habitat.

Source: Southern California Association of Governments, *Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy,* 2020.

The goals stated in the RTP/SCS were used to determine consistency with the planning efforts previously stated. As shown in **Table 5**, the Intersection Component would be consistent with the stated goals of the RTP/SCS. Therefore, the Intersection Component would not result in any significant impacts or interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets.

Conclusion

As discussed above, the Intersection Component would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Also, the Intersection Component would result in minimal construction emissions, would not generate operational GHG emissions, and would decrease idling time at the intersection, which would reduce GHG emissions currently experienced at the Project site. Thus, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.3 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of the Intersection Component's size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Intersection Component-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. As discussed above, Intersection Component-related emissions would not exceed the 3,000 $MTCO_2e$ threshold and would not impede achievement of Statewide 2030 and 2050 GHG emission reduction targets. As such, the Intersection Component would result in a less than significant cumulative GHG impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

6 REFERENCES

1. 14 California Code of Regulations, Section 15064.4a

2. California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*, November 2022.

3. California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017.

4. City of Agoura Hills, *City of Agoura Hills Climate Action and Adaptation Plan*, 2021.

5. City of Agoura Hills, *Climate Action and Adaptation Plan*, March 2021.

6. City of Agoura Hills, *General Plan*, 2010.

7. Intergovernmental Panel on Climate Change, Carbon and Other Biogeochemical Cycles, In: Climate Change 2013: The Physical Science Basis, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

8. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.

9. Intergovernmental Panel on Climate Change, *Climate Change 2014 Mitigation of Climate Change Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2014.

10. National Research Council, *Advancing the Science of Climate Change*, 2010.

11. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, August 26, 2009.

12. Southern California Association of Governments, *Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy*, 2020.

13. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.

14. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

15. U.S. EPA, *Overview of Greenhouse Gases*, February 5, 2020. https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

Appendix A

Greenhouse Gas Emissions Data

Road Construction Emissions Model **Version 9.0.0**
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Kanan Agoura Intersection	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type	2	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	7.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.52	miles
Total Project Area	2.74	acres
Maximum Area Disturbed/Day	0.01	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	60.58	70.23
	Drainage/Utilities/Sub-Grade	20.00	0.00	3.56
	Paving	20.00	0.00	0.00
Asphalt	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	0.00	297.93
	Drainage/Utilities/Sub-Grade	20.00	0.00	0.00
	Paving	20.00	0.00	0.00

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	3.00	0.70	7/1/2023	1/1/2023
Grading/Excavation	1.00	2.80	8/1/2023	4/3/2023
Drainage/Utilities/Sub-Grade	5.00	2.45	9/1/2023	5/4/2023
Paving	2.10	1.05	11/1/2023	10/4/2023
Totals (Months)	11			

Please note: You have entered a different number of months than the project length shown in cell D16.
Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		7	210.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		1	30.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.01	0.19	1.45	0.05	0.02	0.01	793.99	0.00	0.12	831.20
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	8.73	0.00	0.00	9.14
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.03	0.21	0.01	0.00	0.00	113.14	0.00	0.02	118.44
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.01	0.00	0.00	0.00	6.22	0.00	0.00	6.51
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	14.96	0.00	0.00	15.66

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		15	450.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.03	0.40	3.11	0.11	0.05	0.02	1,701.41	0.00	0.27	1,781.14
Tons per const. Period - Grading/Excavation	0.00	0.00	0.03	0.00	0.00	0.00	18.72	0.00	0.00	19.59
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	18.72	0.00	0.00	19.59

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip		20		
One-way trips/day		2	Calculated Daily Trips	Calculated Daily VMT
No. of employees: Grubbing/Land Clearing		7	14	280.00
No. of employees: Grading/Excavation		22	44	880.00
No. of employees: Drainage/Utilities/Sub-Grade		15	30	600.00
No. of employees: Paving		12	24	480.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.90	0.07	0.05	0.02	0.00	315.42	0.00	0.01	317.41
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	316.99	0.00	0.01	319.01
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.03	2.73	0.29	0.00	0.00	0.00	67.79	0.07	0.03	78.91
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.12	0.07	0.03	79.33
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.04	0.65	0.05	0.03	0.01	0.00	198.20	0.00	0.00	199.79
Tons per const. Period - Grubbing/Land Clearing	0.00	0.02	0.00	0.00	0.00	0.00	6.54	0.00	0.00	6.59
Pounds per day - Grading/Excavation	0.13	2.04	0.17	0.09	0.04	0.01	622.90	0.01	0.02	627.92
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	0.00	6.85	0.00	0.00	6.91
Pounds per day - Drainage/Utilities/Sub-Grade	0.09	1.37	0.11	0.06	0.03	0.00	421.71	0.01	0.01	425.07
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.08	0.01	0.00	0.00	0.00	23.19	0.00	0.00	23.38
Pounds per day - Paving	0.07	1.11	0.09	0.05	0.02	0.00	339.05	0.01	0.01	341.78
Tons per const. Period - Paving	0.00	0.03	0.00	0.00	0.00	0.00	7.83	0.00	0.00	7.90
Total tons per construction project	0.01	0.14	0.01	0.01	0.00	0.00	44.42	0.00	0.00	44.77

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	2.99	0.11	0.05	0.02	1,710.61	0.00	0.27	1,790.77
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,713.69	0.00	0.27	1,793.99
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.31	0.01	0.00	0.00	151.24	0.00	0.02	158.32
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.01	0.00	0.00	0.00	4.99	0.00	0.00	5.22
Pounds per day - Grading/Excavation	0.00	0.04	0.31	0.01	0.00	0.00	151.24	0.00	0.02	158.32
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.66	0.00	0.00	1.74
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.31	0.01	0.00	0.00	150.85	0.00	0.02	157.92
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.02	0.00	0.00	0.00	8.30	0.00	0.00	8.69
Pounds per day - Paving	0.00	0.04	0.31	0.01	0.00	0.00	151.12	0.00	0.02	158.20
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	3.49	0.00	0.00	3.65
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	18.44	0.00	0.00	19.31

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.01	0.10	0.00	0.02	0.00
Fugitive Dust - Grading/Excavation		0.01	0.10	0.00	0.02	0.00
Fugitive Dust - Drainage/Utilities/Subgrade		0.01	0.10	0.01	0.02	0.00

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Excavators	0.38	6.52	3.10	0.15	0.14	0.01	1,000.21	0.32	0.01	1,010.99
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	0.94	9.36	8.94	0.38	0.35	0.02	1,857.11	0.58	0.02	1,876.57
Grubbing/Land Clearing	tons per phase	0.03	0.31	0.30	0.01	0.01	0.00	61.28	0.02	0.00	61.93

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.57	9.77	4.65	0.23	0.21	0.02	1,500.32	0.49	0.01	1,516.49
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Graders	0.77	3.39	9.31	0.30	0.28	0.01	1,281.71	0.41	0.01	1,295.52
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.31	3.70	3.22	0.18	0.16	0.01	508.22	0.16	0.00	513.69
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.27	1.51	2.65	0.09	0.08	0.01	605.56	0.20	0.01	612.10
	2		Model Default Tier	Scrapers	1.57	12.27	16.57	0.65	0.60	0.03	2,940.26	0.95	0.03	2,971.94
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Tractors/Loaders/Backhoes	0.61	8.93	6.14	0.30	0.28	0.01	1,206.31	0.39	0.01	1,219.29
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	4.65	42.42	48.38	1.97	1.82	0.09	8,899.27	2.86	0.08	8,994.61
Grading/Excavation	tons per phase	0.05	0.47	0.53	0.02	0.02	0.00	97.89	0.03	0.00	98.94

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.25	2.41	1.71	0.09	0.09	0.00	375.26	0.02	0.00	376.66
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.30	3.67	2.68	0.12	0.12	0.01	623.04	0.03	0.00	625.11
	1		Model Default Tier	Graders	0.38	1.69	4.55	0.15	0.14	0.01	640.78	0.21	0.01	647.69
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.32	3.72	2.72	0.13	0.13	0.01	623.04	0.03	0.00	625.14
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.11	2.29	1.39	0.04	0.04	0.00	333.79	0.11	0.00	337.39
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Scrapers	0.78	6.10	8.16	0.32	0.30	0.02	1,469.92	0.48	0.01	1,485.76
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.45	6.70	4.55	0.22	0.20	0.01	904.85	0.29	0.01	914.58
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	2.75	27.39	26.74	1.12	1.06	0.05	5,103.78	1.17	0.04	5,146.10
Drainage/Utilities/Sub-Grade	tons per phase	0.15	1.51	1.47	0.06	0.06	0.00	280.71	0.06	0.00	283.04

Paving	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.19	2.88	1.87	0.09	0.08	0.00	455.21	0.15	0.00	460.12
	1		Model Default Tier	Paving Equipment	0.17	2.56	1.60	0.08	0.07	0.00	394.47	0.13	0.00	398.72
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.00	2		Model Default Tier	Rollers	0.46	5.56	4.81	0.26	0.24	0.01	762.33	0.25	0.01	770.54
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Signal Boards	0.11	0.60	0.72	0.03	0.03	0.00	98.63	0.01	0.00	99.13
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.45	6.69	4.59	0.23	0.21	0.01	904.76	0.29	0.01	914.50
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day		1.39	18.29	13.60	0.68	0.63	0.03	2,615.40	0.82	0.02	2,643.02
	Paving	tons per phase		0.03	0.42	0.31	0.02	0.01	0.00	60.42	0.02	0.00	61.05
Total Emissions all Phases (tons per construction period) =>				0.27	2.70	2.61	0.11	0.10	0.01	500.30	0.13	0.00	504.96

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Kanan Agoura Intersection				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	0.98	10.05	9.31	0.52	0.42	0.10	0.39	0.37	0.02	0.02	2,206.54	0.58	0.05	2,234.69
Grading/Excavation	4.82	45.08	53.42	2.34	2.24	0.10	1.95	1.93	0.02	0.12	12,168.81	2.87	0.51	12,393.19
Drainage/Utilities/Sub-Grade	2.84	28.82	27.37	1.30	1.20	0.10	1.11	1.09	0.02	0.06	5,789.48	1.18	0.10	5,847.54
Paving	1.46	19.44	14.00	0.74	0.74	0.00	0.66	0.66	0.00	0.03	3,105.58	0.83	0.06	3,143.00
Maximum (pounds/day)	8.64	83.95	90.09	4.15	3.85	0.30	3.45	3.39	0.06	0.21	20,164.84	4.64	0.65	20,475.41
Total (tons/construction project)	0.28	2.86	2.72	0.13	0.12	0.01	0.11	0.11	0.00	0.01	596.83	0.14	0.01	604.29

Notes:

Project Start Year ->	2023
Project Length (months) ->	7
Total Project Area (acres) ->	3
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	131	298	210	450	880	40
Drainage/Utilities/Sub-Grade	4	0	30	0	600	40
Paving	0	0	0	0	480	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Kanan Agoura Intersection				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	**ROG (tons/phase)**	**CO (tons/phase)**	**NOx (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**SOx (tons/phase)**	**CO2 (tons/phase)**	**CH4 (tons/phase)**	**N2O (tons/phase)**	**CO2e (MT/phase)**
Grubbing/Land Clearing	0.03	0.33	0.31	0.02	0.01	0.00	0.01	0.01	0.00	0.00	72.82	0.02	0.00	66.90
Grading/Excavation	0.05	0.50	0.59	0.03	0.02	0.00	0.02	0.02	0.00	0.00	133.86	0.03	0.01	123.67
Drainage/Utilities/Sub-Grade	0.16	1.59	1.51	0.07	0.07	0.01	0.06	0.06	0.00	0.00	318.42	0.07	0.01	291.77
Paving	0.03	0.45	0.32	0.02	0.02	0.00	0.02	0.02	0.00	0.00	71.74	0.02	0.00	65.87
Maximum (tons/phase)	0.16	1.59	1.51	0.07	0.07	0.01	0.06	0.06	0.00	0.00	318.42	0.07	0.01	291.77
Total (tons/construction project)	0.28	2.86	2.72	0.13	0.12	0.01	0.11	0.11	0.00	0.01	596.83	0.14	0.01	548.21

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Appendix 4.13-1

Acoustical Assessment

Kimley»Horn

Acoustical Assessment

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

City of Agoura Hills, California

Kimley»Horn

Expect More. Experience Better.

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Contact: Mr. Ryan Chiene
714.705.1343

August 2022

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LIST OF ABBREVIATED TERMS

ADT	average daily traffic
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CNEL	community equivalent noise level
L_{dn}	day-night noise level
dB	decibel
L_{eq}	equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating ventilation and air conditioning
Hz	hertz
in/sec	inches per second
L_{max}	maximum noise level
µPa	micropascals
L_{min}	minimum noise level
PPV	peak particle velocity
RMS	root mean square
VdB	vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Kanan Road/Agoura Road Ultimate Intersection Improvements Project (Proposed Project). The purpose of this Acoustical Assessment is to evaluate the potential Project-related construction and operational noise and vibration levels and determine the level of impact the Proposed Project would have on the environment.

1.1 Project Location

The Project site is in the City of Agoura Hills (City), which is located along the U.S. Route 101 (US 101 or Ventura Freeway). Exhibit 1: Regional Vicinity Map, depicts the Project site in a regional context.

Exhibit 2: Local Vicinity Map, depicts the Project site in a local context and indicates the Project site is generally comprised of three discontiguous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Project site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed east pilasters location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed west pilasters location.

The Kanan Road/Agoura Road intersection is in the City's southern portion, approximately 600 feet south of the Kanan Road/U.S. Highway 101 interchange. The Project site is within the Agoura Village Specific Plan (AVSP) area, except the proposed west pilasters location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area.

1.2 Project Description

The Agoura Hills City Council adopted the Agoura Village Specific Plan (AVSP) and certified the accompanying updated Final Revised and Recirculated Program EIR (Certified PEIR) (State Clearinghouse [SCH] No. 2003111051) in accordance with CEQA on November 19, 2008 (Resolution 19-1915). One of the AVSP proposed components was a roundabout at Kanan Road/Agoura Road intersection, at ultimate buildout of the AVSP area. The proposed roundabout was included in the Certified PEIR Project Description and evaluated throughout the Certified PEIR as the Preferred Alternative.[1] In September 2014, the City Council voted to not proceed with the Kanan Road/Agoura Road roundabout as the Preferred Alternative because of the large amount of property outside of the existing right-of-way (ROW) which would need to be acquired from property owners to construct the roundabout, and instead authorized the design of a widened standard four-leg signalized intersection, as the ultimate configuration (i.e., the Proposed Project). This altered design limits ROW acquisitions.

The Proposed Project proposes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Kanan Road/Agoura Road intersection's high use and visibility make the Proposed Project a challenging and sensitive priority for the City.

[1] City of Agoura Hills. Agoura Village Specific Plan: Updated Final Revised and Recirculated Environmental Impact Report. August 2008.

The Proposed Project proposes improvements that include widening the intersection, providing pilasters and monument signs, and undergrounding overhead power/telecommunication lines, among others, as depicted on Exhibit 3A: Proposed Kanan Road/Agoura Road Intersection, and described below. Exhibit 3B: Proposed Kanan Road/Agoura Road Intersection Improvements provides a close-up view of the proposed improvements by segment. Although the pilasters and monument signs will be constructed at a later date by others, the environmental impacts from the pilasters and monument signs will be analyzed herein, including for construction, to provide a conservative analysis.

Intersection and Roadway Improvements

Modified road alignments, including elevations and widths, are proposed to accommodate a widened intersection with a configuration of turn pockets and adequate room for additional queuing capacity at all intersection approaches. The through lanes would vary between 10 and 13 feet wide. The proposed widened pavement improvements would generally match the existing Kanan Road and Agoura Road pavement structural sections, as further detailed below.

a. **North Leg:** Improvements on the north leg would occur within the 100-foot ROW and would extend from the Kanan Road/Agoura Road intersection to approximately 50 to 60 feet north. Improvements would be limited to new pedestrian curb ramps, relocation of traffic signals, landscape buffers, full-depth asphalt replacement, and a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection. The existing lane geometry would remain, with two northbound through lanes and five southbound lanes including two left-turn pockets, two through lanes, and one right-turn pocket lane.

b. **South Leg:** Improvements on the south leg would extend from the Kanan Road/Agoura Road intersection to approximately 250 feet south. Improvements include full depth asphalt replacement, asphalt mill and overlay, creation of a new right-turn pocket lane, relocation of existing utilities and traffic signals, and new pedestrian curb ramps and 12-foot sidewalk along northbound lanes. The northbound geometry would include a 12-foot left turn lane, two through lanes ranging from 12 to 13 feet, and a new right turn pocket lane measuring 13 feet. The existing ROW would be relocated further east to accommodate the proposed improvements. The two existing 15-feet southbound though lanes would remain.

c. **East Leg:** Improvements on the east leg would extend from the Kanan Road/Agoura Road intersection to approximately 530 feet east, terminating at the existing landscaped median on Agoura Road, near the vacant lot at 29125 Agoura Road. The existing eastbound and westbound 6-foot Class II bike lane would remain. Improvements include full depth asphalt replacement, asphalt mill and overlay, new green conflict striping, relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of ROW by 10 feet to the south to allow for the bike lane and sidewalk to each be widened by 1 foot, and new landscape buffers. A Southern California Edison (SCE) transformer would need to be relocated to the south to avoid the newly widened sidewalk. A striped median ranging from 10 to 21 feet is also proposed. Left-turn access to the Speedway Gas Station would be maintained. Eastbound lanes would maintain two through lanes measuring 11 feet, eventually merging into one through lane until the Project terminus. Westbound lanes geometry would remain the same. One westbound through lane would expand into one 14-foot right turn pocket lane and 11-foot through lane, with the existing 6-foot bike lane with new green conflict striping in between. The westbound lane would terminate at the Kanan Road/Agoura Road intersection with the 12-foot right turn pocket lane, the existing 6-foot bike lane with new

green conflict striping, the existing 11-foot through lane, and the existing 11-foot left turn pocket at the Kanan Road/Agoura Road intersection.

- **West Leg:** Improvements on the west leg would extend from the Kanan Road/Agoura Road intersection to approximately 400 feet west, terminating just west of the existing AT&T driveway located west of the Tavern Tomoko & Ladyface Brewery and the existing driveways for the Agoura Pointe Shopping Center. Improvements include full depth asphalt replacement, asphalt mill and overlay, new green conflict striping for existing eastbound bike lane, relocation of traffic signals and utilities, new pedestrian curb ramps, relocation of ROW by 7 feet to the south to accommodate new 11-foot right turn pocket lane. Eastbound lanes would feature two 11-foot left turn pocket lanes, one 11-foot through lane, 6-foot Class II bike lane, and new 12-foot right turn pocket lane. Westbound lanes would feature a 11 foot through lane with 7 foot Class II bike lane. Approximately 190 feet west of the Kanan Road/Agoura Road intersection, a set of stairs will be created to connect the westbound sidewalk to the Agoura Pointe Shopping Center parking lot. The development of the stairway connection would remove the existing parking spot and would open into the parking lot. The parking spot would be replaced with a landing zone and would be surrounded by a landscape buffer to the west and the existing island with an oak tree on the east. Three mature oak trees, two of which are located north of Agoura Road and one which is located south of Agoura Road, would be protected and remain in place as part of the Proposed Project.

Ancillary improvements such as minor utility modifications/relocations would be required to accommodate the above improvements; see also *Underground Utility Improvements* Section below. Existing pedestrian and street lighting would also be relocated; however, no new pedestrian or street lighting would be added.

Monument Signage Improvements

The Proposed Project includes entryway and statement signage (i.e., pilasters and monuments) on Kanan Road and Agoura Road. The new signage would adhere to AVSP Design Guidelines (Chapter 5), as applicable. The sign improvements are comprised of pilasters and monument signs. In total, six pilasters are proposed, as described below. The pilasters would be up to approximately 10 feet tall, and up to approximately 10 feet wide by 10 feet long. A 15-foot landscaped buffer would be provided surrounding the base of the pilasters. Thus, the total base footprint of the pilasters with the landscaped buffer would be approximately 1,600 square feet each. The monuments would be up to approximately 15 feet tall, and up to approximately 24 feet wide by 24 feet long. A 5-foot landscaped buffer would be provided surrounding the base of the monuments. Thus, the total base footprint of the monuments with the landscaped buffer would be approximately 1,156 square feet each.

- Agoura Road East and West Pilasters: Four pilasters are proposed on Agoura Road at the two locations depicted on Exhibit 3A (two pilasters for each location, offset from each other on either side of the road). These pilasters are intended to establish the character of the AVSP area;

- Kanan Road South Pilasters: Two pilasters are proposed on Kanan Road at the location depicted on Exhibit 3A (two pilasters for this location, offset from each other on either side of the road) to establish the AVSP area's southern boundary. The proposed locations would be approximate with the conceptual driveway locations of the proposed developments east and west of Kanan Road; and

- Kanan Road Monuments: Two monuments are proposed on Kanan Road at the location depicted

on Exhibit 3A**,** near the Kanan Road/Cornell Road intersection. The monuments are intended to approximately establish the City's southern limit.

The new signage, along with other aesthetic improvements from new landscaping islands, activated pedestrian corners, and street furnishings are intended to contribute and define a unique "gateway for the City." Minor lighting would be provided at the pilasters and monuments for illumination and safety purposes.

Underground Utility Improvements

The Proposed Project proposes undergrounding two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, for approximately 1,105 linear feet, from approximately 160 feet south of Agoura Road to Cornell Way; see Exhibit 3A and Exhibit 3B.

The lighting poles that include luminaires will remain in place, and all other utility poles, excluding one located on northbound Kanan Road, will also remain in place. Utility poles may be installed/upgraded at the utility district's boundary where determined necessary for the transition from the existing overhead system to the proposed underground system. The final utility pole locations will be determined during final engineering design.

Further details concerning undergrounding the utilities is provided under the *Construction and Phasing* Section below.

Drainage and Water Quality

Under existing conditions within the Project area, surface flows are directed to two inlets on the northeast and southeast corners of the Kanan Road/Agoura Road intersection. Under proposed Project conditions, these inlets would be relocated to accommodate the widening of Agoura Road. The associated drain lines would be extended; however, flows would remain generally unchanged.

Construction and Phasing

The Proposed Project improvements are proposed to occur in a single phase.[2] Prior to the start of construction, the City will need to purchase the ROW and coordinate temporary construction easements. This process will be approximately 6 to 9 months. After the purchase and receipt of the easements, construction will start and is anticipated to occur over approximately 12 months, beginning as early as 2023 and ending as early as 2024. The proposed improvements would be located mostly within existing City ROW but would require partial permanent acquisitions and temporary construction easements (TCE) from adjacent properties; see Table 1: Proposed Right-of-Way. As indicated in Table 1, approximately 0.18-acre of permanent property acquisitions and approximately 6.04-acre of temporary construction easements are required for the proposed Project. The pilasters and monument signs would be located in approximate areas within the marked areas in Exhibit 3B; therefore, the areas for improvements are approximate. It should be noted that the Proposed Project would not result in acquisitions or TCE for the pilasters; if and when the properties that are identified for the monument signs are developed, then the ROW.

[2] For purposes of the analysis, it is conservatively assumed that the construction activities would occur in a single phase to present the most conservative (e.g., highest) daily maximum construction emissions.

Table 1: Proposed Right-of-Way		
Parcel	**Required Permanent Property Acquisitions**	**Required Temporary Construction Easements (TCE)**
City Right of Way	--	5.33
2061-032-021	0.04	--
2061-031-020	0.14	0.16
2061-004-034	--	0.2
2061-032-022	--	0.02
2061-032-028	--	0.11
2061-007-905	--	0.07
2061-029-004	--	0.02
2061-004-046	--	0.04
2061-032-025	--	0.09
Source: Kimley-Horn, 2022.		

To underground the two existing overhead power/telecommunication lines on the south leg along the east side of Kanan Road, the Proposed Project would require approximately 1,105 linear feet of trenching approximately 4.5 feet deep and 2.5 feet wide, generally between Agoura Road and Cornell Road. Undergrounding the power lines would involve removing the existing overhead utility lines and poles, installing conduit and substructures (e.g., transformers on concrete pads), installing cable through the conduits, and backfilling.

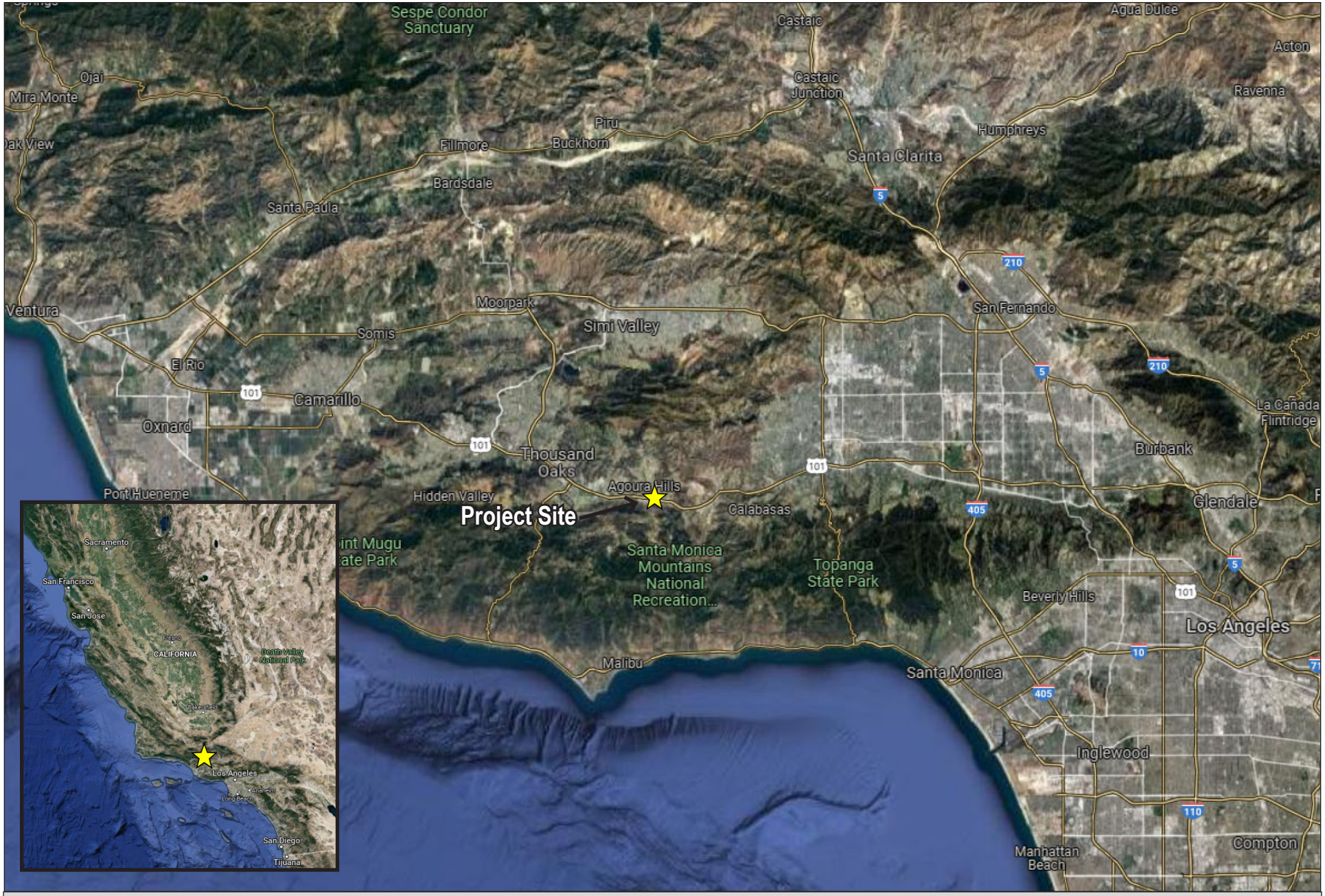


EXHIBIT 1: REGIONAL VICINITY MAP

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

NOT TO SCALE

Kimley»Horn

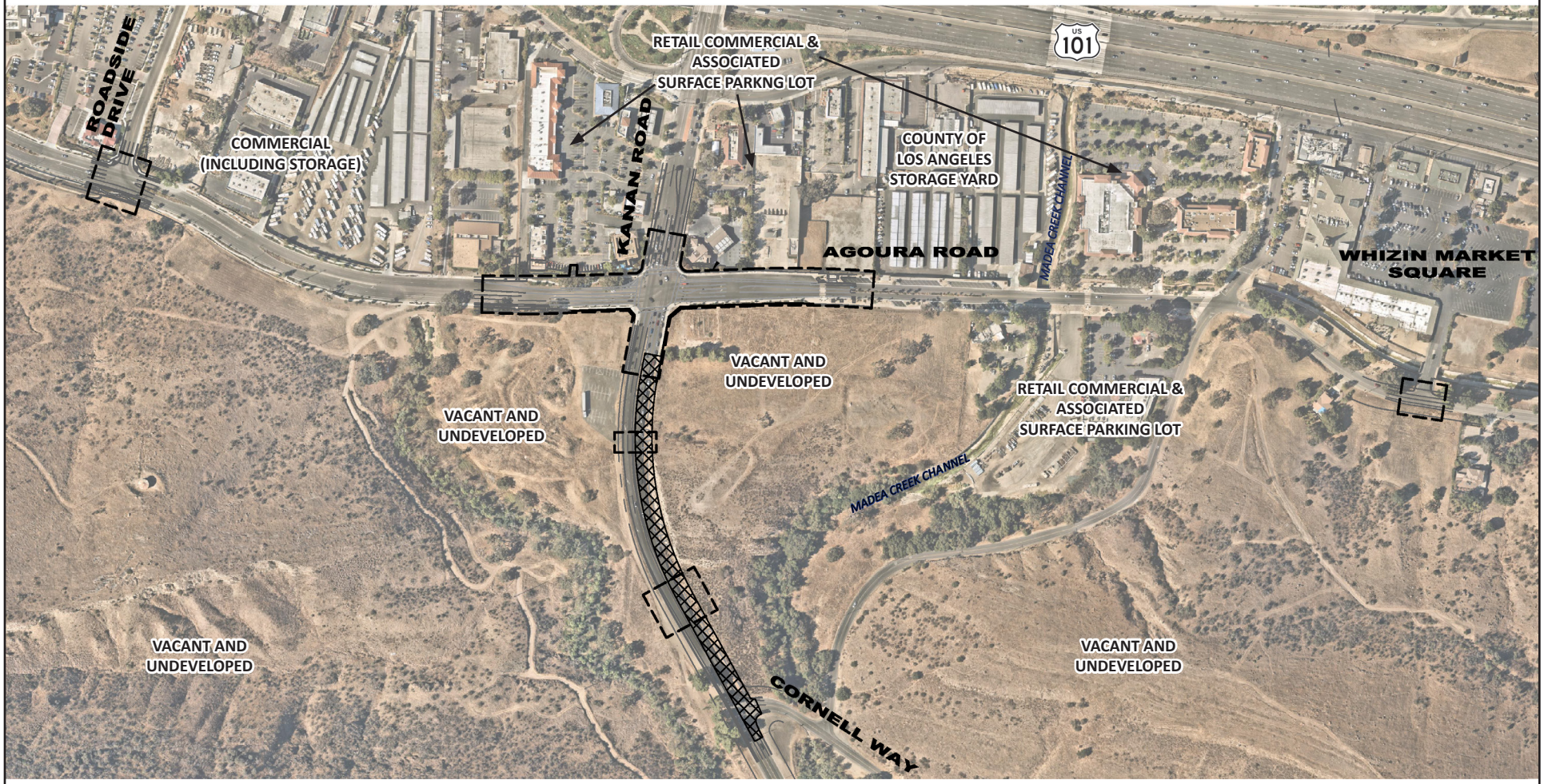
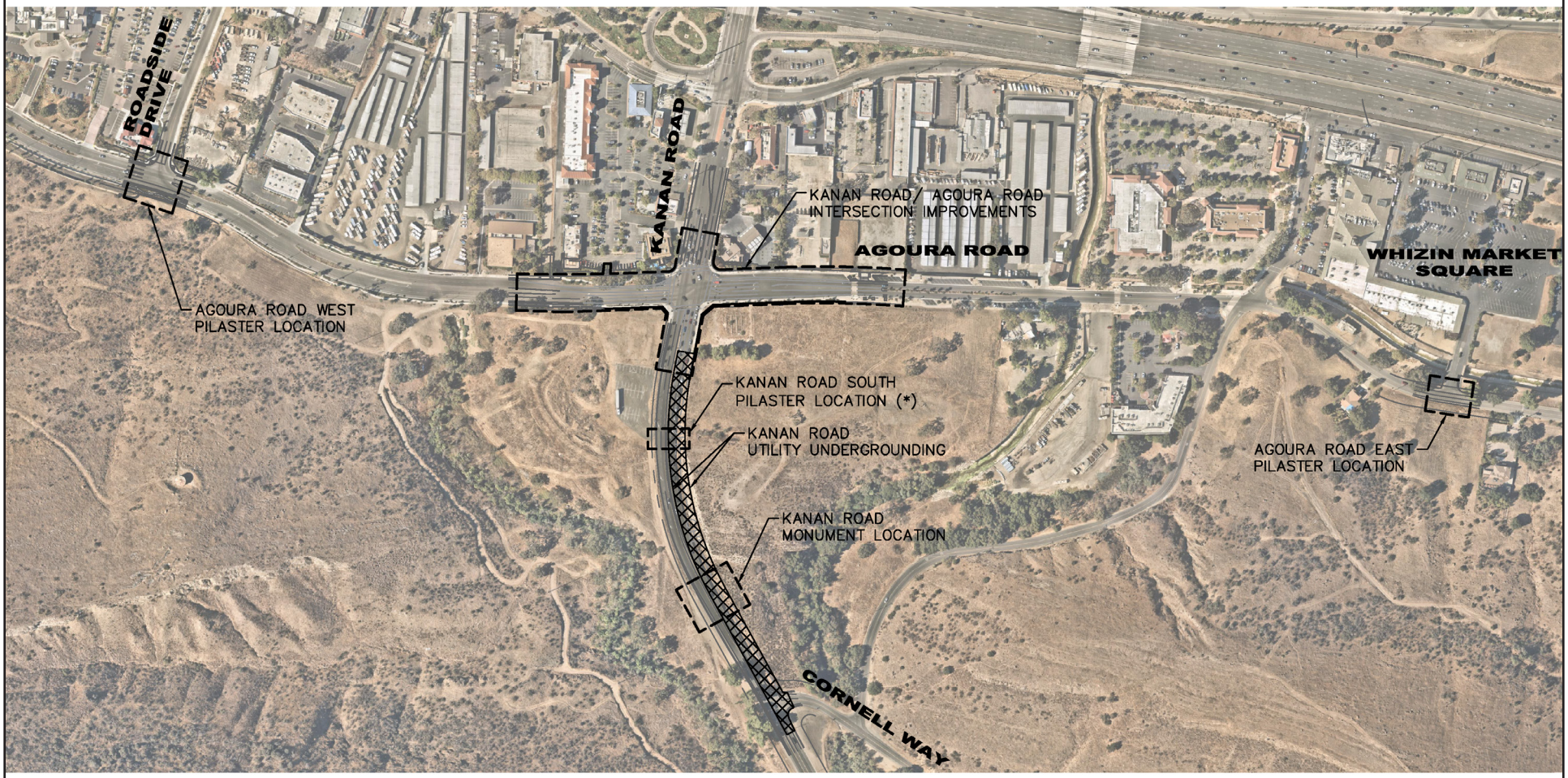


EXHIBIT 2: LOCAL VICINITY MAP

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

SCALE: 1" = 300'

Kimley»Horn



LEGEND

(*) – APPROXIMATE LOCATION. WILL BE DETERMINED WHEN DRIVEWAYS ARE APPROVED.

EXHIBIT 3A: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION

Kanan Road/Agoura Road Ultimate Intersection Improvements Project

SCALE: 1" = 300'

Kimley»Horn

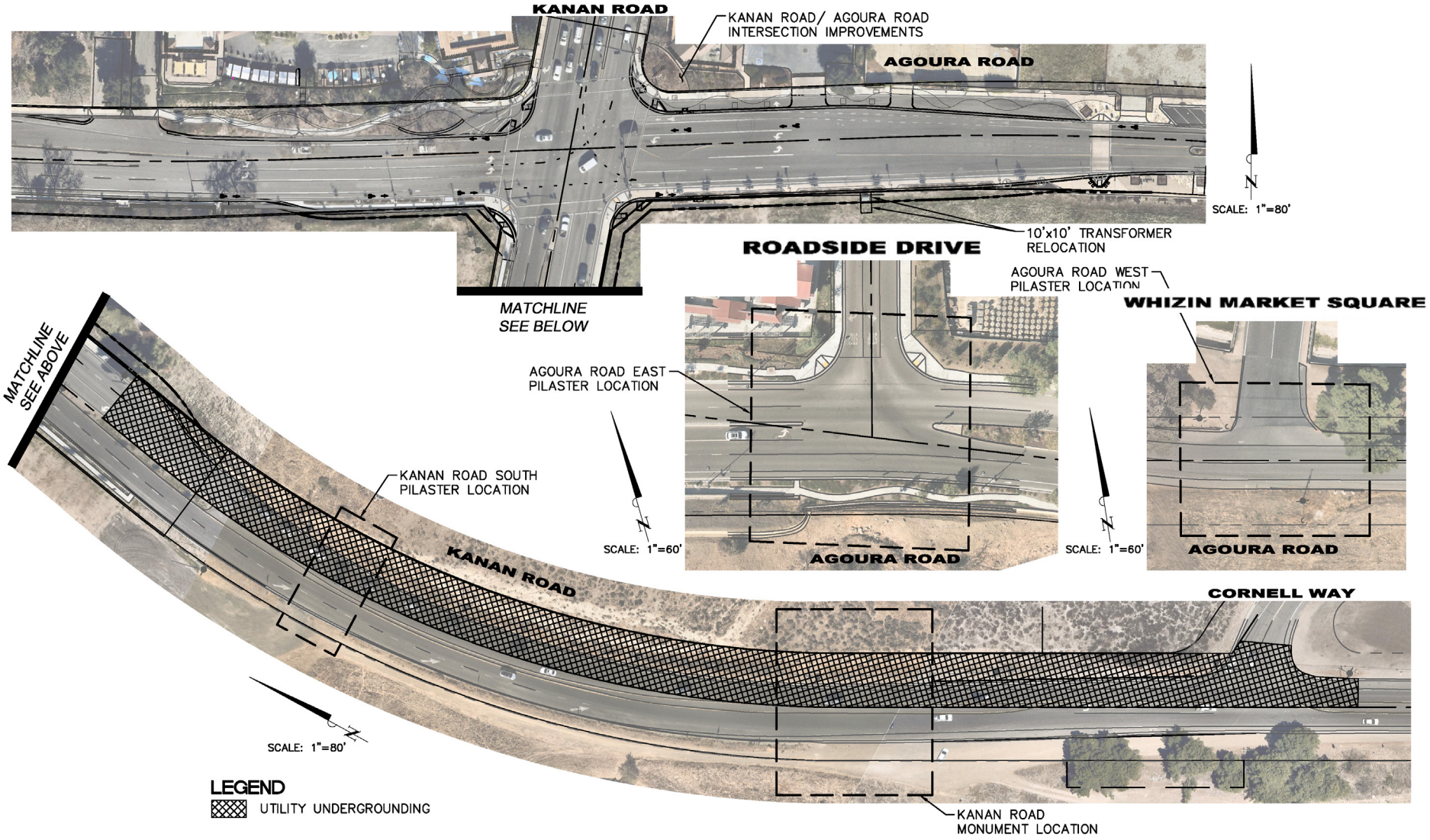


EXHIBIT 4: PROPOSED KANAN ROAD/AGOURA ROAD INTERSECTION IMPROVEMENTS

Agoura Village Specific Plan Update Project

Kimley»Horn

2 ACOUSTIC FUNDAMENTALS

2.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. In acoustics, the fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of a base of steady background noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. Table 2: Typical Noise Levels provides typical noise levels.

Table 2: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	Dishwasher in next room
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) represents the continuous sound pressure level over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in Table 3: Definitions of Acoustical Terms.

Table 3: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascals is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_{01}, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average L_{eq} with a 5 dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

A-Weighted Decibels

The perceived loudness of sounds is dependent on 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 can be approximated by the A-weighted decibel (dBA) sound level scale, which gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions. Under the dB scale, three sources of equal loudness together would produce an increase of 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The way older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative

annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.[3]

2.2 Groundborne Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 4: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 4: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations

Maximum PPV (in/sec)	Vibration Annoyance Potential Criteria	Vibration Damage Potential Threshold Criteria	FTA Vibration Damage Criteria
0.008	--	Extremely fragile historic buildings, ruins, ancient monuments	--
0.01	Barely Perceptible	--	--
0.04	Distinctly Perceptible	--	--
0.1	Strongly Perceptible	Fragile buildings	--
0.12	--	--	Buildings extremely susceptible to vibration damage
0.2	--	--	Non-engineered timber and masonry buildings
0.25	--	Historic and some old buildings	--
0.3	--	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	--	--
0.5	--	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel or timber (no plaster)

PPV = peak particle velocity; in/sec = inches per second; FTA = Federal Transit Administration

Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2020 and Federal Transit administration, Transit Noise and Vibration Assessment Manual, 2018.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities

[3] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

such as earth-moving which requires the use of heavy-duty earthmoving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

3 REGULATORY SETTING

3.1 State

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types, including single-family homes, multiple-family homes, schools, libraries, and churches. As none of these uses apply to the Proposed Project, these guidelines are not applicable.

3.2 Local

City of Agoura Hills General Plan

The City of Agoura Hills General Plan (General Plan) contains the following goals and policies that address noise as part of the Community Safety Element:

Goal N-1: Land Use Conflicts. Minimized land use conflicts between various noise sources and other human activities.

Policy N-1.1: **Noise Standards.** Require noise mitigation for all development where the projected noise levels exceed those shown in Table N-2, to the extent feasible.

Policy N-1.2: **Compatibility of Noise-Generating Uses with Sensitive Receptors.** Require buildings and sites to be designed such that surrounding noise sensitive uses are adequately buffered from noise generating uses.

Policy N-1.4: **Noise Mitigation Measures.** Ensure that all new development provides adequate sound insulation or other protection from existing and anticipated noise sources.

Policy N-1.5: **Sensitive Receptors.** Incorporate ambient noise level considerations into land use decisions involving schools, hospitals, and similar noise-sensitive uses.

Policy N-1.6: **Noise Standards.** Enforce standards that specify acceptable noise limits for various land uses throughout the City. Table N-1 (Noise/Land Use Compatibility Matrix) shows criteria used to assess the compatibility of proposed land uses with the noise environment. These criteria are the bases of specific Noise Standards. These standards, presented in Table N-2 (Interior and Exterior Noise Standards), define City policy related to land uses and acceptable noise levels.

Goal N-2: Motor Vehicles. Minimized motor vehicle traffic noise impacts on sensitive noise receptors.

Policy N-2.1: **State Motor Vehicle Noise Standards.** Encourage the enforcement of state motor vehicle noise standards for cars, trucks, and motorcycles through coordination with the California Highway Patrol and the Los Angeles County Sheriff's Department.

Policy N-2.2: **Roadway Mitigation Measures.** Ensure the employment of noise mitigation measures in the design of roadway improvement projects consistent with funding capability. Support efforts by the California Department of Transportation and others to provide for acoustical protection of existing noise-sensitive land uses affected by these projects.

Policy N-2.3: **Noise Mitigation Along Major Arterials.** Require sound-attenuating devices, such as walls and berms, in the design of residential and other noise-sensitive land uses that are adjacent to the Ventura Freeway and major arterials.

Goal N-3: Non-Transportation-Related Noise. Minimized non-transportation-related noise impacts on sensitive noise receptors.

Policy N-3.3: **Enforcement of Hours of Construction and Maintenance Activity.** Continue to enforce restrictions on hours of construction activity so as to minimize the impacts of noise and vibration from the use of trucks, heavy drilling equipment, and other heavy machinery, including property maintenance equipment, to adjacent uses, particularly in residential areas.

The Community Safety Element also includes the following compatibility standards, as provided in Table 5: Noise/Land Use Compatibility Matrix. The noise level ranges shown in the table serve as guidelines with respect to the placement of land uses in the City.

Table 5: Noise/Land Use Compatibility Matrix

Land Use Category		Community Noise Exposure (CNEL)						
Categories	**Uses**	**<55**	**60**	**65**	**70**	**75**	**80>**	
Residential	Single Family, Duplex, Multiple Family	A	A	B	B	C	D	D
Residential	Mobile Homes	A	A	B	C	C	D	D
Commercial Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theater	A	A	A	A	B	B	C
Commercial Industrial Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial Recreation **Institutional** Civic Center	Amphitheater, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go-cart track; Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial General, Special **Industrial, Institutional**	Automobile, Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional General	Hospital, Church, Library, Schools' Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers, Wildlife Habitat	A	A	A	A	B	C	C

Notes:

Zone A (Clearly Compatible): Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements

Zone B (Normally Compatible): New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C (Normally Incompatible): New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

Zone D (Clearly incompatible): New construction or development should generally not be undertaken.

Source: City of Agoura Hills, *Community Safety Element*, 2004.

City of Agoura Hills Municipal Code

The Agoura Hills Municipal Code (AHMC) establishes the following noise provisions relative to the Project:

Section 9656.1. – Designated noise zone.

All residential properties are hereby assigned to the following noise zones:

A. Noise *zone 1*: All properties located in residential zone districts.

Section 9656.2. – Exterior noise standards.

A. The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone.

Table 6: Noise Standards in Noise Zone 1	
Noise level	**Time period**
55 db(A)	7:00 a.m. – 10 p.m.
50 db(A)	10:00 p.m. – 7 a.m.

In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) db(A).

B. It shall be unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, either incorporated or unincorporated, to exceed:

1. The noise standard for a cumulative period of more than fifteen (15) minutes in any hour; or

2. The noise standard plus five (5) db(A) for a cumulative period of more than ten (10) minutes in any hour; or

3. The noise standard plus ten (10) db(A) for a cumulative period of more than five (5) minutes in any hour; or

4. The noise standard plus fifteen (15) db(A) for a cumulative period of more than one (1) minute in any hour; or

5. The noise standard plus twenty (20) db(A) for any period of time.

C. In the event the ambient noise level exceeds any of the noise limit categories above, the noise level applicable to said category shall be increased to reflect said ambient noise level.

Section 9656.3. – Interior noise standards.

A. The following interior noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone:

Table 7: Interior Noise Standards in Noise Zone 1	
Noise level	**Time period**
45 db(A)	7:00 a.m. – 10 p.m.
45 db(A)	10:00 p.m. – 7 a.m.

In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) db(A).

B. It shall be unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased occupied, or otherwise controlled by such person, when the foregoing causes the noise level when measured within any other dwelling unit on any residential property, either incorporated or unincorporated, to exceed:

1. The interior standard for a cumulative period of more than five (5) minutes in any hour; or

2. The interior noise standard plus five (5) db(A) for a cumulative period of more than one (1) minute in any hour; or

3. The interior noise standard plus ten (10) db(A) for any period of time.

C. In the event the ambient noise level exceeds either of the first two (2) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Section 9656.4. – Special provisions.

The following activities shall be exempted from the provisions of these sections:

A. Activities conducted on the grounds of any public or private nursery, elementary, intermediate or secondary school or college.

B. Public dances, provided said events are conducted pursuant to a permit issued by the city.

C. Activities conducted on any authorized park or playground provided such park or playground is owned and operated by a public entity.

D. Any mechanical device, apparatus or equipment used, related to or connected with any emergency machinery, vehicle or work.

E. Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a legal holiday.

F. Mobile noise sources associated with agricultural operations provided such operations do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a legal holiday.

G. Noise sources associated with the maintenance of real property provided said activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except Sunday or a legal holiday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a legal holiday.

H. Any activity to the extent regulation thereof has been preempted by state or federal law.

Section 9656.5. – Schools, hospitals and churches; special provisions.

It shall be unlawful for any person to create any noise which causes the noise level at any school, hospital or church while the same is in use, to exceed the noise limits as specified in section 9656.2, prescribed for the assigned noise zone in which the school, hospital or church is located, or which noise level unreasonably interferes with the use of such institution or which unreasonably disturbs or annoys patients in a hospital provided conspicuous signs are displayed in three (3) separate locations within one-tenth of a mile of the institution indicating the presence of a school, church or hospital.

4 EXISTING CONDITIONS

4.1 Existing Noise Sources

Stationary Sources

The Proposed Project area is generally urbanized. The primary sources of stationary noise in the Proposed Project vicinity are urban-related activities (i.e., mechanical equipment, and pedestrians). The sources of stationary noise nearest the Project site emanates from retail commercial, self-storage, light industrial (printing and light manufacturing), and restaurant uses to the north. Noise sources from these land uses typically include mechanical equipment such as heating ventilation and air conditioning (HVAC), automobile-related noise such as cars starting and doors slamming, truck activity, and landscaping equipment. The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

Mobile Sources

The majority of the existing noise in the Project area is generated from traffic along Kanan Road and Agoura Road. According to the City of Agoura Hills General Plan Noise Element, the Project site lies within the 65-70 dBA CNEL traffic noise contour.[4]

4.2 Sensitive Receptors

Sensitive populations are more susceptible to the effects of noise impacts than is the general population. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Land uses located north of the Project site include retail commercial, self-storage, light industrial (printing and light manufacturing), and restaurant. South of the Project site is vacant and undeveloped land. Sensitive land uses nearest to the Project site are shown in Table 8: Sensitive Receptors and are measured from the closest Project site boundary to the sensitive receptor. The sensitive receptors nearest to the Project site include church uses approximately 40 feet northwest of the proposed construction boundary.

Table 8: Sensitive Receptors

Receptor Description	Distance and Direction from the Proposed Project
Church	40 feet to the northwest
Dental Facility	650 feet to the northwest
Veterinary Center	930 feet to the northwest
Single Family Homes	1,800 feet to the southeast

Source: Google Maps, 2022

[4] City of Agoura Hills. (2010). *Final General Plan Update – March 2010 Part II.* https://www.agourahillscity.org/home/showpublisheddocument/8304/635045247851600000.

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA Thresholds

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project would have a significant effect on the environment if it would:

- Generate 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;
- Generate excessive groundborne vibration or groundborne noise levels; and
- 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, expose people residing or working in the project area to excessive noise levels.

5.2 Methodology

Construction

Construction noise levels were based on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA). Construction noise is assessed in dBA L_{eq}. This unit is appropriate because L_{eq} can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period.

Construction noise modeling was conducted using the FHWA Roadway Construction Noise Model (RCNM). Reference noise levels are used to estimate operational noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

The analysis of the Without Project and With Project noise environments is based on noise calculations and empirical observations. Operational traffic noise levels in the Project vicinity were qualitatively analyzed consistent with methodologies utilized by the California Department of Transportation (Caltrans) and the FHWA.

Vibration

Groundborne vibration levels associated with construction-related activities for the Proposed Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential groundborne vibration impacts

related to building/structure damage and interference with sensitive existing operations were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria.

For a structure built traditionally, without assistance from qualified engineers, the FTA guidelines show that a vibration level of up to 0.20 in/sec PPV is considered safe and would not result in any vibration damage. FTA guidelines show that modern engineered buildings built with reinforced-concrete, steel or timber can withstand vibration levels up to 0.50 in/sec PPV and not experience vibration damage. The Caltrans 2020 *Transportation and Construction Vibration Guidance Manual* identifies the vibration threshold for human annoyance, vibrations levels of 0.10 in/sec PPV begin to cause annoyance and levels of 0.20 in/sec are considered annoying.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 Acoustical Impacts

Threshold 6.1 Would the Project generate 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?

The Proposed Project would be constructed within the hours restricted by the City's Noise Ordinance. As daytime construction activity is exempt from City Noise Ordinance restrictions, noise impacts from Proposed Project construction would be less than significant. The Proposed Project would implement intersection improvements, pilasters, and monument signs, which would not result in any changes to the noise levels that already exist at the Project site. No stationary noise sources would be included as part of the Proposed Project (e.g., parking lots, HVAC, or mechanical equipment). The Proposed Project would include a new terraced plaza at the northwest corner of the Kanan Road/Agoura Road intersection, which would allow for an open space gathering area. While the accumulation of people and loud speaking may create a new stationary noise source, the terraced plaza would be located adjacent to the Kanan Road/Agoura Road intersection. Therefore, the mobile noise sources would be louder and more continuous than the people who would gather at the terraced plaza area and would not constitute a substantial increase in noise levels. Further, there are no noise-sensitive receptors located in proximity of the proposed terraced plaza who would be affected by the increase in noise levels. Mobile noise sources (i.e., vehicles) would utilize the proposed intersection, however, no change in traffic volumes would occur as a result of the Proposed Project, thus, no change in mobile source noise would occur. Therefore, the Proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity in excess of established standards. Impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

Threshold 6.2 Would the Project generate excessive groundborne vibration or groundborne noise levels?

Construction can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Ground disturbing activity as part of the Proposed Project would entail excavation for grading and access to underground utilities. The ground disturbing activities require heavy machinery that could generate excessive groundborne vibrations, which can spread through the ground and diminish with distance from the source. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved.

The FTA has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 in/sec PPV) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks)

at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec PPV is considered safe and would not result in any construction vibration damage.

Table 9: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 9, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Proposed Project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity.

Table 9: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 40 Feet (in/sec)[1]
Large Bulldozer	0.089	0.031
Loaded Trucks	0.076	0.027
Small Bulldozer	0.003	0.001
Vibratory Roller	0.210	0.104
Jackhammer	0.035	0.012

Notes:
1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

The nearest structure to the Project site is approximately 40 feet away. Table 9 shows that at 40 feet the vibration velocities from construction equipment would not exceed 0.104 in/sec PPV, which is below the FTA's 0.20 in/sec PPV threshold for building damage. It is also acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. Therefore, Proposed Project construction vibration impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.3 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?

The Project site is not within two miles of a private airstrip or an airport land use plan. Therefore, the Proposed Project would not result in excessive airport-related noise levels for people residing or working in the Proposed Project area. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

7 REFERENCES

1. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

2. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual, 2020 and Federal Transit administration*, Transit Noise and Vibration Assessment Manual, 2018.

3. City of Agoura Hills, *Final General Plan Update – March 2010 Part II*, 2010.

4. City of Agoura Hills, *General Plan*, 2004.

5. City of Agoura Hills, *Municipal Code*, 2022.

6. County of Los Angeles, *Code of Ordinances*, 2022.

7. Federal Highway Administration, *Roadway Construction Noise Model*, 2006.

8. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

9. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Appendix 4.18-1

Tribal Cultural Resources Documentation

Kimley»Horn

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: August 24, 2023

To: Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

Dear Representative(s);

The City of Agoura Hills (City) is writing to you pursuant to AB 52's requirement for consultation with Native American tribes. Please let me know within 30 days of the receipt of this letter if you wish to initiate consultation pursuant to AB 52 and California Public Resource Code Section 21080.3.1(a) and 65352.4 regarding the following project. If you would like to schedule a consultation with the City, please confirm if you would be your tribe's lead contact person, or kindly provide the name and contact information for another lead tribal representative with whom we should coordinate. Please note, on July 20, 2023 the City letter in compliance with Senate Bill 18 (SB 18). No additional changes to the project are being proposed.

Please note, in February of 2022, the City submitted a notification regarding the Kanan – Agoura Intersection Project and in October of 2022, the City submitted a notification regarding the AVSP Amendment. The current notification combines the scope of both projects into one combined project. **No additional scope of work is being proposed**, however, as the Project Description has changed, the City has opted to initiate a new tribal review period pursuant to SB 18.

Tribes have 90 days from the date on which they receive notification to request consultation, in writing. If you desire to consult with the City on review of this Project, please respond to me and request consultation in writing to the address below or via email to dthomas@agourahillscity.org within 90 days of receipt of this letter. My direct telephone number is 818.597.7311. Should the City not receive a response within 90 days, it will be presumed that you have declined consultation.

City of Agoura Hills
ATTN: Denice Thomas, AICP, Community Development Director
30001 Ladyface Court
Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org

Phone No: (818) 597-7311
The Agoura Village Specific Plan Amendment ("Project"):

Study Area:

The City of Agoura Hills is located in Los Angeles County, and bordered by Ventura County to the north, City of Calabasas to the east, City of Westlake Village to the west, and unincorporated Los Angeles County to the south.

The study area for the Project described is the Agoura Village Specific Plan area. The Specific Plan area is located approximately half way between Westlake Village and Calabasas, south of Highway 101 within the City of Agoura Hills. The Specific Plan area runs along both sides of Agoura Road, one block west of Kanan Road to approximately two blocks east of Cornell Road. Roadside Drive and Highway 101 border much of the area to the north and open space borders the south.

Project Description (form and content):

The Agoura Village Specific Plan (AVSP) is being amended in form and content. The form of the document has been updated to improve usability of the document by formatting the document in a manner that enhances the user-friendliness of the document.

The content of the AVSP is being amended to respond to the following Planning Principles:

1) Amending the existing vision to ensure it includes, among other things, primary goals requiring pedestrian-friendliness, bike-friendliness, encouragement and inclusion of active transportation and alternate modes of transport, changes that address climate change impacts, incorporation of energy efficient building standards, incorporation of fire resiliency standards, and ensure a village-concept with connected complimentary land uses;

2) Utilize data from the updated market demand study to inform changes to land use distribution within the AVSP (e.g.: ratio of commercial to residential);

3) Amending the overall amount of commercial and residential uses allowed for the purpose of creating a viable mixed use plan;

4) Amending the AVSP to provide for mixed-use redevelopment of certain existing commercial properties, and/or relocation of certain land uses and development density from the south side of Agoura Road to the north side of Agoura Road;

5) Ensure the AVSP provides the opportunity of the City to meet its Regional Housing Needs Assessment allocation (RHNA) as determined by the California Department of Housing and Community Development (HCD);

6) Ensure the AVSP is consistent with and enables implementation of the City/County Fire and Emergency Evacuation Plan;

7) Clarify methodology for measuring building height;

8) Amend the building height requirements for buildings along Agoura Road and Kanan Road frontages to maximize and/or preserve viewsheds to the surrounding hills and open space;

9) Clarify the “bonus density” provisions for residential development;

10) Amend AVSP to establish a density per acre requirement;

11) Ensure the AVSP supports Active Transportation and prioritizes circulation and connectivity with the General Plan;

12) Collaborate with applicants and property owners to accommodate the principles to the extent feasible and amend incentive options to encourage developers to modify current plans to align with updated AVSP.

13) Incorporate clear and specific signage and lighting standards within the AVSP;

14) Ensure consistency with the adopted Climate Action and Adaptation Plan (CAAP); and

15) Incorporate design standards that support a sustainable wildlife urban interface.

Project Description (Kanan – Agoura Intersection):

The Intersection Component area comprises approximately 6.1 acres in the AVSP area’s north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. The Intersection Component is generally comprised of three discontinuous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines.

Project Description (General Plan Update):

The Project also includes a General Plan Amendment to Chapter 3: Infrastructure and Community Services. The amendment establishes a new roadway classification which would be a subcategory under a secondary arterial (Semi-Rural Secondary Arterial) section and would apply to certain roadways within the AVSP.

Thank you for your assistance with our efforts to address cultural places, features, and objects

that may be affected by the proposed Project. If you have any questions, or need further information, please contact me directly at (818) 597-7311 or dthomas@agourahillscity.org.

Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: August 24, 2023

To: Fernandeno Tataviam Band of Mission Indians
Rudy Ortega, Tribal President
1019 Second Street, Suite 1
San Fernando, CA, 91340

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: August 24, 2023

To: Barbareno/ Ventureno Band of Mission Indians
Annette Ayala, MLD
188 S. Santa Rosa Street
Ventura, CA, 93001

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7) Clarify methodology for measuring building height;

8) Amend the building height requirements for buildings along Agoura Road and Kanan Road frontages to maximize and/or preserve viewsheds to the surrounding hills and open space;

9) Clarify the “bonus density” provisions for residential development;

10) Amend AVSP to establish a density per acre requirement;

11) Ensure the AVSP supports Active Transportation and prioritizes circulation and connectivity with the General Plan;

12) Collaborate with applicants and property owners to accommodate the principles to the extent feasible and amend incentive options to encourage developers to modify current plans to align with updated AVSP.

13) Incorporate clear and specific signage and lighting standards within the AVSP;

14) Ensure consistency with the adopted Climate Action and Adaptation Plan (CAAP); and

15) Incorporate design standards that support a sustainable wildlife urban interface.

Project Description (Kanan – Agoura Intersection):

The Intersection Component area comprises approximately 6.1 acres in the AVSP area’s north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. The Intersection Component is generally comprised of three discontinuous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines.

Project Description (General Plan Update):

The Project also includes a General Plan Amendment to Chapter 3: Infrastructure and Community Services. The amendment establishes a new roadway classification which would be a subcategory under a secondary arterial (Semi-Rural Secondary Arterial) section and would apply to certain roadways within the AVSP.

Thank you for your assistance with our efforts to address cultural places, features, and objects that may be affected by the proposed Project. If you have any questions, or need further

information, please contact me directly at (818) 597-7311 or dthomas@agourahillscity.org.

Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Barbareno/ Ventureno Band of Mission Indians
Annette Ayala, MLD
188 S. Santa Rosa Street
Ventura, CA, 93001

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

Dear Representative(s);

Senate Bill 18 (SB 18) requires that cities/counties notify the appropriate California Native American Tribes (that are on the Tribal Consultation List maintained by the California Native American Heritage Commission (NAHC)), before adopting or amending a General Plan or Specific Plan (Cal. Gov. Code § 65352.3). As the Project, described below, would require an amendment of the City's Agoura Village Specific Plan (AVSP), as well as an amendment to the General Plan, the Project is subject to Cal. Gov. Code § 65352.3. In compliance with SB 18 requirements, and as Lead Agency, the City of Agoura Hills (City) hereby extends an invitation to consult on the proposed City of Agoura Hills AVSP Amendment.

Please note, in February of 2022, the City submitted a notification regarding the Kanan – Agoura Intersection Project and in October of 2022, the City submitted a notification regarding the AVSP Amendment. The current notification combines the scope of both projects into one combined project. **No additional scope of work is being proposed**, however, as the Project Description has changed, the City has opted to initiate a new tribal review period pursuant to SB 18.

Tribes have 90 days from the date on which they receive notification to request consultation, in writing. If you desire to consult with the City on review of this Project, please respond to me and request consultation in writing to the address below or via email to dthomas@agourahillscity.org within 90 days of receipt of this letter. My direct telephone number is 818.597.7311. Should the City not receive a response within 90 days, it will be presumed that you have declined consultation.

City of Agoura Hills
ATTN: Denice Thomas, AICP, Community Development Director
30001 Ladyface Court
Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org
Phone No: (818) 597-7311

The Agoura Village Specific Plan Amendment ("Project"):

Study Area:

The City of Agoura Hills is located in Los Angeles County, and bordered by Ventura County to the north, City of Calabasas to the east, City of Westlake Village to the west, and unincorporated Los Angeles County to the south.

The study area for the Project described is the Agoura Village Specific Plan area. The Specific Plan area is located approximately half way between Westlake Village and Calabasas, south of Highway 101 within the City of Agoura Hills. The Specific Plan area runs along both sides of Agoura Road, one block west of Kanan Road to approximately two blocks east of Cornell Road. Roadside Drive and Highway 101 border much of the area to the north and open space borders the south.

Project Description (form and content):

The Agoura Village Specific Plan (AVSP) is being amended in form and content. The form of the document has been updated to improve usability of the document by formatting the document in a manner that enhances the user-friendliness of the document.

The content of the AVSP is being amended to respond to the following Planning Principles:

1) Amending the existing vision to ensure it includes, among other things, primary goals requiring pedestrian-friendliness, bike-friendliness, encouragement and inclusion of active transportation and alternate modes of transport, changes that address climate change impacts, incorporation of energy efficient building standards, incorporation of fire resiliency standards, and ensure a village-concept with connected complimentary land uses;

2) Utilize data from the updated market demand study to inform changes to land use distribution within the AVSP (e.g.: ratio of commercial to residential);

3) Amending the overall amount of commercial and residential uses allowed for the purpose of creating a viable mixed use plan;

4) Amending the AVSP to provide for mixed-use redevelopment of certain existing commercial properties, and/or relocation of certain land uses and development density from the south side of Agoura Road to the north side of Agoura Road;

5) Ensure the AVSP provides the opportunity of the City to meet its Regional Housing Needs Assessment allocation (RHNA) as determined by the California Department of Housing and Community Development (HCD);

6) Ensure the AVSP is consistent with and enables implementation of the City/County Fire and Emergency Evacuation Plan;

7) Clarify methodology for measuring building height;

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Project Description (General Plan Update):

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Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA, 93307

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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City of Agoura Hills
ATTN: Denice Thomas, AICP, Community Development Director
30001 Ladyface Court
Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org
Phone No: (818) 597-7311

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Study Area:

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Project Description (form and content):

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Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Coastal Band of the Chumash Nation
Mia Lopez, Chairperson
P.O. Box 4464
Santa Barbara, CA, 93140

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org
Phone No: (818) 597-7311

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Study Area:

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Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Gabrieleno Band of Mission Indians
Kizh Nation Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Fernandeno Tataviam Band of Mission Indians
Rudy Ortega, Tribal President
1019 Second Street, Suite 1
San Fernando, CA, 91340

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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The Agoura Village Specific Plan Amendment ("Project"):

Study Area:

The City of Agoura Hills is located in Los Angeles County, and bordered by Ventura County to the north, City of Calabasas to the east, City of Westlake Village to the west, and unincorporated Los Angeles County to the south.

The study area for the Project described is the Agoura Village Specific Plan area. The Specific Plan area is located approximately half way between Westlake Village and Calabasas, south of Highway 101 within the City of Agoura Hills. The Specific Plan area runs along both sides of Agoura Road, one block west of Kanan Road to approximately two blocks east of Cornell Road. Roadside Drive and Highway 101 border much of the area to the north and open space borders the south.

Project Description (form and content):

The Agoura Village Specific Plan (AVSP) is being amended in form and content. The form of the document has been updated to improve usability of the document by formatting the document in a manner that enhances the user-friendliness of the document.

The content of the AVSP is being amended to respond to the following Planning Principles:

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2) Utilize data from the updated market demand study to inform changes to land use distribution within the AVSP (e.g.: ratio of commercial to residential);

3) Amending the overall amount of commercial and residential uses allowed for the purpose of creating a viable mixed use plan;

4) Amending the AVSP to provide for mixed-use redevelopment of certain existing commercial properties, and/or relocation of certain land uses and development density from the south side of Agoura Road to the north side of Agoura Road;

5) Ensure the AVSP provides the opportunity of the City to meet its Regional Housing Needs Assessment allocation (RHNA) as determined by the California Department of Housing and Community Development (HCD);

6) Ensure the AVSP is consistent with and enables implementation of the City/County Fire and Emergency Evacuation Plan;

7) Clarify methodology for measuring building height;

8) Amend the building height requirements for buildings along Agoura Road and Kanan Road frontages to maximize and/or preserve viewsheds to the surrounding hills and open space;

9) Clarify the “bonus density” provisions for residential development;

10) Amend AVSP to establish a density per acre requirement;

11) Ensure the AVSP supports Active Transportation and prioritizes circulation and connectivity with the General Plan;

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15) Incorporate design standards that support a sustainable wildlife urban interface.

Project Description (Kanan – Agoura Intersection):

The Intersection Component area comprises approximately 6.1 acres in the AVSP area’s north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. The Intersection Component is generally comprised of three discontinuous areas:

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The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines.

Project Description (General Plan Update):

The Project also includes a General Plan Amendment to Chapter 3: Infrastructure and Community Services. The amendment establishes a new roadway classification which would be a subcategory under a secondary arterial (Semi-Rural Secondary Arterial) section and would apply to certain roadways within the AVSP.

Thank you for your assistance with our efforts to address cultural places, features, and objects that may be affected by the proposed Project. If you have any questions, or need further

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Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Gabrieleno Band of Mission Indians
Kizh Nation Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

Dear Representative(s);

Senate Bill 18 (SB 18) requires that cities/counties notify the appropriate California Native American Tribes (that are on the Tribal Consultation List maintained by the California Native American Heritage Commission (NAHC)), before adopting or amending a General Plan or Specific Plan (Cal. Gov. Code § 65352.3). As the Project, described below, would require an amendment of the City's Agoura Village Specific Plan (AVSP), as well as an amendment to the General Plan, the Project is subject to Cal. Gov. Code § 65352.3. In compliance with SB 18 requirements, and as Lead Agency, the City of Agoura Hills (City) hereby extends an invitation to consult on the proposed City of Agoura Hills AVSP Amendment.

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Tribes have 90 days from the date on which they receive notification to request consultation, in writing. If you desire to consult with the City on review of this Project, please respond to me and request consultation in writing to the address below or via email to dthomas@agourahillscity.org within 90 days of receipt of this letter. My direct telephone number is 818.597.7311. Should the City not receive a response within 90 days, it will be presumed that you have declined consultation.

City of Agoura Hills
ATTN: Denice Thomas, AICP, Community Development Director
30001 Ladyface Court
Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org
Phone No: (818) 597-7311

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Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA, 90707

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Gabrielino Tongva Indians of California Tribal Council
Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078
Simi Valley, CA, 93094

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Date: July 20, 2023

To: Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231
Los Angeles, CA, 90012

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P.O. Box 693
San Gabriel, CA, 91778

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

Dear Representative(s);

Senate Bill 18 (SB 18) requires that cities/counties notify the appropriate California Native American Tribes (that are on the Tribal Consultation List maintained by the California Native American Heritage Commission (NAHC)), before adopting or amending a General Plan or Specific Plan (Cal. Gov. Code § 65352.3). As the Project, described below, would require an amendment of the City's Agoura Village Specific Plan (AVSP), as well as an amendment to the General Plan, the Project is subject to Cal. Gov. Code § 65352.3. In compliance with SB 18 requirements, and as Lead Agency, the City of Agoura Hills (City) hereby extends an invitation to consult on the proposed City of Agoura Hills AVSP Amendment.

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Tribes have 90 days from the date on which they receive notification to request consultation, in writing. If you desire to consult with the City on review of this Project, please respond to me and request consultation in writing to the address below or via email to dthomas@agourahillscity.org within 90 days of receipt of this letter. My direct telephone number is 818.597.7311. Should the City not receive a response within 90 days, it will be presumed that you have declined consultation.

City of Agoura Hills
ATTN: Denice Thomas, AICP, Community Development Director
30001 Ladyface Court
Agoura Hills, CA 91301
Email: dthomas@agourahillscity.org

Phone No: (818) 597-7311
The Agoura Village Specific Plan Amendment ("Project"):

Study Area:

The City of Agoura Hills is located in Los Angeles County, and bordered by Ventura County to the north, City of Calabasas to the east, City of Westlake Village to the west, and unincorporated Los Angeles County to the south.

The study area for the Project described is the Agoura Village Specific Plan area. The Specific Plan area is located approximately half way between Westlake Village and Calabasas, south of Highway 101 within the City of Agoura Hills. The Specific Plan area runs along both sides of Agoura Road, one block west of Kanan Road to approximately two blocks east of Cornell Road. Roadside Drive and Highway 101 border much of the area to the north and open space borders the south.

Project Description (form and content):

The Agoura Village Specific Plan (AVSP) is being amended in form and content. The form of the document has been updated to improve usability of the document by formatting the document in a manner that enhances the user-friendliness of the document.

The content of the AVSP is being amended to respond to the following Planning Principles:

1) Amending the existing vision to ensure it includes, among other things, primary goals requiring pedestrian-friendliness, bike-friendliness, encouragement and inclusion of active transportation and alternate modes of transport, changes that address climate change impacts, incorporation of energy efficient building standards, incorporation of fire resiliency standards, and ensure a village-concept with connected complimentary land uses;

2) Utilize data from the updated market demand study to inform changes to land use distribution within the AVSP (e.g.: ratio of commercial to residential);

3) Amending the overall amount of commercial and residential uses allowed for the purpose of creating a viable mixed use plan;

4) Amending the AVSP to provide for mixed-use redevelopment of certain existing commercial properties, and/or relocation of certain land uses and development density from the south side of Agoura Road to the north side of Agoura Road;

5) Ensure the AVSP provides the opportunity of the City to meet its Regional Housing Needs Assessment allocation (RHNA) as determined by the California Department of Housing and Community Development (HCD);

6) Ensure the AVSP is consistent with and enables implementation of the City/County Fire and Emergency Evacuation Plan;

7) Clarify methodology for measuring building height;

8) Amend the building height requirements for buildings along Agoura Road and Kanan Road frontages to maximize and/or preserve viewsheds to the surrounding hills and open space;

9) Clarify the “bonus density” provisions for residential development;

10) Amend AVSP to establish a density per acre requirement;

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12) Collaborate with applicants and property owners to accommodate the principles to the extent feasible and amend incentive options to encourage developers to modify current plans to align with updated AVSP.

13) Incorporate clear and specific signage and lighting standards within the AVSP;

14) Ensure consistency with the adopted Climate Action and Adaptation Plan (CAAP); and

15) Incorporate design standards that support a sustainable wildlife urban interface.

Project Description (Kanan – Agoura Intersection):

The Intersection Component area comprises approximately 6.1 acres in the AVSP area’s north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. The Intersection Component is generally comprised of three discontinuous areas:

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The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines.

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Sincerely,

Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street
West Hills, CA, 91307

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: Northern Chumash Tribal Council
Violet Walker, Chairperson
P.O. Box 6533
Los Osos, CA, 93412

SUBJECT: Notification of the City of Agoura Hills' Specific Plan and General Plan Amendment for the Proposed Agoura Village Specific Plan (AVSP) Amendment & Kanan – Agoura Intersection Project Pursuant to Senate Bill 18

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Denice Thomas, AICP
Community Development Director

CITY OF AGOURA HILLS

"Gateway to the Santa Monica Mountains National Recreation Area"

Date: July 20, 2023

To: San Luis Obispo County Chumash Council
1030 Ritchie Road
Grover Beach, CA, 93433

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Date: July 20, 2023

To: Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517
Santa Ynez, CA, 93460

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15) Incorporate design standards that support a sustainable wildlife urban interface.

Project Description (Kanan – Agoura Intersection):

The Intersection Component area comprises approximately 6.1 acres in the AVSP area’s north-central portion, approximately 600 feet south of the Kanan Road/US 101 interchange. The Intersection Component is entirely within the AVSP area, except for the proposed Agoura Village Gateway Monument West location, which is at the Agoura Road/Roadside Drive intersection, adjacent and west of the AVSP area. The Intersection Component is generally comprised of three discontinuous areas:

- Kanan Road/Agoura Road intersection - this comprises most of the Intersection Component site, with the south leg extending to Cornell Way;
- Agoura Road/Whizin Market Square access driveway intersection (approximately 605 feet east of Cornell Road) – this is the proposed Agoura Village Gateway Monument East location; and
- Agoura Road/Roadside Drive intersection (approximately 1,585 feet west of Kanan Road) – this is the proposed Agoura Village Gateway Monument West location.

The Intersection Component includes improvements to enhance traffic capacity and improve mobility, safety, and access within the City. The Intersection Component would widen the intersection, provide the Agoura Village Gateway Monuments and City Gateway Entry Monuments, and underground overhead power/telecommunication lines.

Project Description (General Plan Update):

The Project also includes a General Plan Amendment to Chapter 3: Infrastructure and Community Services. The amendment establishes a new roadway classification which would be a subcategory under a secondary arterial (Semi-Rural Secondary Arterial) section and would apply to certain roadways within the AVSP.

Thank you for your assistance with our efforts to address cultural places, features, and objects that may be affected by the proposed Project. If you have any questions, or need further

information, please contact me directly at (818) 597-7311 or dthomas@agourahillscity.org.

Sincerely,

Denice Thomas, AICP
Community Development Director