

1 O'Hill Ridge Garg Residence Project

PUBLIC REVIEW DRAFT



Initial Study/Mitigated Negative Declaration | July 2020



Prepared for
City of Laguna Niguel

Prepared by

Michael Baker
INTERNATIONAL

**PUBLIC REVIEW DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

**1 O'Hill Ridge – Garg Residence
Project**

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MITIGATED NEGATIVE DECLARATION AND TECHNICAL APPENDICES ON CD



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1.0 INTRODUCTION

The 1 O'Hill Ridge – Garg Residence Project (herein referenced as the “project”) involves development of a two-story single-family residence with a basement and attached 11-car garage, a detached guest house, terraced yards, and a paved access driveway within the Bear Brand Ranch Community; refer to [Section 2.0, *Project Description*](#). Following a preliminary review of the proposed project, the City of Laguna Niguel (City) has determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study addresses the direct, indirect, and cumulative environmental effects of the project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with CEQA (Public Resources Code Section 21000-21177) and pursuant to California Code of Regulations Section 15063, the City of Laguna Niguel, acting in the capacity of Lead Agency under CEQA, is required to undertake the preparation of an Initial Study to determine if the proposed project would have a significant environmental impact. If, as a result of the Initial Study, the Lead Agency finds that there is evidence that any aspect of the project may cause a significant environmental effect, the Lead Agency shall further find that an Environmental Impact Report (EIR) is warranted to analyze project-related and cumulative environmental impacts. Alternatively, if the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency shall find that the proposed project would not have a significant effect on the environment and shall prepare a Negative Declaration for that project. Such determination can be made only if “there is no substantial evidence in light of the whole record before the Lead Agency” that such impacts may occur (Public Resources Code Section 21080(c)).

The environmental documentation, which is ultimately selected by the City in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and/or other discretionary approvals would be required.

The environmental documentation is subject to a public review period. During this review, public agency comments on the document relative to environmental issues should be addressed to the City. Following review of any comments received, the City will consider these comments as a part of the project's environmental review and include them with the Initial Study documentation for consideration by the City.

1.2 PURPOSE

CEQA Guidelines Section 15063 identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include:

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



1.3 CONSULTATION

As soon as a Lead Agency (in this case, the City of Laguna Niguel) has determined that an Initial Study would be required for the project, the Lead Agency is directed to consult informally with all Responsible Agencies and Trustee Agencies that are responsible for resources affected by the project, to obtain the recommendations of those agencies as to whether an EIR or Negative Declaration should be prepared for the project. Following receipt of any written comments from those agencies, the Lead Agency considers any recommendations of those agencies in the formulation of the preliminary findings. Following completion of this Initial Study, the Lead Agency initiates formal consultation with these and other governmental agencies as required under CEQA and its implementing guidelines.

1.4 INCORPORATION BY REFERENCE

The following documents were utilized during preparation of this Initial Study and are incorporated into this document by reference. The documents are available for review at the City of Laguna Niguel Community Development Department located at 30111 Crown Valley Parkway, Laguna Niguel, California 92677.

- City of Laguna Niguel General Plan (August 4, 1992). The *City of Laguna Niguel General Plan* (General Plan) provides a source of information and a policy framework for managing future growth and development and for establishing a system of land use administration tailored to the needs of the City. The General Plan focuses on key community priorities to fully understand the long-term consequences and benefits of the City's land use decisions. The General Plan includes the following elements: Land Use, Open Space/Parks/Conservation, Circulation, Public Facilities, Noise, Seismic/Public Safety, Housing, Growth Management, and Community Service Standards. Each element provides regulatory background, environmental setting, and goals, policies, and actions.
- Laguna Niguel Municipal Code (current through Ordinance No. 2020-204, enacted March 3, 2020). The *Laguna Niguel Municipal Code* (Municipal Code) provides regulations for government administrative operations, construction, development, infrastructure, public safety, and business operations within the City. The City's Zoning Code (Municipal Code Title 9, *Planning and Zoning*) is intended to promote public health, safety, and general welfare within Laguna Niguel. The Zoning Code implements the General Plan; provides regulations not covered by the *Laguna Niguel Local Coastal Program*; classifies different land uses and structures in appropriate places and regulates such land uses to serve the needs of the City; establishes conditions which allow the various land use types to exist in harmony and to promote the stability of existing land uses by protecting them; and prevents undue intensity of land use or development to maintain a suitable balance between developed land and open space, among others.



2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The City of Laguna Niguel (City) is located in the southern portion of the County of Orange; refer to Exhibit 2-1, Regional Vicinity. The cities of Aliso Viejo and Laguna Hills are located to the north, Mission Viejo and San Juan Capistrano are to the east, Dana Point is to the south, and Laguna Beach and unincorporated Orange County areas are to the west.

The proposed 1 O'Hill Ridge – Garg Residence Project (project) site is approximately six acres and is located in the southern portion of the City at 1 O'Hill Ridge (Assessor's Parcel Number [APN] 121-100-55); refer to Exhibit 2-2, Site Vicinity. Regional access to the project site is provided via Interstate 5 (I-5), State Route 74 (SR-74), and State Route 1 (SR-1; Pacific Coast Highway). Local access to the project site is provided via Golden Lantern, Old Ranch Road, and O'Hill Ridge.

2.2 ENVIRONMENTAL SETTING

The project site is an undeveloped residential estate hillside parcel within the Bear Brand Ranch Community. The site consists of gently rolling to steeply sloped hills with elevations ranging from approximately 340 to 680 feet above mean sea level. Ruderal nonnative grasses and ornamental species are the dominant vegetation on the lower southeastern and southern slopes. The western edge of the site is also disturbed with ruderal vegetation with a number of small oak trees scattered near the top of the slope. Slightly more than half of the site is composed of native vegetation primarily consisting of coastal sage scrub and disturbed coastal sage scrub on the steeper slopes in the eastern and central portions of the site.

GENERAL PLAN LAND USE DESIGNATION AND ZONING

Based on the *City of Laguna Niguel General Plan* (General Plan) Land Use Map, the project site is designated Residential Detached and Open Space. Based on the City's Zoning Map, the project site is zoned Rural Residential District (RS-1) and Open Space District (OS).

SURROUNDING LAND USES

Surrounding land uses include a mixture of residential and open space uses. Specifically, land uses surrounding the project site include:

- North: Undeveloped open space and single-family residences, designated Residential Detached and Open Space and zoned RS-1, OS, Single-Family District 3 (RS-3), and Single-Family District 4 (RS-4) are located to the north of the project site;
- East: The City of San Juan Capistrano bounds the project site to the east with single-family residential uses, designated Very Low Density (VLD-LU 2.0)¹ and zoned Single-Family-40,000 District (RSE-40,000)² under the City of San Juan Capistrano Land Use Map and Zoning Map, respectively, are located to the east;
- South: Undeveloped open space and single-family residences, designated Residential Detached and Open Space and zoned RS-1, OS, and Residential Estate District 4 (RS-2) are located to the south of the site; and
- West: Open space and single-family residential uses designated Residential Detached and zoned OS and RS-2 are located to the west of the project site.

¹ City of San Juan Capistrano, *San Juan Capistrano Land Use Map*, January 2, 2019.

² City of San Juan Capistrano, *San Juan Capistrano Official Zoning Map*, November 15, 2002.



Source: Google Earth Pro, 2020.

Yellow outline - Project Boundary

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Site Vicinity

Exhibit 2-2



2.3 BACKGROUND AND HISTORY

The project site is located within the Bear Brand Ranch Community, a hillside gated residential community consisting of over 120 uniquely designed single-family residences. Portions of the natural hillside terrain surrounding the project site have been altered by grading associated with construction along Upper Vintage in 1989. Based on review of historic aerial photographs, the project site has been an undeveloped hillside with no known past uses on-site. The only grading within the project site consists of a dirt access road, with minor 10-foot high cuts on the uphill side of the slope. A past development proposal for the project site consisted of an approximately 16,250-square foot custom home with ancillary site improvements, including a pool, walls, and tennis court (Site Development Permit SP 07-01 [Curtone Residence]).

2.4 PROJECT CHARACTERISTICS

The project proposes to develop a two-story single-family residence with a basement and attached 11-car garage, a detached guest house, terraced yards, and a paved access driveway from O'Hill Ridge; refer to Exhibit 2-3, Conceptual Site Plan. Table 2-1, Proposed Building Square Footages, details the square footages of the residential levels and accessory structures.

Table 2-1
Proposed Building Square Footages

Proposed Project	Square Feet
Lot Size	261,556
Main Residence	
Basement	11,708
First Floor	8,798
Second Floor	7,876
Total – Main Residence	28,382
Guest House/Lookout Tower	2,937
Total Livable Space	31,319
Garage	5,096
Mechanical	499
TOTAL	36,914 square feet

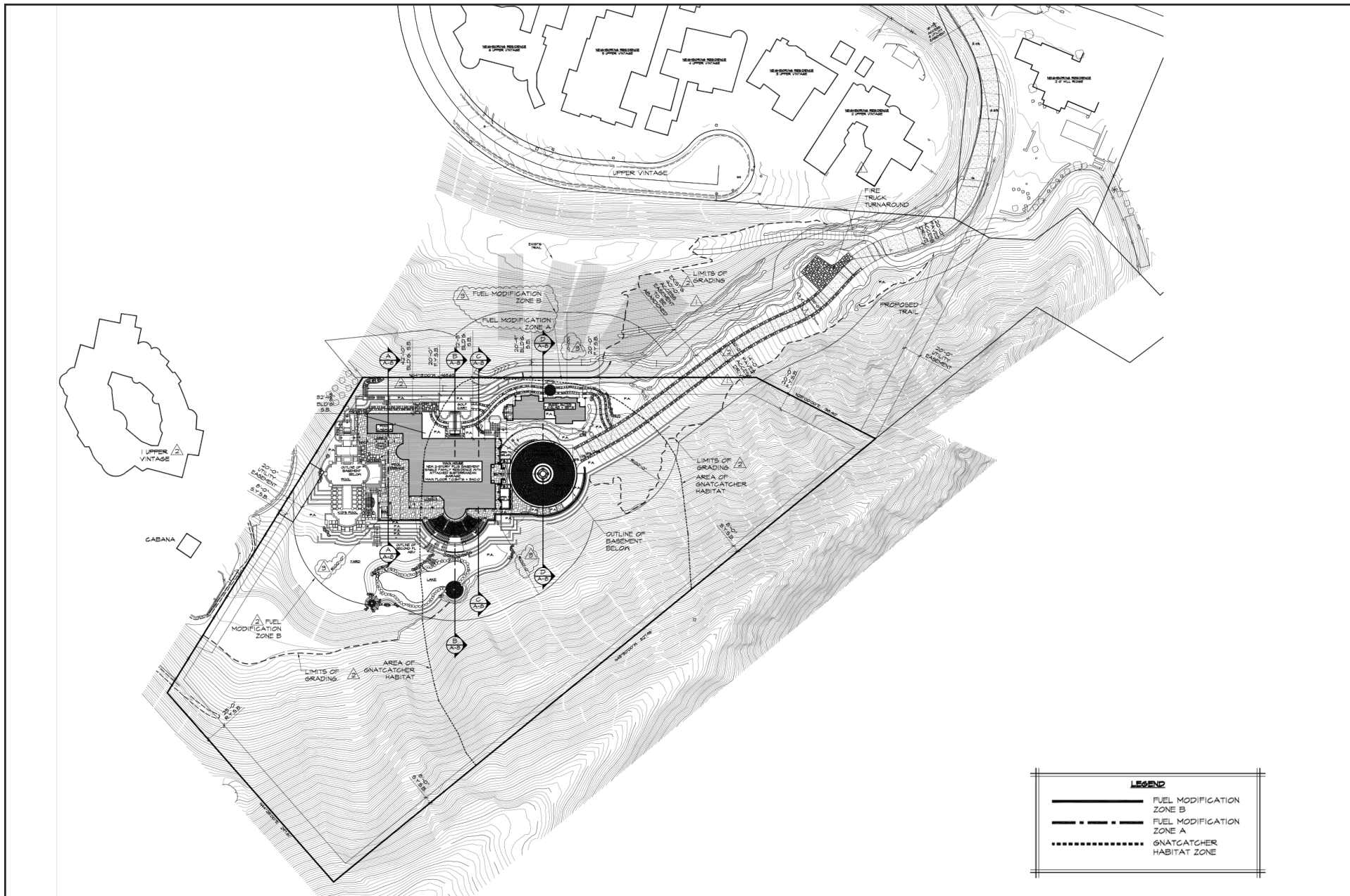
Source: Brion Jeannette Architecture, 2019.

PROPOSED BUILDINGS

Main Residence

The main residence would consist of two stories and a basement level. As shown on Exhibit 2-4, First Floor Plan, the first floor would include an entry foyer, living room, great room, dining room, kitchen and pantry, breakfast solarium with a glass roof, elevator, conference room, library, powder rooms, and storage rooms. Loggias³ along the southern end of the first floor would open towards the pool, pool cabana, and terrace, which include a wet bar, barbecue/bar, sauna, and bathrooms.

³ A "loggia" is an architectural feature which consists of a covered exterior gallery or corridor open to the elements and usually supported by a series of columns or arches.



Source: Brion Jeannette Architecture, 2019

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
Conceptual Site Plan

Exhibit 2-3

Exhibit 2-4



The second floor would include five bedrooms, each with a walk-in closet, bathroom, and deck, balcony, and/or solarium; a great room; dining area; refreshment bar; and study room; refer to Exhibit 2-5, *Second Floor Plan*.

The basement would include an 11-car garage and mechanical room; lounge; wine cellar and tasting room; two-lane bowling alley and billiards; arcade room; wet bar; fitness, sauna, and massage rooms; powder rooms; and caretaker living quarters, including a bedroom, kitchenette, bathroom, and laundry room; refer to Exhibit 2-6, *Basement Floor Plan*. The basement would also open towards the backyard via loggias.

Guest House/Lookout Tower

The two-story detached guest house would be located to the northeast of the main residence and consist of three individual suites. As shown on Exhibit 2-7, *Guest House and Lookout Tower Floor Plans*, each suite would include a living room, bedroom, wet bar, walk-in closet, bathroom, and patio, deck, and/or balconies. The lookout tower would be at the roof level of the building.

Building Elevations and Sections

The proposed building elevations along the north, east, south, and west elevations are shown on Exhibits 2-8a, *Building Elevation – North*, through 2-8d, *Building Elevation – West*. As detailed, the proposed buildings' roofs and protruding architectural features would not exceed the City's 35-foot maximum building height limit measured from above natural/finished grade. Additionally, building sections are shown on Exhibit 2-9, *Building Sections*, to illustrate how the proposed residence and accessory structures would sit along the naturally sloped hillside. Given the sloped nature of the site, terraced walls are also proposed along the eastern, southern, and western project boundaries ranging in height from 1.3 to 12 feet.

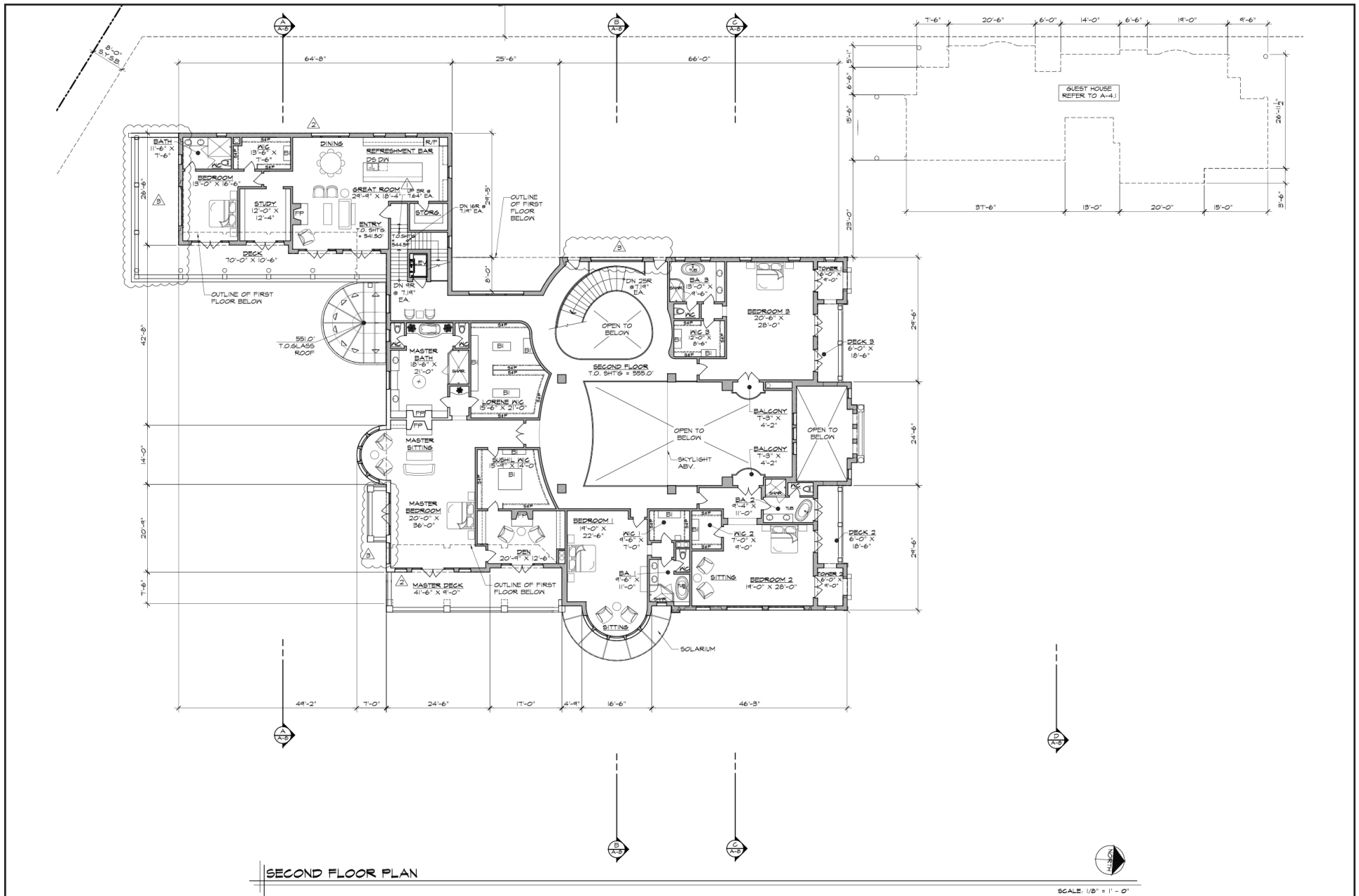
The exterior building colors would include a variety of neutral earth tones (beiges, browns, and clay colors), while the project's exterior building materials would include stone and plaster walls with rough sand texture; stained wood shutters, garage doors, and rafter tails; roman pan, mission, and red clay roof tiles; stone veneer decorative walls; precast stone surrounding arched openings, columns, entry pediments, wall caps, eaves, doors, and windows; metalized and matte black wrought iron window grilles, shutter hardware, exterior railings, and decorative elements; and copper gutters, downspouts, and collection boxes.

SITE ACCESS

The residence would be accessed via an 860-foot long paved driveway proposed along O'Hill Ridge approximately 400 feet north of Old Ranch Road. The access road would extend through Lot B of Tract 12026, which consists of moderate to steep topography. A motorized gate would be installed along the access road approximately mid-way between O'Hill Ridge and the proposed circular driveway at the entrance of the residence.

AMENITIES

In addition to the proposed interior amenities, such as the bowling alley, arcade room, and fitness and sauna rooms, the project proposes several exterior amenities. These include a water fountain at the center of the circular driveway entrance; pool cabana, terrace, barbecue/bar, and pool; lake; golf cart storage area; and a proposed trail segment across the access road that would connect two ends of an existing unnamed trail.



Source: Brion Jeannette Architecture, 2019

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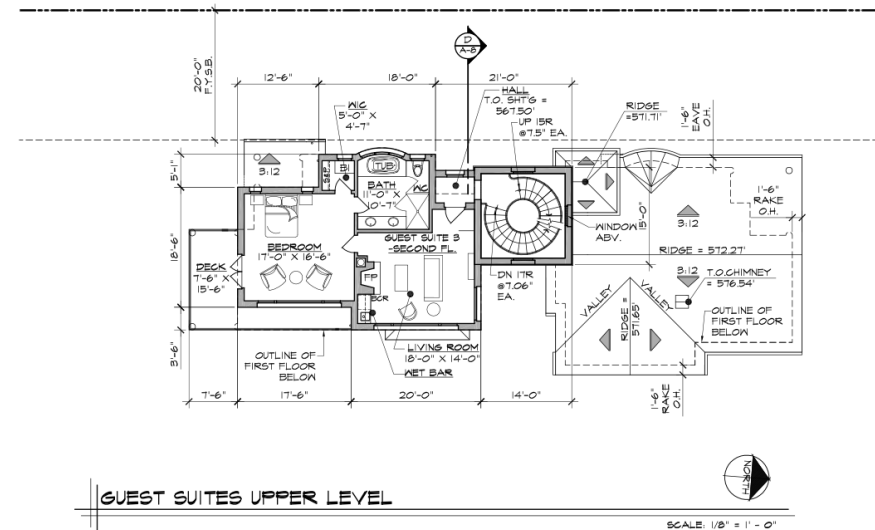
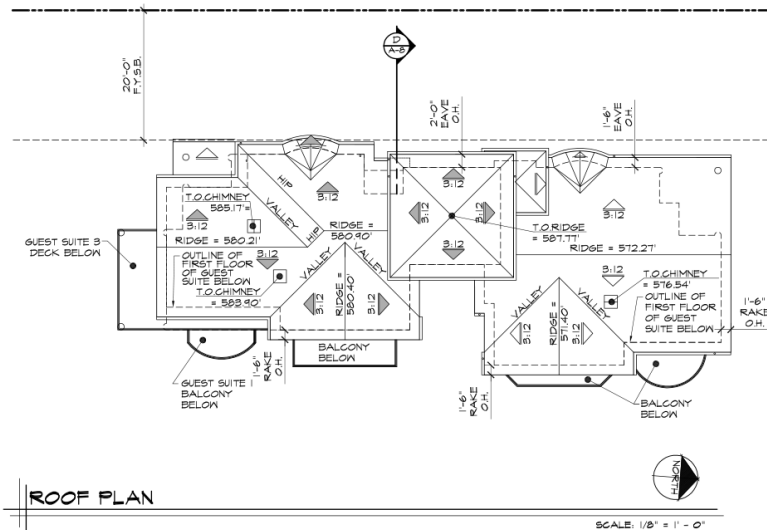
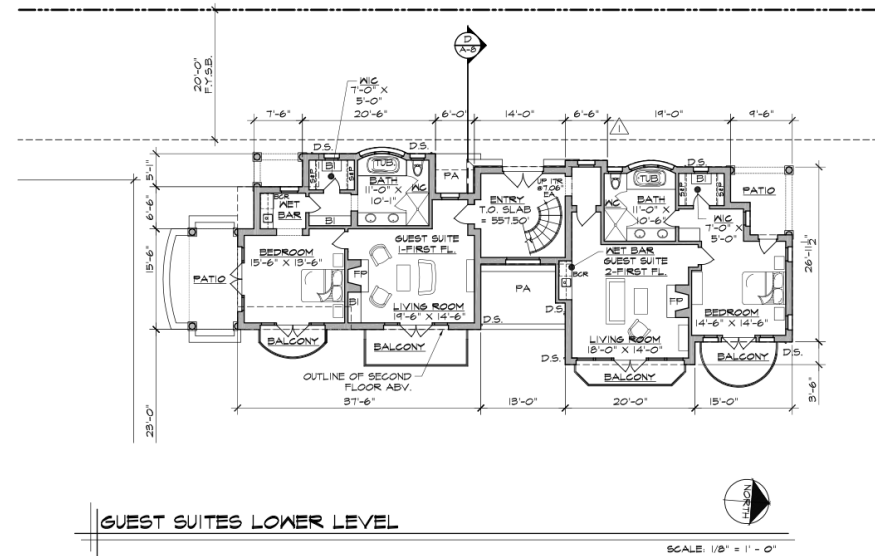
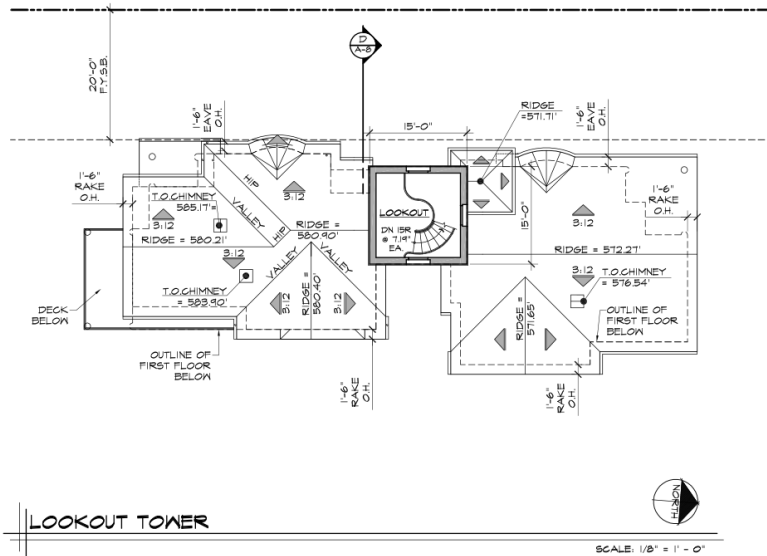


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Second Floor Plan

Exhibit 2-5



Source: Brion Jeannette Architecture, 2019

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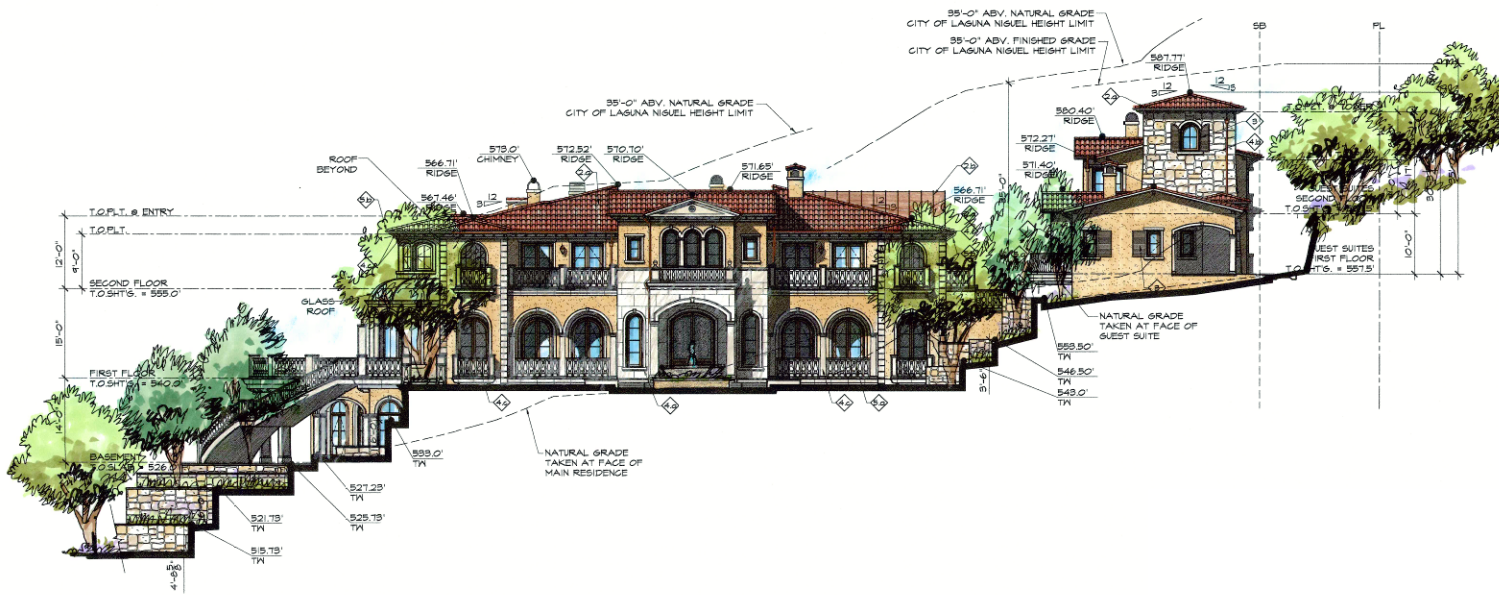
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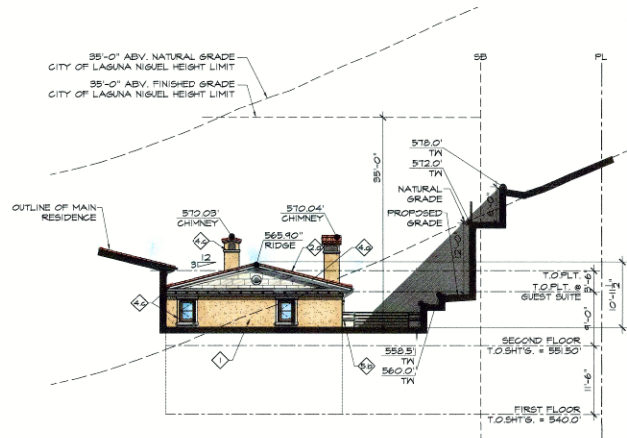
1 O'HILL RIDGE – GARG RESIDENCE PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION **Guest House and Lookout Tower Floor Plans**

Exhibit 2-7



NORTH ELEVATION

SCALE: 1/8" = 1' - 0"



NORTH ELEVATION - COURTYARD

SCALE: 1/8" = 1' - 0"

EXTERIOR FINISH SPECIFICATIONS:

- ◇ EXTERIOR PLASTER:
 - ◇ EXTERIOR PLASTER 0/ (2) LAYER GRADE D PAPER AT BUILDING FIELD TO HAVE ROUGH SAND (OLD WORLD) TEXTURE. FINAL COLOR COAT TO BE OMEGA AKROFLEX OR OMEGAFLEX. FINAL COLOR TO BE TRAZER CL 38452 MINAKI (LRY 360) AND BE APPROVED BY ARCHITECT PRIOR TO APPLICATION.
- ◇ ROOFING:
 - ◇ ROOF TILE TO BE ROMAN PAN TILE WITH MISSION TILE COVER BY REDLAND CLAY TILE. COLOR TO BE 'OLD SEDONA BLEND.' TILE TO HAVE STAGGERED COURSES AND CUSTOM LAY UP IN 100% MORTAR BOOST.
 - ◇ GLASS A' STANDING SEAM COPPER ROOF
- ◇ WOOD:
 - ◇ WOOD AT SHUTTERS, GARAGE DOORS, RAFTER TAILS, TO BE SEALED, STAIN-GRADE ALDER.
- ◇ STONE:
 - ◇ EXTERIOR CUT STONE AT SELECT WALLS PER ELEVATIONS TO BE FRENCH CASIMA LIMESTONE WITH A HONED FINISH.
 - ◇ EXTERIOR STONE VENEER AT GUEST SUITES TO BE GAMBON STONE IN A RANDOM PATTERN.
 - ◇ ARCHED OPENINGS, COLUMNS, ENTRY PEDIMENT, WALL CAPS, EAVES, DOOR & WINDOWS SURROUND SHALL BE PRECAST STONE. COLOR TO BE SAN SIMON (R10) BY SOUTHER STAFF & STONE.
- ◇ METAL AND IRON:
 - ◇ FROUGHT IRON AT WINDOW GRILLES, SHUTTER HARDWARE, EXTERIOR RAILINGS AND DECORATIVE ELEMENTS PER ELEVATIONS TO BE METALIZED AND PAINTED MATTIE BLACK.
 - ◇ GUTTERS, DOWNSPOUTS, AND COLLECTIONS BOXES TO BE 1/2 OZ COPPER.

Source: Brion Jeannette Architecture, 2020

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
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Building Elevation - North

Exhibit 2-8a



Source: Brion Jeannette Architecture, 2020

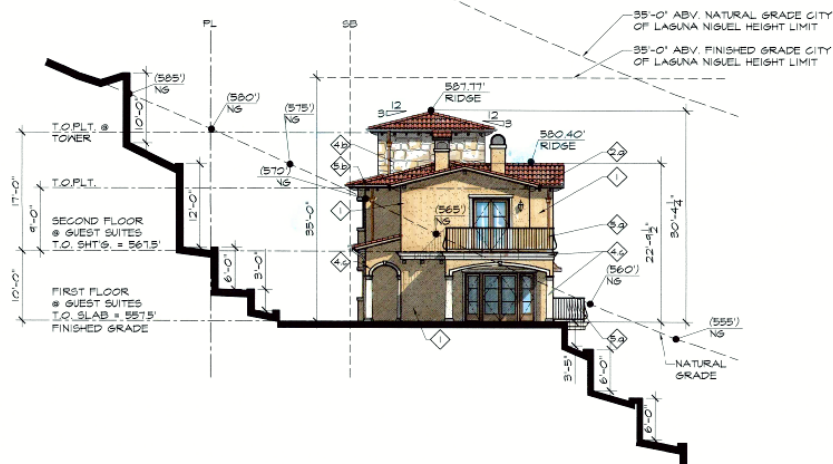
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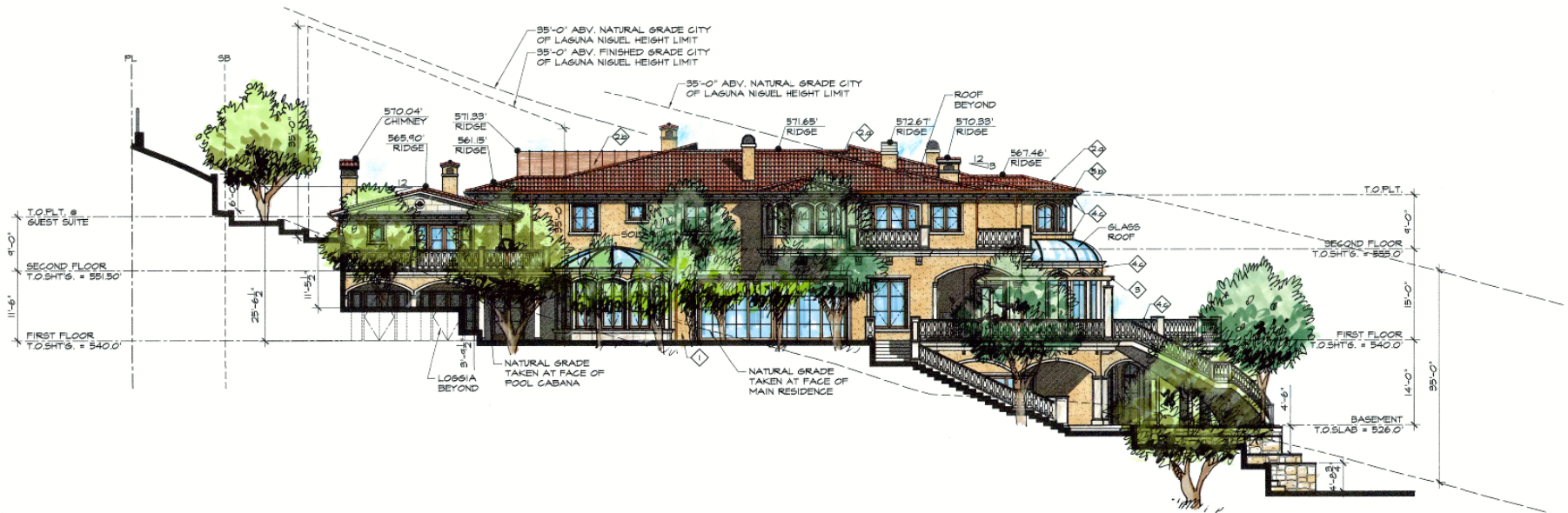
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Building Elevation - East

Exhibit 2-8b



SOUTH ELEVATION - GUEST SUITE

SCALE: 1/8" = 1' - 0"



SOUTH ELEVATION

SCALE: 1/8" = 1' - 0"

Source: Brion Jeannette Architecture, 2020

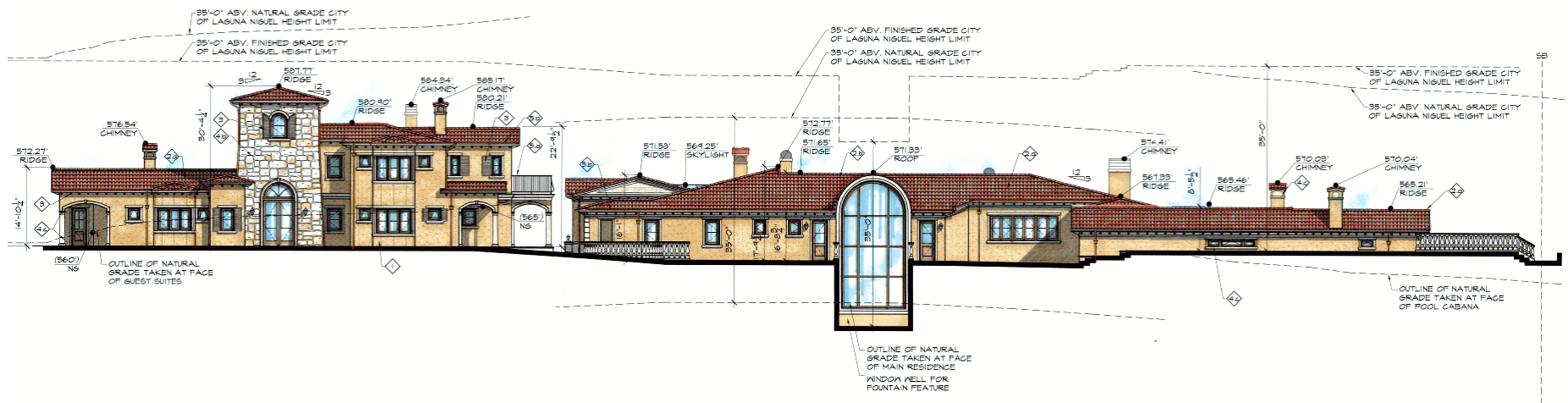
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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
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Building Elevation - South

Exhibit 2-8c



WEST ELEVATION

SCALE: 1/8" = 1' - 0"

Source: Brion Jeannette Architecture, 2020

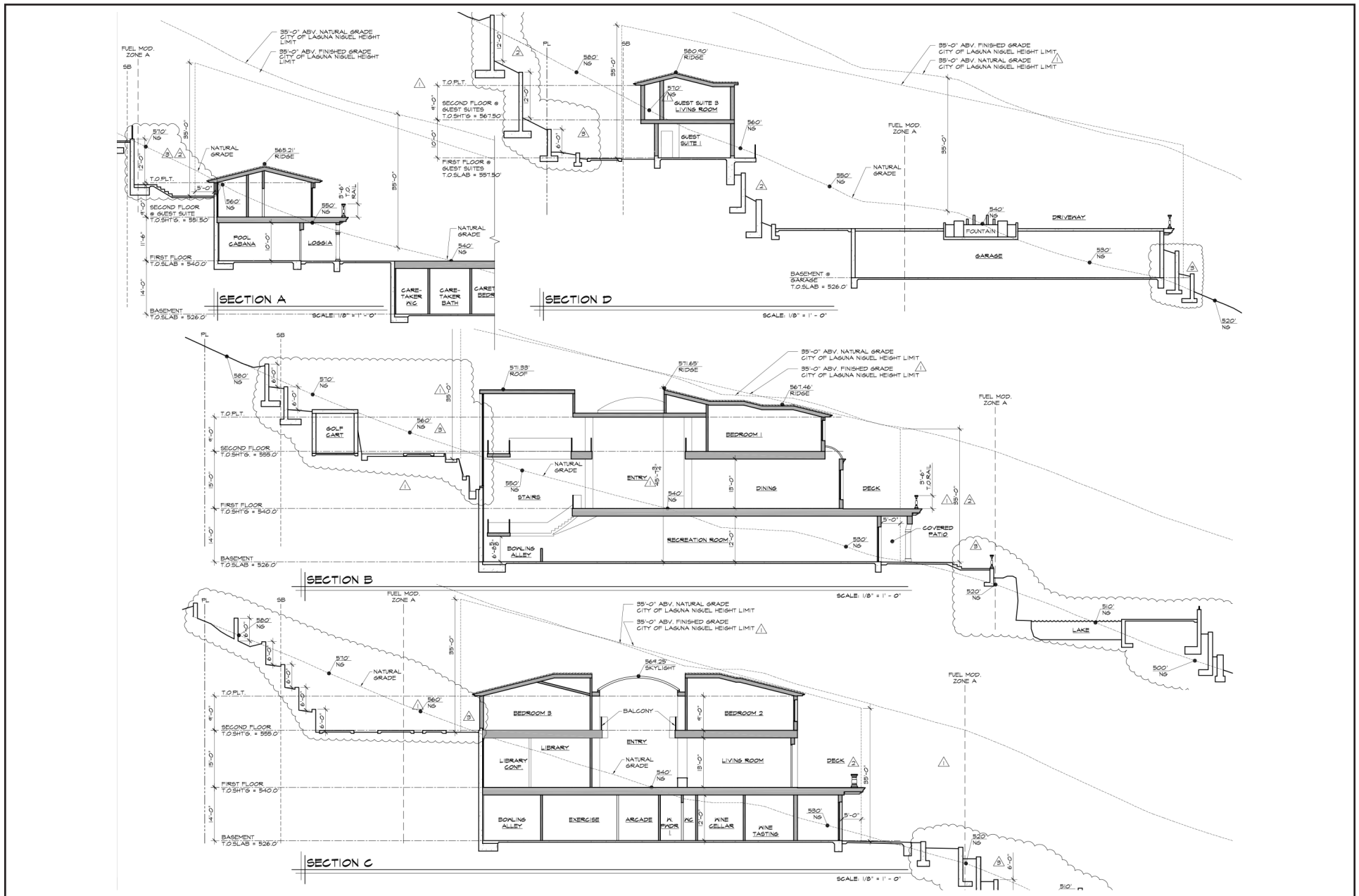
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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
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Building Elevation - West

Exhibit 2-8d



Source: Brion Jeannette Architecture, 2019

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Building Sections

Exhibit 2-9



LANDSCAPING

Ornamental landscaping would be installed throughout the project site, including along the access road, building perimeters, entryways, and yards; refer to Exhibit 2-10, *Conceptual Landscape Plan*. Planting materials would include a variety of trees and shrubs, such as citrus trees, strawberry trees, olive trees, California sycamore, coast live oak, bush sunflower, privet, prostrate myoporum, carmel creeper, red yucca, lemonade berry, prostrate rosemary, California coffeeberry, native grasses, and mulch. All landscaped areas are designed to be irrigated with an automatically controlled system using low gallon spray heads and on-grade drop system for slope planting.

FUEL MODIFICATION PLAN

The project proposes several fuel modification measures to minimize wildland fire hazard risks. As shown on Exhibit 2-11, *Conceptual Fuel Modification Plan*, the site would include Zone A and Zone B fuel modification zones. Zone A is defined as a 5- to 20-foot setback zone for non-combustible construction only. Zone B is defined as the first 95- to 150-feet from Zone A. Zone B is required to be permanently irrigated and fully landscaped with approved drought-tolerant, deep-rooted, moisture-retentive material. Both zones would be maintained by the property owner.

A radiant heat wall is also proposed along the southern project boundary adjacent to an existing residence located at 1 Upper Vintage. The radiant heat wall would be at least six feet tall and constructed of solid block or block with 0.25-inch thick tempered glass panels.

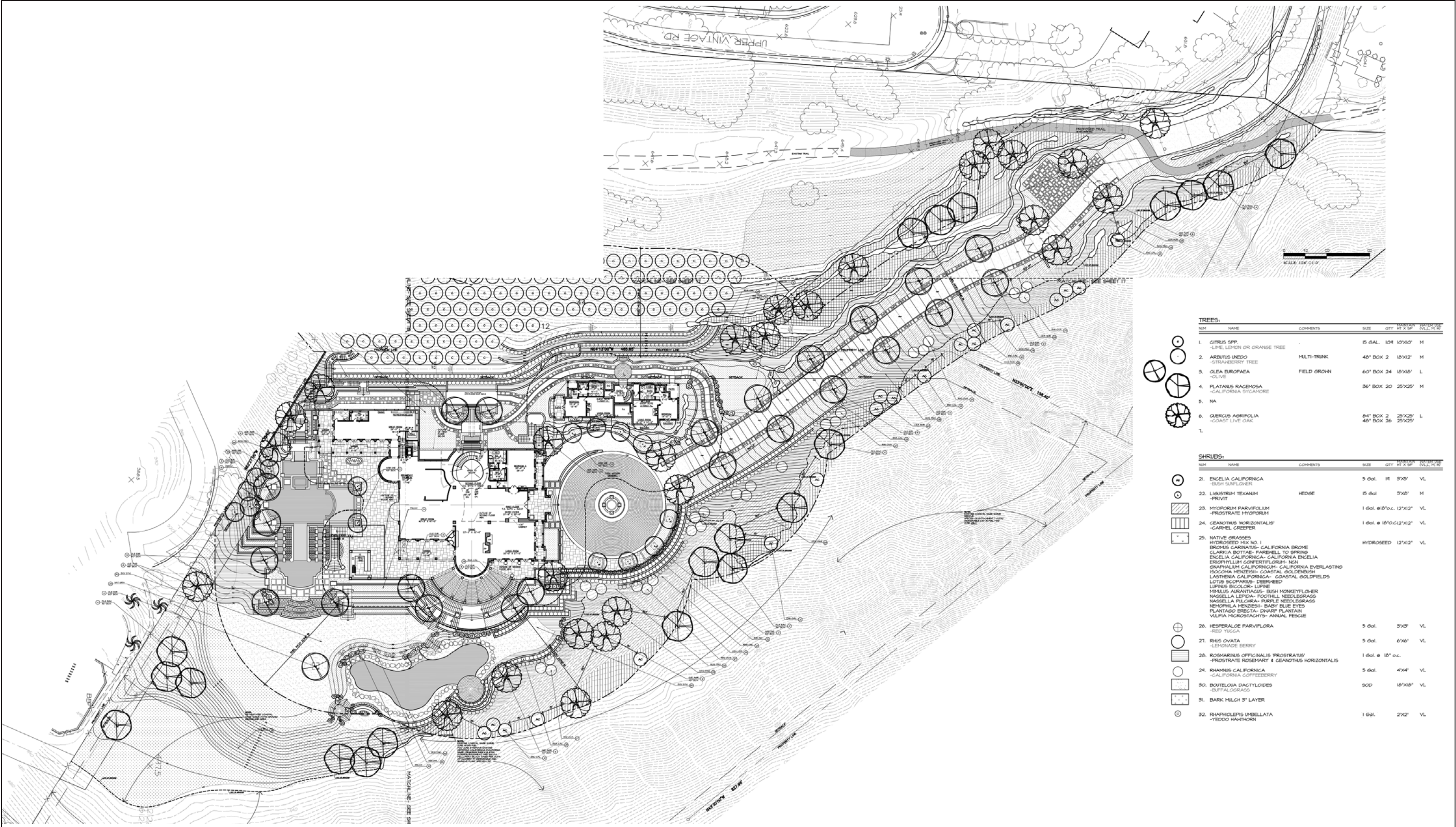
FIRE MASTER AND PROTECTION PLANS

As part of the project's Fire Master Plan and Fire Protection Plan, the 20-foot wide paved driveway would include a fire truck turnaround area, public fire hydrant, and knox key switch at the proposed motorized gate approximately mid-way between O'Hill Ridge and the proposed residence. "No Parking-Fire Lane" signs would be posted along the access road along with an "End of Fire Access" sign approximately 300 feet from the entrance of the main residence. The final Fire Master Plan and Fire Protection Plan would require approval by the Orange County Fire Authority.

UTILITIES AND SERVICES

The following utilities and services would serve the project site:

- Water. The project site would be served by the Moulton Niguel Water District (MNWD) from existing water facilities within O'Hill Ridge. As noted below, the project involves constructing an on-site lake with potential overflow being utilized for on-site landscaping irrigation.
- Sewer. MNWD would also provide sanitary sewer services to the project site via existing sewer lines within O'Hill Ridge. The project applicant would construct a private lateral sewer system connecting to the existing sewer line within O'Hill Ridge.
- Drainage. The project proposes to construct an on-site lake (detention basin) near the southeastern portion of the project site, designed to capture a 100-year storm event. Any flow in excess of the lake's capacity would enter an overflow spillway into a storm drain and pass through a modular wetland for treatment. The runoff would then flow down the hill into a proposed energy dissipation rip rap structure near the existing ravine at the bottom of the canyon. Eventually, stormwater runoff would sheet flow into an existing 30-inch storm drain under Peppertree Bend that ultimately outlets to the San Juan Creek Channel and Pacific Ocean at Doheny Beach. In addition, runoff stored in the lake would be used for on-site irrigation.



Source: Brion Jeannette Architecture, 2019

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1 O'HILL RIDGE - GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Conceptual Landscape Plan

Exhibit 2-10



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Source: Brion Jeannette Architecture, 2019

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION **Conceptual Fuel Modification Plan**

Exhibit 2-11



- Dry Utilities. Southern California Gas Company and San Diego Gas and Electric would provide natural gas and electricity services to the site, respectively, while AT&T, Cox Communication, and Frontier Communications would provide telecommunication services.

2.5 PHASING/CONSTRUCTION

Construction activities are anticipated to occur in one phase for a total of 36 months. Grading activities would occur for the first six months with construction activities occurring for the remaining time (approximately 30 months). Project earthwork includes approximately 41,127 cubic yards of cut and 6,520 cubic yards of fill, which would require about 34,607 cubic yards of export.

2.6 AGREEMENTS, PERMITS, AND APPROVALS

The proposed project would require agreements, permits, and approvals from the City of Laguna Niguel and other responsible agencies prior to construction. These discretionary actions are listed below and may change as the project entitlement process proceeds.

City of Laguna Niguel

- California Environmental Quality Act Clearance;
- Site Development Permit (SP 17-03) for site plan review and oversized guest house (considered under 'Alternate Development Standards' request);
- Use Permit (UP 17-01) to relocate access driveway through Open Space zone;
- Minor Adjustment (MA 17-10) for over-height walls and fences; and
- Variance (VA 17-02) to adjust the required fuel modification zone.

Orange County Fire Authority

- Fire Master Plan Approval;
- Fire Protection Plan Approval; and
- Fuel Modification Plan Approval.



3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1. **Project Title:**
1 O'Hill Ridge – Garg Residence Project
2. **Lead Agency Name and Address:**
City of Laguna Niguel
Community Development Department
30111 Crown Valley Parkway
Laguna Niguel, California 92677
3. **Contact Person and Phone Number:**
Adam Johnson, Senior Planner
949.362.4363
4. **Project Location:**
The proposed project is located at 1 O'Hill Ridge in the City of Laguna Niguel, California.
5. **Project Sponsor's Name and Address:**
Brion Jeanette Architecture
470 Old Newport Boulevard
Newport Beach, California 92663
6. **General Plan Designation:**
Residential Detached
7. **Zoning:**
Rural Residential District (RS-1)
8. **Description of Project:**
The project involves development of a two-story single-family residence with a basement and attached 11-car garage, a detached guest house, terraced yards, and a paved access driveway within the Bear Brand Ranch Community. Refer to Section 2.4, Project Characteristics.
9. **Surrounding Land Uses and Setting:**
Surrounding land uses include a mixture of residential and open space uses. Specifically, land uses surrounding the project site include:
 - North: Undeveloped open space and single-family residences, designated Residential Detached and Open Space and zoned RS-1, Open Space (OS), Single-Family District 3 (RS-3), and Single-Family District 4 (RS-4) are located to the north of the project site;
 - East: The City of San Juan Capistrano bounds the project site to the east with single-family residential uses, designated Very Low Density (VLD-LU 2.0) and zoned Single-Family-40,000 District (RSE-40,000) under the City of San Juan Capistrano Land Use Map and Zoning Map, respectively, are located to the east;
 - South: Undeveloped open space and single-family residences, designated Residential Detached and Open Space and zoned RS-1, OS, and Residential Estate District 4 (RS-2) are located to the south of the site; and



- West: Open space and single-family residential uses designated Residential Detached and zoned OS and RS-2 are located to the west of the project site.

10. Other public agencies whose approval is required:

Orange County Fire Authority, Moulton Niguel Water District

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In compliance with Assembly Bill 52, the City distributed letters to Native American tribes previously requesting information from the City regarding future projects in their territory to inform them of the proposed project. Refer to Section 4.18, Tribal Cultural Resources.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less Than Significant Impact with Mitigation Incorporated."

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

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

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

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the CEQA Guidelines Appendix G and used by the City of Laguna Niguel in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.



For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- No Impact. The development would not have any measurable environmental impact on the environment.
- Less Than Significant Impact. The development would have the potential for impacting the environment, although this impact would be below established thresholds that are considered to be significant.
- Less Than Significant Impact With Mitigation Incorporated. The development 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 development's physical or operational characteristics can reduce these impacts to levels that are.
- Potentially Significant Impact. The development would have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to less than significant levels.



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4.0 ENVIRONMENTAL ANALYSIS

4.1 AESTHETICS

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

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. A scenic vista is generally defined as a view of undisturbed natural lands exhibiting a unique or unusual feature that comprises an important or dominant portion of the viewshed.¹ Scenic vistas may also be represented by a particular distant view that provides visual relief from less attractive views of nearby features. Other designated Federal and State lands, as well as local open space or recreational areas, may also offer scenic vistas if they represent a valued aesthetic view within the surrounding landscape of nearby features.

CITY OF LAGUNA NIGUEL

The General Plan does not designate scenic resources or scenic vistas within the City of Laguna Niguel. However, General Plan Figure OS-3, *Scenic Highways*, identifies Landscape Corridors within the City. According to the General Plan, a Landscape Corridor traverses developed or developing areas and has been designated for special treatment to provide a pleasant driving environment and community enhancement. Alicia Parkway, Camino del Avion, Crown Valley Parkway, La Paz Road, Moulton Parkway, Niguel Road (between Crown Valley Parkway and Camino del Avion), Pacific Island Drive, and Golden Lantern Street are all designated by the General Plan as Landscape Corridors. Views of the project site from these Landscape Corridors are not readily afforded due to topographic conditions and intervening vegetation and structures. Thus, no impacts to General Plan-designated Landscape Corridors would occur in this regard.

The City's Hillside Protection Ordinance is included in Municipal Code Section 9-1-8, *Hillside Protection*. Pursuant to Municipal Code Section 9-1-81, *Hillside Protection Regulations*, the City's hillside design regulations are intended to ensure that any permitted hillside development conforms to the natural topography and the visual impacts of grading are softened by incorporating slope undulation, blending, and other features to reflect the natural terrain. Although the project currently consists of an undeveloped hillside, Figure 8.3, *Exempt Bear Brand Hillside Estates Area*, of Municipal Code Section 9-1-81 exempts the project site from the City's hillside design regulations. Nonetheless, the proposed

¹ A viewshed is the geographical area which is visible from a particular location.



project is not anticipated to substantially alter the existing topographic ridgeline form, as the major ridgeline within the area has already been preserved as permanent open space (Municipal Code Section 9-1-81[f][7]); refer to Response 4.1(c). No impacts would occur in this regard.

CITY OF SAN JUAN CAPISTRANO

Public views of the project site are primarily limited to those within the Capistrano Valley downslope of the project site within the City of San Juan Capistrano's jurisdiction. According to the *San Juan Capistrano General Plan*, the hillsides surrounding the City contribute to its character and provide visual quality for the community.² In addition, the *City of San Juan Capistrano General Plan* identifies designated arterials and the railroad corridor that passes through the City as scenic corridors; refer to *City of San Juan Capistrano General Plan* Figure C-2, *Arterial Highway System*. Public views of the project site would be available from designated scenic arterials including Ortega Highway, San Juan Creek Road, Del Obispo Street, Calle Arroyo, La Novia, and Via Estelita. Although the project currently consists of an undeveloped hillside and would be visible from designated scenic arterials, project implementation is not anticipated to substantially alter the hillside's existing topographic ridgeline form, as the major ridgeline within the area has already been preserved as permanent open space; refer to Response 4.1(c). No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

No Impact. There are no officially-designated State scenic highways in the City of Laguna Niguel.³ The nearest scenic highway is State Route 1 (SR-1) (designated as eligible for listing), which is located approximately 1.5 miles west of the project site. Views of the project site are not readily afforded from SR-1 due to topographic conditions and intervening vegetation and structures. As noted in Response 4.1(a), the project would not impact General Plan-designated Landscape Corridors or City of San Juan Capistrano-designated scenic arterials. Thus, the project would not substantially damage scenic resources within a State scenic highway. No impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

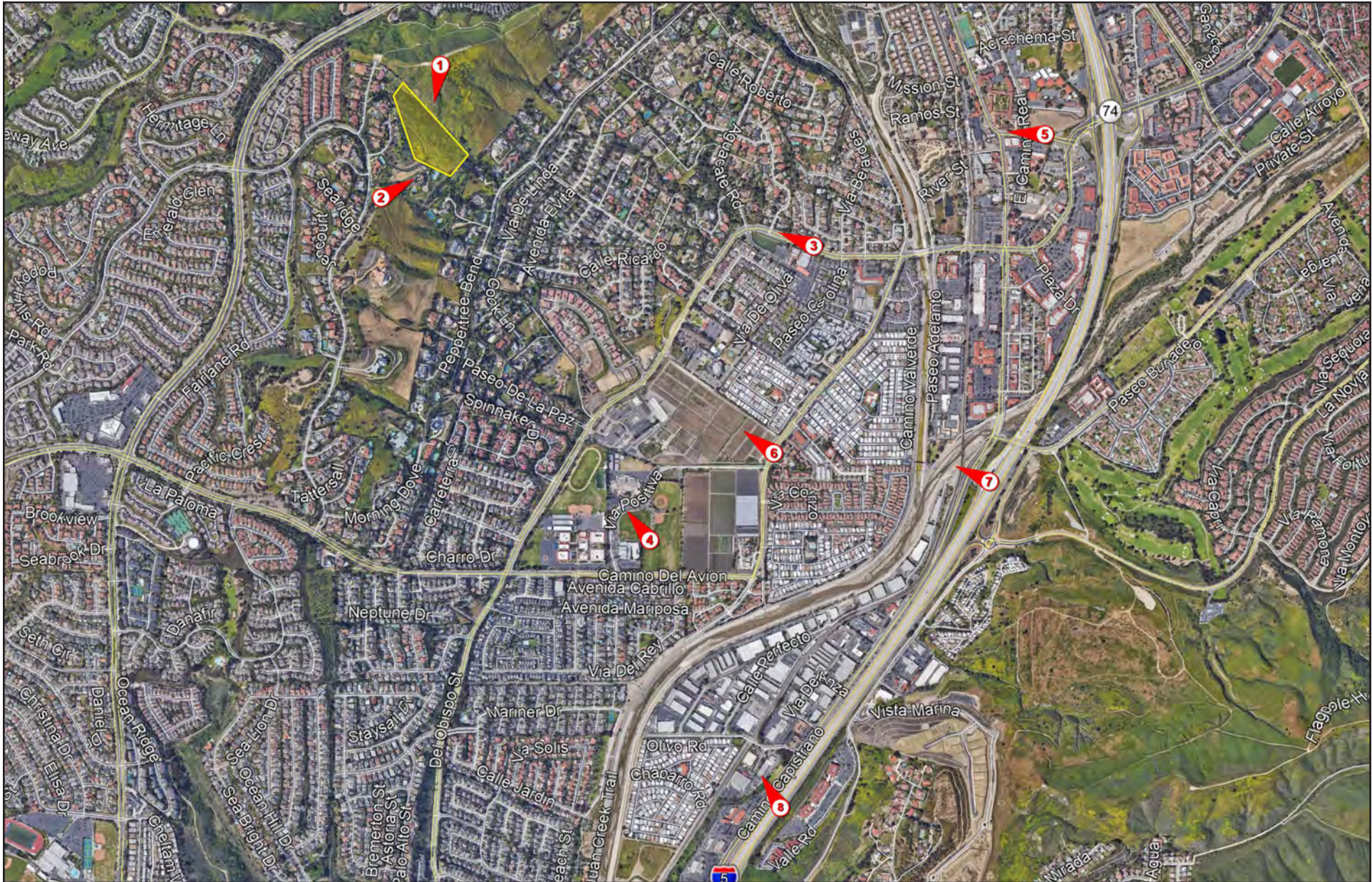
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable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

Less Than Significant Impact. The project site is an undeveloped residential estate hillside parcel located within a suburbanized area known as the Bear Brand Ranch Community. Surrounding areas are primarily comprised of residential and open space uses. Based on the project's urbanized setting, the following analysis evaluates the project's potential to conflict with applicable zoning and other regulations governing scenic quality.

For informational purposes only, a preliminary discussion of public views of the project site and photosimulations illustrating pre- and post-development views are also provided. Public views of the project site are primarily limited to those within the Capistrano Valley downslope of the project site and include the key views described below and depicted on Exhibit 4.1-1, Key View Locations Map.

² City of San Juan Capistrano, *City of San Juan Capistrano General Plan, Community Design Element*, page 4, May 7, 2002.

³ California Department of Transportation, *List of Eligible and Officially Designated State Scenic Highways*, updated July 2019.



Source: VisionScape Imagery, May 2020.

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Project Site



Key View Number and Direction

1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
Key View Locations Map



- **Key View 1:** Key View 1 is located along Colinas Ridge Trail looking south towards the project site; refer to Exhibit 4.1-2, Key View 1 – Existing and Proposed Condition. As depicted on Exhibit 4.1-2, recreational users of the Colinas Ridge Trail would have views of the proposed development.
- **Key View 2:** Key View 2 is located at an unnamed neighborhood park east of Old Ranch Road looking northeast towards the project site; refer to Exhibit 4.1-3, Key View 2 – Existing and Proposed Condition. As depicted on Exhibit 4.1-3, recreational users of the neighborhood park would have partial views of the project site, although the majority of the proposed structures would be blocked by an existing adjacent residential estate and associated landscaping to the southwest.
- **Key View 3:** Key View 3 is located within the City of San Juan Capistrano along Del Obispo Street looking west towards the project site; refer to Exhibit 4.1-4, Key View 3 – Existing and Proposed Condition. As depicted on Exhibit 4.1-4, local roadway travelers (motorists, bicyclists, and pedestrians) along westbound Del Obispo Street would have views of the proposed development on the hillside adjacent to other existing residential estates within the Bear Brand Ranch Community.
- **Key View 4:** Key View 4 is located within the City of San Juan Capistrano at the San Juan Capistrano Community Center and Sports Park looking northwest towards the project site; refer to Exhibit 4.1-5, Key View 4 – Existing and Proposed Condition. As depicted on Exhibit 4.1-5, recreational users of the San Juan Capistrano Community Center and Sports Park would have partial distant views of the project site, although the majority of the project site is blocked by existing trees.
- **Key View 5:** Key View 5 is located within the City of San Juan Capistrano along Ortega Highway looking west towards the project site; refer to Exhibit 4.1-6, Key View 5 – Existing and Proposed Condition. As depicted on Exhibit 4.1-6, westbound Ortega Highway motorists and pedestrians would have distant views of the proposed development on the hillside adjacent to other existing residential estates within the Bear Brand Ranch Community.
- **Key View 6:** Key View 6 is located within the City of San Juan Capistrano along Alipaz Street looking northwest towards the project site; refer to Exhibit 4.1-7, Key View 6 – Existing and Proposed Condition. As depicted on Exhibit 4.1-7, local roadway travelers (motorists, bicyclists, and pedestrians) looking west while traveling along Alipaz Street would have distant views of the proposed development. However, it should be noted that the project site is not within the natural line of sight of travelers along Alipaz Street.
- **Key View 7:** Key View 7 is located within the City of San Juan Capistrano along the Interstate 5 (I-5) southbound off-ramp for Camino Capistrano looking northwest towards the project site; refer to Exhibit 4.1-8, Key View 7 – Existing and Proposed Condition. As depicted on Exhibit 4.1-8, southbound I-5 motorists would have distant views of the proposed development on the hillside adjacent to other existing residential estates within the Bear Brand Ranch Community.
- **Key View 8:** Key View 8 is located within the City of San Juan Capistrano along northbound I-5 looking northwest towards the project site; refer to Exhibit 4.1-9, Key View 8 – Existing and Proposed Condition. As depicted on Exhibit 4.1-9, northbound I-5 motorists would have distant views of the proposed development. However, it should be noted that the project site is not within the natural line of sight of motorists along I-5.



Existing View



Proposed View - From Colinas Ridge Trail looking South



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 1 – Existing and Proposed Condition

Exhibit 4.1-2



Existing View



Proposed View - From Park (West of Old Ranch Rd.) looking Northeast



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 2 – Existing and Proposed Condition

Exhibit 4.1-3



Existing View



Project Location

Proposed View - From Del Obispo St. looking West



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 3 – Existing and Proposed Condition

Exhibit 4.1-4



Existing View



Proposed View - From Sports Park looking Northwest



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 4 – Existing and Proposed Condition

Exhibit 4.1-5



Existing View



Proposed View - From Ortega Hwy. looking West



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 5 – Existing and Proposed Condition



Existing View



Proposed View - From Alipaz St. looking Northwest



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 6 – Existing and Proposed Condition

Exhibit 4.1-7



Existing View



Project Location

Proposed View - From 5-Fwy (Southbound) looking Northwest



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

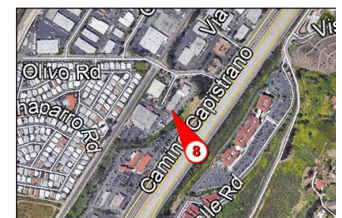
Key View 7 – Existing and Proposed Condition



Existing View



Proposed View - From 5-Fwy (Northbound) looking Northwest



Source: VisionScape Imagery, May 2020.

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1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Key View 8 – Existing and Proposed Condition

Exhibit 4.1-9



CONSTRUCTION

As discussed in Section 2.5, *Phasing/Construction*, construction activities are anticipated to occur over a duration of 36 months. During this time, short-term construction activities, construction equipment, and truck traffic would be visible to nearby recreational users, local roadway travelers, Ortega Highway motorists and pedestrians, and I-5 motorists. Intervening topography would screen residential and open space uses to the north from the majority of the project's proposed construction activities. However, project construction would be visible from public locations within the Capistrano Valley downslope of the project site. These construction-related visual impacts are considered to be temporary and would cease upon construction completion.

To reduce temporary impacts to visual character and quality, Standard Condition of Approval (SCA) AES-1 would require project construction materials, heavy duty equipment, and debris piles be clustered in designated staging areas. Compliance with SCA AES-1 would ensure the project's construction-related impacts to visual character/quality of the project site and its surrounding areas are less than significant.

OPERATIONS

As depicted on Exhibit 4.1-2 through Exhibit 4.1-9, the proposed project would be visible from public locations including nearby recreational uses, local roadways, and I-5. Municipal Code Section 9-1-31.1, *RS-1 Rural Residential District*, includes site development standards that aid in governing scenic quality and would reduce the potential for operational-related visual impacts to public views. Table 4.1-1, *Municipal Code Consistency Analysis Governing Scenic Quality*, provides a consistency analysis of the proposed project and the applicable development standards under Municipal Code Section 9-1-31.1, *RS-1 Rural Residential District*. Refer to Section 4.11, *Land Use and Planning*, for a discussion concerning the project's consistency with other applicable zoning requirements.



Table 4.1-1
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
Sec. 9-1-33.3. - Roof and wall projections. a) Roof projections. Notwithstanding the height standards of Section 9-1-33.4, chimneys, roof vents, finials, spires, and similar architectural features not containing usable space are permitted to extend up to three feet above the maximum structure height set forth in Table 3.2 preceding. b) Wall projections. The following architectural projections are permitted to encroach into the required setbacks specified in Table 3.2 preceding: 1. Roof overhangs, chimneys, awnings, canopies, and similar projections may encroach a maximum of two feet into any required setback provided such projections are no closer than three feet from any property line. 2. Cantilevered seating windows, ledges and similar projections, which are located a minimum of one foot above the floor and do not increase a building's usable floor area, may encroach a maximum of two feet into any required setback provided such projections are no closer than three feet from any property line. 3. Subject to approval of a minor adjustment, balconies, elevated decks, and exterior stairways may encroach a maximum of four feet into required front and rear setbacks provided such projections are no closer than three feet from any property line. Such projections shall not encroach into required side setbacks.	Consistent. Given the sloped nature of the project site, the heights of the main residence and guest house vary depending on which elevation is measured. Nevertheless, none of the roof projections associated with the main residence and guest house would exceed the 35-foot building height limit of the Rural Residential (RS-1) zone; refer to <u>Exhibit 2-8a, Building Elevation – North</u>, and <u>Exhibit 2-8c, Building Elevation – South</u>. The proposed roof projections would not conflict with Municipal Code Section 9-1-33.3 in this regard. Similarly, none of the proposed architectural wall projections (i.e., balconies, decks, and exterior stairways) associated with the main residence and guest house would encroach into the required setbacks specified in Municipal Code Table 3.2; refer to <u>Exhibit 2-4, First Floor Plan</u>, <u>Exhibit 2-5, Second Floor Plan</u>, and <u>Exhibit 2-7, Guest House and Lookout Tower Floor Plans</u>. The proposed wall projections would not conflict with Municipal Code Section 9-1-33.3 in this regard.
Sec. 9-1-33.4. - Measurement of building height. Unless specifically stated otherwise, for purposes of this code the maximum height of buildings and other structures shall be defined as the vertical distance from the ground to an imaginary plane above and parallel to the ground. For residential districts, this imaginary plane shall be located at a vertical distance of 35 feet from ground level, and the building shall not penetrate that plane. "Ground level" shall be defined by the director as the lower of the following alternatives (i.e. that which is the lowest level above sea level): 1. The finish grades at the exterior walls of an existing or proposed building; or 2. The existing grades on the site.	Consistent. Given the sloped nature of the project site, the heights of the main residence and guest house vary depending on which elevation is measured. Nevertheless, the main residence and guest house would not exceed the 35-foot building height limit of RS-1; refer to <u>Exhibit 2-8a</u> and <u>Exhibit 2-8c</u>. The proposed project would not conflict with Municipal Code Section 9-1-33.4.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
Sec. 9-1-33.5. - Measurement of setbacks. a) Measurement. "Setback" means the distance that a building or other structure or a parking lot or other facility must be located from a lot line, property line, or other specified boundary. Setbacks for residential development are specified in Table 3.2, except where different setbacks are provided for special situations in this and following sections. Setbacks are measured along a line drawn at a 90-degree angle to whichever of the following results in the greatest setback: 1. Front setbacks. The front lot line or the ultimate street right-of-way. 2. Rear setbacks. The rear lot line or the ultimate street right-of-way. 3. Side setbacks. The side lot line or the ultimate street right-of-way. b) Surface easements. Where a surface easement for recreation trail or vehicular access has been granted across any portion of a lot, the building setback shall be a minimum of five feet from the edge of that easement. Setbacks from utility access easements shall be zero.	Consistent. As described in <u>Table 4.11-2, RS-1 Development Standards Consistency Analysis</u>, the proposed project would comply with the minimum front yard, side yard, and rear yard setbacks identified for the RS-1 zone. The proposed project does not include a surface or utility easement. The proposed project would not conflict with Municipal Code Section 9-1-33.5.
Sec. 9-1-33.6. - Setbacks from slopes. The following setbacks apply for structures adjacent to slopes which are 2:1 or steeper and over ten feet in height unless a minor adjustment is approved, per Section 9-1-114, to allow encroachment into the setback: 1. All main buildings and all accessory structures over 12 feet in height shall be set back a minimum of ten feet from the tops and toes of such slopes. 2. Accessory structures 12 feet in height or less shall be: a. Set back a minimum of three feet from the tops and toes of such slopes; or b. Permitted on or cantilevered over such slopes if a minor adjustment is approved, provided the structure conforms to the accessory structure standards of section 9-1-35.3. Notwithstanding other provisions of this code regarding height measurement, height shall be measured via a plumb line from the top-most point of the structure to the finish grade directly below the top-most point.	Consistent. Based on the <i>Preliminary Geotechnical Investigation for New Single-Family Residence, 1 O'Hill Ridge, Bear Brand Ranch, Laguna Niguel, California</i> (Geotechnical Investigation), prepared by Geofirm, August 17, 2018, the main residence and guest house would be constructed on slopes of 2:1 or steeper. As described in <u>Table 4.11-2</u>, the proposed project would comply with the minimum setbacks identified for main buildings and accessory structures. The proposed project would not conflict with Municipal Code Section 9-1-33.6.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
Sec. 9-1-35.2. - Fences and walls. a) Definitions. For purposes of this section, “fence or “wall” means any type of fence, wall, retaining wall, sound attenuation wall, screen, windscreen, hedge or thick growth of shrubs or trees, or any combination of these. A building wall shall not be considered a fence or wall for the purposes of this section. The terms “fence” and “wall” are used interchangeably in this section to mean any or all of the preceding structures or vegetation. “Hedge” or “thick growth of shrubs or trees” means vegetation at least 42 inches high which creates a screen blocking at least 50 percent of the view through the vegetation measured over a horizontal distance of five feet or greater. b) Measurement of fence height. 1. Fence heights shall be measured from finish grade at the base of the fence to the top on that side which results in the greatest height, except as otherwise specified in this section. 2. Fences separated by 30 inches or more (as measured between their closest surfaces) shall be considered separate structures and their heights shall be measured independently. Fences less than 30 inches apart shall be considered one structure and fence height shall be measured from the base of the lower fence to the top of the higher fence. c) Fence height standards. The construction and installation of fences shall be in compliance with the following height and related standards: 1. Railings on top of retaining walls. Open railings, up to 48 inches high, placed on top of a retaining wall may extend beyond the permitted wall height limit for the purpose of pedestrian safety, with approval of the community development director. Approval shall only be granted in cases where pedestrian access is located adjacent to the wall and either the wall is existing and cannot be modified, or as a result of site constraints construction of the wall would result in the need for a railing which exceeds the wall height limit. This provision shall apply only to areas where fences are permitted over 42 inches in height.	Consistent. The project proposes walls greater than 42 inches in height within the front yard setback area and terraced, retaining walls up to 12 feet in height within the main building area and off-site. Walls up to 12 feet in height are allowed within the main building area, however, the project requires a Minor Adjustment to develop the over-height front yard setback and off-site walls. Based on the Municipal Code, fences higher than the maximum allowed heights may be permitted if a Minor Adjustment is approved by the City. In addition to the findings required for approval of the project’s Site Development Permit, the following findings are also required in conjunction with approval of a fence height increase: (1) the height and location of the fence as proposed would not result in or create a traffic hazard; and (2) the location, size, design, and other characteristics of the fence would not result in a material adverse effect on adjacent residents or their properties, including but not limited to, any views available to such residents prior to construction of the proposed “over-height” fence. The proposed retaining walls and fences would be located on or adjacent to the project site and thus, would not create traffic hazards on adjacent roadways. Additionally, given that the site naturally slopes downwards to the east, the retaining walls and fences are primarily located on the eastern portion of the main residence to counter the site’s downward slope and would not impact views from adjacent residential uses to the south and uphill to the west. With approval of the proposed Minor Adjustment, the proposed project would not conflict with Municipal Code Section 9-1-35.2. The project does not propose swimming pool fencing, sound attenuation walls, or fences adjacent to scenic highways. The project would not conflict with Municipal Code Section 9-1-35.2 in this regard.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
2. Architectural features. For all fences, architectural features, such as pilasters, finials, and similar features, may extend an additional six inches above the maximum fence height, provided such features do not comprise more than ten percent of the horizontal length of the fence. 3. Within side and rear setbacks. The maximum fence height shall be six feet within any required rear or side setback area, except that where a difference in grade exists between two properties, the following rules shall apply: a. Fence height shall be determined independently for each property. b. No fence adjacent to a property line shall exceed eight feet in height as measured from the property on which it is located. c. No fence adjacent to a property line shall exceed six feet in height as measured from any adjacent property or street. 4. Within front setbacks. a. Maximum fence height shall be 42 inches if located within the front setback. b. Where, because of the orientation of the lots, a property line fence separates a front yard on one lot from a rear yard on an adjacent lot, the maximum fence height shall be six feet within the front setback area, except as limited by paragraph (c)(6) of this section (required sight distances). c. Any portion of a building site where vehicular access is taken shall conform to the requirements of paragraph (c)(6) of this section (required sight distances). 5. Within main building area. In the area of a lot where a main building may be constructed, the maximum fence height shall be 12 feet. Higher fences may be permitted if a minor adjustment is approved per paragraph (d) of this section. 6. Required sight distances. In regulating fences, it is necessary to provide open "corner cutback" areas in order to preserve motorist sight distances. Therefore, notwithstanding other provisions of this section, maximum fence height shall be one foot within the triangular area formed by drawing a straight line as follows:	



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
a. Between two points located on and 15 feet distant from the point of intersection of two ultimate street right-of-way lines. b. Within five feet from the intersection of an ultimate street or alley right-of-way and the edge of a driveway or another alley right-of-way. 7. Swimming pool fencing. Fences enclosing swimming pools shall conform to the height requirements of this section and to the provisions of section 9-1-35.5 (Swimming pools and spas). 8. Sound attenuation walls. City or state-required sound attenuation walls bordering freeways or arterial highways may exceed six feet in height, if approved by the director. d) Increases in allowed height. Fences higher than the maximums set forth in this section may be permitted if a minor adjustment is approved by the director per Section 9-1-114. In addition to the findings required for approval of all site development permits, the following findings shall also be made in conjunction with approval of a fence height increase: 1. The height and location of the fence as proposed will not result in or create a traffic hazard; and 2. The location, size, design and other characteristics of the fence will not result in a material adverse effect on adjacent residents or their properties, including but not limited to any views available to such residents prior to construction of the proposed "over-height" fence. Any application for a fence height increase may be referred by the director to the planning commission for action if the director determines, on a case-by-case basis, that the public interest would be better served by such referral. e) Fences adjacent to scenic highways. Adjacent to a scenic highway (as identified in the general plan) and along Niguel Road between Crown Valley Parkway and Alicia Parkway, fences shall not be placed below the top of slopes which have a slope ratio of 2:1 or steeper and measure over ten feet in height.	



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis																
Sec. 9-1-35.4. - Garages, carports and driveways. a) Garage and carport placement. Garages and carports include attached or detached structures having direct access to a street or alley. Carports shall be permitted only upon approval of a minor adjustment per paragraph (b) of this section. Standards for the placement of garages and carports are set forth in Table 3.3. 1. Except as otherwise specified, detached garages and carports shall conform to the development standards for main buildings. 2. Garages and carports shall not be located within any corner cutback areas for fences as set forth in Section 9-1-35.2. Table 3.3: Garage/Carport Development Standards <table border="1"> <thead> <tr> <th>Development Standard</th><th>RS-1</th></tr> </thead> <tbody> <tr> <td>Maximum Structure Height (feet)</td><td>35</td></tr> <tr> <td>Minimum Front Yard Setback (feet)</td><td>20</td></tr> <tr> <td>Minimum Side Yard Setback (feet)</td><td>8</td></tr> <tr> <td>Minimum Rear Yard Setback (feet)</td><td>25</td></tr> <tr> <td>Minimum Driveway Length</td><td>20</td></tr> <tr> <td>Minimum Setback from Tops and Toes of Slopes 2:1 or Steeper and Over 10 feet (feet)</td><td>10</td></tr> <tr> <td>Minimum Driveway Widths and Maneuvering Areas</td><td>See Section 9-1-63</td></tr> </tbody> </table> 3. Upon approval of a minor adjustment, the minimum front building setback for a side-entry garage may be reduced to ten feet in all detached single-family residential districts except the RS-1 district. As shown in the illustration, such side entry garages shall provide a minimum of 20 feet from the garage opening to the sidewalk (or to the edge of street pavement if there is no sidewalk). No living space shall be permitted over such reduced-front setback garages.	Development Standard	RS-1	Maximum Structure Height (feet)	35	Minimum Front Yard Setback (feet)	20	Minimum Side Yard Setback (feet)	8	Minimum Rear Yard Setback (feet)	25	Minimum Driveway Length	20	Minimum Setback from Tops and Toes of Slopes 2:1 or Steeper and Over 10 feet (feet)	10	Minimum Driveway Widths and Maneuvering Areas	See Section 9-1-63	Consistent. The proposed project includes an attached 11-car garage that would be located within the basement level of the residence. No carports are proposed. The proposed garage would not have direct access to a street or alley and thus would not be subject to the standards for placement of garages under Municipal Code Section 9-1-35.4. The project does not include off-street parking facilities. Thus, the residential parking requirements identified in Municipal Code Section 9-1-63, <i>Residential Parking Requirements</i>, would not be applicable. The project would not conflict with the driveway requirements under Municipal Code Section 9-1-35.4 in this regard.
Development Standard	RS-1																
Maximum Structure Height (feet)	35																
Minimum Front Yard Setback (feet)	20																
Minimum Side Yard Setback (feet)	8																
Minimum Rear Yard Setback (feet)	25																
Minimum Driveway Length	20																
Minimum Setback from Tops and Toes of Slopes 2:1 or Steeper and Over 10 feet (feet)	10																
Minimum Driveway Widths and Maneuvering Areas	See Section 9-1-63																



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
4. When alleys, private streets or common driveways are provided specifically as vehicular access to garages and carports and when separate access and circulation systems are provided for pedestrians, guests and emergency vehicles, garages and carports may be placed up to a minimum of five feet from such alley, private street or common driveway. b) Carport standards. Carports shall be permitted only upon approval of a minor adjustment and shall conform to the following additional standards: 1. Carports shall be constructed of materials and colors comparable to those of the main dwelling and/or garage. 2. Carports shall be located on the side of garages and shall not be located in front of (in-line with) garages. 3. Carports shall not be designed for side-entry. c) Driveway standards. Residential driveways and maneuvering areas shall be provided in accordance with Section 9-1-63 (Residential parking requirements).	
Sec. 9-1-35.5. - Swimming pools and spas. a) Swimming pools. The provisions of this paragraph (a) shall apply to all swimming pools. Swimming pools are permitted as accessory uses in residential districts subject to the provisions of this paragraph. 1. Definition. "Swimming pool" means an artificial body of water containing or normally capable of containing water to a depth of 18 inches or more at any point, designed, constructed and used for swimming, dipping or immersion purposes by humans. This includes, but is not limited to, in-ground, above-ground, and on-ground pools, hot tubs, portable and non-portable spas, and fixed in-place wading pools. 2. Location. Pools shall be located at least three feet (measured from water's edge) from any side or rear property line. In no case shall pools be located where the fence height is restricted to less than six feet by the provisions of Section 9-1-35.2, within the panhandle portion of a panhandle lot, or on slopes which are 2:1 or steeper and over ten feet in height. Fencing and screening. All pools shall be fenced in accordance with the provisions of the City's building and safety code, state law and other applicable ordinances. All pool equipment shall be screened from view from the street.	Consistent. The proposed swimming pool would be located more than three feet from any side or rear property line and thus would not conflict with Municipal Code Section 9-1-35.5. As noted previously, the project would require slope stabilization measures based on existing topography. The stabilization measures in the proposed residential area consists of partial removal of unsuitable landslide materials and stabilization with a shear key and shear pins, as detailed in Appendix D, <i>Slope Stability Analysis</i>, of the Geotechnical Investigation. All pool equipment would be located adjacent to the proposed residence and screened from public views; refer to <u>Exhibit 4.1-2</u> through <u>Exhibit 4.1-8</u>. Thus, the project would not conflict with Municipal Code Section 9-1-35.5 in this regard.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
Sec. 9-1-35.8. - Guest houses. a) Purpose. This section provides standards and criteria for the establishment of guest houses within residential districts. b) Definition. For the purposes of this code, "guest house" means an attached or detached dwelling unit which has sanitary facilities, but no cooking facilities, and which is used primarily for sleeping purposes by members of the family occupying the main residence and their non-paying guests or domestic employees. c) Limitations. Only one guest house may be established on any lot in addition to the primary residence. d) Where permitted. A guest house may be constructed as an accessory use in the RS-1, RS-2, RS-3, and RS-4 districts subject to conformance with the standards of this section. e) Guest house standards. All guest houses shall conform to the following standards: 1. Guest houses shall conform to all applicable building code standards and all development and design standards of the zoning district in which they are located. In addition, the height of the guest house shall not exceed the height of the primary residence. 2. Guest houses shall be architecturally compatible with the primary residence. 3. The floor area of a guest house shall not exceed 640 square feet. 4. Guest houses may contain independent access and sanitation facilities. 5. Guest houses shall not contain cooking facilities separate from the primary residence. 6. A guest house shall be used only by the occupants of the primary residence, their non-paying guests, or domestic employees. The guest house shall not be rented or otherwise occupied separately from the primary residence. 7. A minimum of one additional enclosed or unenclosed off-street parking space shall be provided for the guest house (see Section 9-1-63 for residential parking space design standards). Tandem parking spaces shall not be credited toward meeting this requirement and no variance or other deviation shall be granted to allow substandard parking spaces or locations. 8. A deed restriction shall be required for recordation against the property to prohibit the use or conversion of the guest house to a rental unit or to a unit for sale.	Consistent. The project proposes a single two-story detached guest house would be located to the northeast of the main residence and consist of three individual suites. As shown on <u>Exhibit 2-7</u>, each suite would include a living room, bedroom, wet bar, walk-in closet, bathroom, and patio, deck, and/or balconies. No kitchens or cooking facilities are proposed. The project would be consistent with Municipal Code Section 9-1-35.8 in this regard. As depicted on <u>Exhibit 2-8a</u> through <u>Exhibit 2-8d</u>, the proposed guest house would be architecturally compatible with the main residence. The guest house would include the same exterior building colors and building materials proposed for the main residence. As described in <u>Section 2.4, Project Characteristics</u>, the exterior building colors would include a variety of neutral earth tones (beiges, browns, and clay colors), while the project's exterior building materials would include stone and plaster walls with rough sand texture; stained wood shutters, garage doors, and rafter tails; roman pan, mission, and red clay roof tiles; stone veneer decorative walls; precast stone surrounding arched openings, columns, entry pediments, wall caps, eaves, doors, and windows; metalized and matte black wrought iron window grilles, shutter hardware, exterior railings, and decorative elements; and copper gutters, downspouts, and collection boxes. The project would be consistent with Municipal Code Section 9-1-35.8 in this regard. The proposed guest house is approximately 2,937 square feet in size. Municipal Code Section 9-1-114.1(g), <i>Alternate Development Standards</i>, would accommodate the oversized guest house under the proposed Site Development Permit. As such, the project would be consistent with Municipal Code Section 9-1-35.8 in this regard. As concluded in <u>Table 4.11-2</u>, the project would satisfy the minimum parking space requirement for guest houses through its provision of an 11-car garage. The project would be consistent with Municipal Code Section 9-1-35.8 in this regard.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
Sec. 9-1-35.15. - Outdoor lighting. a) Purpose. This section is intended to provide standards for outdoor lighting which allows adequate lighting for public safety while minimizing the adverse effects of excessive lighting on neighbors and the community. b) Outdoor game courts. Any lighted outdoor recreation use shall be subject to the provisions of Section 9-1-35.14 for lighted game courts. c) Residential lighting standards. All properties zoned for residential use shall be subject to the outdoor lighting standards of this section. The regulations apply to both security and purely decorative lighting. Outdoor lighting which complies with these standards shall be permitted as an accessory use while deviation from the standards shall require approval of a site development permit. d) Intensity and design. The proposed lighting shall represent the minimum level of illumination necessary to meet the aesthetic and security needs of the property. Light sources, intensity of light, and color of light shall be designed and located to achieve security or decorative lighting goals without causing an adverse impact on neighboring properties. Light sources shall be designed, and located to minimize spillover of light or glare onto neighboring properties. e) Height. Building-mounted lights shall be installed below the eave line. Pole or fence-mounted lights shall be located no more than eight feet above grade, except in residential parking lots. f) Location. Lighting shall only be installed adjacent to buildings, walkways, driveways, or activity areas (decks, patios, spas and pools, and similar use areas) and focal landscape areas close to the residence or activity area. g) Residential parking lots. The lighting intensity within parking lots and adjacent areas shall conform to the standards of subarticle 9 (Community Design Guidelines); that is, lighting intensity shall be at least 1.0 footcandle at all points, but shall not exceed an average of 3.0 foot-candles over the entire parking lot. Overall height of light standards shall be no more than 22 feet above finish grade. h) Common area lighting. The director may require lighting plans for common open space or recreation areas in single-family districts and lighting plans for multi-family developments to include a photoanalysis demonstrating compliance with these lighting standards.	Consistent. The project does not propose outdoor game courts, pole or fence-mounted lights, residential parking lots, or common area lighting. As noted in Response 4.1(d), as part of the project's Site Development Permit, the City would verify the project complies with all applicable RS-1 development standards related to outdoor lighting to verify exterior lighting is designed and located to minimize spillover of light or glare onto neighboring properties. Thus, the project would be consistent with Municipal Code 9-1-35.15 in this regard.



Table 4.1-1 [cont'd]
Municipal Code Consistency Analysis Governing Scenic Quality

Relevant Section	Consistency Analysis
i) Holiday and decorative lighting. Lighting and decorations with lights which are related to a specific holiday period shall be permitted in residential districts. Decorative lighting not associated with a holiday period shall not be the type that flashes, blinks, moves, or otherwise draws attention. j) Enforcement. If the director determines through complaints received and/or site visits that any outdoor lighting may not be designed consistent with the provisions of this section and may cause an adverse impact on neighboring properties, the director may require a photoanalysis by a licensed engineer, to allow continued use of the lighting.	
Source: City of Laguna Niguel, <i>Laguna Niguel Municipal Code</i> , current through Ordinance No. 2020-204, enacted March 3, 2020.	

As indicated in Table 4.1-1, the proposed project would be consistent with applicable Municipal Code requirements that govern scenic quality. Further, the project would be subject to special site plan and design review as required by the City's Site Development Permit process. This regulatory procedure would enforce the City's regulations governing scenic quality for the project site and surrounding area to ensure the proposed development complies with all applicable RS-1 standards, including, but not limited to permitted uses, development standards and all supplemental regulations. As a result, implementation of the proposed project would not conflict with applicable zoning and other regulations governing scenic quality and is not anticipated to involve significant impacts to public views. Impacts would be less than significant.

Standard Conditions of Approval:

SCA AES-1 To minimize construction-related impacts to visual character or quality of the site and its surroundings for the surrounding public, the project contractor shall ensure that all materials, heavy-duty equipment, and debris piles are clustered in the project's designated construction staging area. Staging locations shall be approved by the City of Laguna Niguel Community Development Director or authorized agents acting within the scope of the particular duties delegated to them. Compliance with this standard condition of approval shall be subject to periodic field inspections.

Mitigation Measures: No mitigation measures are required.

d) **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

Less Than Significant Impact. There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (i.e., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Light introduction can be a nuisance to adjacent uses and diminish the view of the clear night sky. There are no existing lighting sources within the project boundaries; however, light and glare in the project vicinity are produced by street lighting, building illumination, and landscape lighting associated with surrounding residential uses.

CONSTRUCTION

Project construction could involve temporary light and glare impacts as a result of construction equipment and materials. However, based on the project's limited construction duration and scope of activities, these sources of glare



would not be substantial. In conformance with Municipal Code Section 6-6-7, *Exemptions from the Article*, no construction activities would be permitted between 8:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays or Federal holidays. Thus, construction-related impacts concerning light and glare would be less than significant.

OPERATIONS

Project implementation would increase lighting at the project site compared to existing conditions. The project would be required to comply with all exterior lighting requirements of Municipal Code 9-1-35.15, *Outdoor Lighting*, which requires exterior lighting to be designed and located to minimize spillover of light or glare onto neighboring properties. Conformance with Municipal Code Sections 9-1-35.15 would reduce the project's operational lighting impacts to less than significant.

Vehicle headlights entering and exiting the project's entrance could also result in impacts to light and glare. However, light and glare impacts as a result of vehicle headlights would be screened through existing and proposed landscaping along the project's entrance; refer to [Exhibit 2-10](#). As noted in [Section 4.17, *Transportation*](#), the project would generate approximately 24 average daily trips with most trips anticipated to occur during daylight hours. Given the minimal average daily trips generated primarily during daylight hours, vehicle headlights are not anticipated to result in a significant increase in lighting conditions in the immediate project vicinity.

Interior lighting associated with the project may be visible from surrounding uses. However, these lighting conditions would appear similar in character to those emitted from existing residential uses to the north, west, and south of the project site. As such, impacts would be less than significant in this regard.

The proposed project's exterior building materials would include stone and plaster walls with rough sand texture; stained wood shutters, garage doors, and rafter tails; roman pan, mission, and red clay roof tiles; stone veneer decorative walls; precast stone surrounding arched openings, columns, entry pediments, wall caps, eaves, doors, and windows; metalized and matte black wrought iron window grilles, shutter hardware, exterior railings, and decorative elements; and copper gutters, downspouts, and collection boxes. If not properly treated, these materials could cause increased daytime glare. As part of the project's Site Development Permit, the City would verify the project complies with all applicable RS-1 development standards related to light and glare. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.



4.2 AGRICULTURE AND FORESTRY RESOURCES

<i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</i>				
	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

No Impact. According to the California Department of Conservation, the project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.¹ No farmland exists within the site vicinity. Thus, no impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

¹ California Department of Conservation, *California Important Farmland Finder*, <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed February 24, 2020.



b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is zoned Rural Residential District (RS-1) and is not covered under an existing Williamson Act contract.² Thus, project implementation would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project site is zoned RS-1 and is not occupied or used for forest land, timberland, or timberland production. Further, project implementation would not result in the rezoning of forest land, timberland, or timberland zoned timberland production. No impacts would occur.

Mitigation Measures: No mitigation measures are required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Refer to Response 4.2(c). No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

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

No Impact. Refer to Responses 4.2(a) through 4.2(d). No impacts would occur.

Mitigation Measures: No mitigation measures are required.

² California Department of Conservation, *Agricultural Preserves 2004, Williamson Act Parcels – Orange County*, 2004.



4.3 AIR QUALITY

<i>Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c. Expose sensitive receptors to substantial pollutant concentrations?			✓	
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the SCAQMD's 2016 *Air Quality Management Plan for the South Coast Air Basin* (2016 AQMP) means that a project is consistent with the goals, objectives, and assumptions set forth in the 2016 AQMP that are designed to achieve Federal and State air quality standards. According to the SCAQMD *CEQA Air Quality Handbook*, in order to determine consistency with the 2016 AQMP, two main criteria must be addressed:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Response 4.3(c), localized concentrations of carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter less than 10 microns in diameter (PM₁₀), and particulate matter less than 2.5 microns in diameter (PM_{2.5}) would be less than significant during project construction and operations. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations.¹

b) Would the project cause or contribute to new air quality violations?

As discussed in Response 4.3(b), the proposed project would result in emissions that are below the SCAQMD thresholds. Therefore, the project would not have the potential to cause or affect a violation of the ambient air quality standards.

¹ Because reactive organic gases (ROGs) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.



- c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to localized concentrations during project construction and operations; refer to Responses 4.3(b) and 4.3(c). As such, the project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and Southern California Association of Governments (SCAG) air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

- a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the *City of Laguna Nigel General Plan* (General Plan), SCAG's *Growth Management Chapter of the Regional Comprehensive Plan* (RCP), and SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016-2040 RTP/SCS). The 2016-2040 RTP/SCS also provides socioeconomic forecast projections of regional population growth. The project site is designated Residential Detached by the General Plan. The General Plan defines the Residential Detached designation as areas characterized by one single-family dwelling constructed on each individual subdivided lot or legal building site. As the proposed project involves development of one detached single-family residence and accessory uses, the project is an allowed use under the site's existing Residential Detached land use designation. Thus, the proposed project would be consistent with the types, intensity, and patterns of land use envisioned for the site in the 2016-2040 RTP/SCS. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed project would be consistent with the projections included in the 2016 AQMP.

- b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would result in less than significant air quality impacts. Compliance with all feasible emission reduction measures identified by the SCAQMD would be required as identified in Response 4.3(b) and 4.3(c). As such, the proposed project meets this 2016 AQMP consistency criterion.

- c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

As discussed in Section 4.8, Greenhouse Gas Emissions, the project would be consistent with the actions and strategies of the 2016-2040 RTP/SCS. The project would be located within 0.5-mile of multiple bus stops and less than one mile from retail and services. As a result, the project would provide residents the opportunity to use alternative forms of transportation (i.e. walking, bicycling, public transportation) and therefore reduce criteria pollutant emissions. In addition, as discussed above, the project would be consistent with the site's Residential Detached land use designation. As such, the proposed project meets this AQMP consistency criterion.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the proposed project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is considered consistent with the 2016 AQMP.

Mitigation Measures: No mitigation measures are required.



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

Less Than Significant Impact.

Criteria Pollutants

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide.

Ozone (O₃). O₃ occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" O₃ layer) extends upward from about 10 to 30 miles and protects life on Earth from the sun's harmful ultraviolet rays. "Bad" O₃ is a photochemical pollutant, and needs volatile organic compounds (VOCs), NO_x, and sunlight to form; therefore, VOCs and NO_x are O₃ precursors. To reduce O₃ concentrations, it is necessary to control the emissions of these O₃ precursors. Significant O₃ formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High O₃ concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While O₃ in the upper atmosphere (stratosphere) protects the Earth from harmful ultraviolet radiation, high concentrations of ground-level O₃ (in the troposphere) can adversely affect the human respiratory system and other tissues. O₃ is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of O₃. Short-term exposure (lasting for a few hours) to O₃ at elevated levels can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Nitrogen Dioxide (NO₂). NO_x are a family of highly reactive gases that are a primary precursor to the formation of ground-level O₃ and react in the atmosphere to form acid rain. NO₂ (often used interchangeably with NO_x) is a reddish-brown gas that can cause breathing difficulties at elevated levels. Peak readings of NO₂ occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations). NO₂ can irritate and damage the lungs and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO₂ concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM₁₀). PM₁₀ refers to suspended particulate matter, which is smaller than 10 microns or ten one-millionths of a meter. PM₁₀ arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM₁₀ scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the California Air Resources Board (CARB) adopted amendments to the Statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).



Fine Particulate Matter (PM_{2.5}). Due to recent increased concerns over health impacts related to PM_{2.5}, both State and Federal PM_{2.5} standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new PM_{2.5} standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States Supreme Court reversed this decision and upheld the EPA's new standards. On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal PM_{2.5} standards. On June 20, 2002, CARB adopted amendments for Statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the Statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide (SO₂). SO₂ is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with SO_x. Exposure of a few minutes to low levels of SO₂ can result in airway constriction in some asthmatics.

Volatile Organic Compounds (VOC). VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O₃ to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.

Reactive Organic Gases (ROG). Similar to VOC, ROG are also precursors in forming O₃ and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_x react in the presence of sunlight. ROG are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC interchangeably.

Short-Term Construction Emissions

The project involves construction activities associated with grading, building construction, and architectural coating applications. The project would be constructed over approximately 36 months. Grading activities include 41,127 cubic yards of cut and 6,520 cubic yards of fill, resulting in approximately 34,607 cubic yards of export. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model version 2016.3.2 (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Refer to [Appendix A, Air Quality/GHG/Energy Analysis](#), for the CalEEMod outputs and results. [Table 4.3-1, Construction Related Emissions](#), presents the anticipated daily short-term construction emissions.



Table 4.3-1
Construction Related Emissions

Emissions Source	Pollutant (pounds/day) ^{1,2}					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 1	2.75	35.55	18.90	0.06	4.65	2.69
Year 2	2.59	33.20	20.38	0.06	4.53	2.59
Year 3	2.19	19.19	19.95	0.05	1.87	1.06
Year 4	5.22	18.45	21.86	0.05	2.00	1.08
Maximum Daily Emissions	5.22	35.55	21.86	0.06	4.65	2.69
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes:

1. Emissions were calculated using CalEEMod version 2016.3.2, as recommended by the SCAQMD. Although the construction duration would be a total 36 months, the 36-month duration would occur within the span of four calendar years.
2. The reduction/credits for construction emissions are based on adjustments to CalEEMod and are required by the SCAQMD Rules. The adjustments applied in CalEEMod includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Refer to [Appendix A](#) for assumptions used in this analysis.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading, excavation and construction is expected to be short-term and would cease upon project completion. Most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM₁₀ generated as a part of fugitive dust emissions. PM₁₀ poses a serious health hazard alone or in combination with other pollutants. PM_{2.5} is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. PM_{2.5} is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_x and SO_x combining with ammonia. PM_{2.5} components from material in the Earth's crust, such as dust, are also present, with the amount varying in different locations.

In accordance with Standard Condition of Approval (SCA) AQ-1, the project would implement all required SCAQMD dust control techniques (i.e., daily watering), limitations on construction hours, and adhere to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM₁₀ and PM_{2.5} concentrations. As depicted in [Table 4.3-1](#), total PM₁₀ and PM_{2.5} emissions would not exceed the SCAQMD thresholds during construction. Thus, construction air quality impacts with regard to particulate matter would be less than significant.



Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, employee commutes to the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in [Table 4.3-1](#), construction equipment and worker vehicle exhaust emissions would not exceed the established SCAQMD threshold for all criteria pollutants. Therefore, impacts in this regard would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O₃ precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving and architectural coating have been quantified with the CalEEMod model. As required by SCAQMD Regulation XI, Rule 1113 – *Architectural Coating*, all architectural coatings for the proposed structures would comply with specifications on painting practices as well as regulation on the ROG content of paint.² ROG emissions associated with the proposed project would be less than significant; refer to [Table 4.3-1](#).

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Long-Term Operational Emissions

Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and emissions from stationary area and energy sources. Emissions associated with each of these sources were calculated and are discussed below.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, SO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern (NO_x and ROG react with sunlight to form O₃ [photochemical smog], and wind currents readily transport SO_x, PM₁₀, and PM_{2.5}). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

² South Coast Air Quality Management District, *Rule 1113. Architectural Coatings*, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>, accessed March 5, 2020.



Project-generated vehicle emissions have been estimated using CalEEMod. Based on the Institute of Transportation Engineers (ITE) *Trip Generation Rate Manual*, 10th Edition, trip generation rate of 9.52 trips per day for Single-Family Detached Housing (ITE Code 210), project development would generate approximately 10 average daily trips. However, given the nature of the proposed project as a large residential estate with a main residence and guest house, a more conservative trip generation rate of 12 trips per day and assumption of two dwelling units (main residence and guest house) is utilized. Based on these assumptions, the project would generate approximately 24 average daily trips. Table 4.3-2, Long-Term Air Emissions, presents the project's anticipated operational emissions.

Table 4.3-2
Long-Term Air Emissions

Emissions Source	Pollutant (pounds/day) ^{1,2}					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Project Summer Emissions						
Area	0.70	0.03	0.18	0.00	0.00	0.00
Energy	0.00	0.01	0.00	0.00	0.00	0.00
Mobile	0.03	0.11	0.46	0.00	0.18	0.05
Total Summer Emissions³	0.73	0.15	0.64	0.00	0.18	0.05
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Project Winter Emissions						
Area	0.70	0.03	0.18	0.00	0.00	0.00
Energy	0.00	0.01	0.00	0.00	0.00	0.00
Mobile	0.03	0.12	0.44	0.00	0.18	0.05
Total Winter Emissions³	0.73	0.16	0.62	0.00	0.18	0.05
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Notes:

1. Emissions were calculated using CalEEMod version 2016.3.2, as recommended by the SCAQMD.
2. The reduction/credits for operational emissions are based on adjustments to CalEEMod and are required by 2019 Title 24 Standards. Additionally, the project would be ten percent more efficient than 2019 Title 24 Standards. The emissions results in this table represent the adjusted emissions shown in Appendix A.
3. The numbers may be slightly off due to rounding.

Refer to Appendix A for assumptions used in this analysis.

Area Source Emissions

Area source emissions would be generated due to an increased demand for natural gas associated with the proposed project; refer to Table 4.3-2. The primary use of natural gas producing area source emissions by the project would be for consumer products, architectural coating, and landscaping.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas usage associated with the proposed project; refer to Table 4.3-2. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.



Total Operational Emissions

As shown in Table 4.3-2 the total operational emissions for both summer and winter would not exceed established SCAQMD thresholds. Therefore, impacts in this regard would be less than significant.

Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, O₃ precursors, VOCs and NO_x, affect air quality on a regional scale. Health effects related to O₃ are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

Further, as noted in the Brief of Amicus Curiae by the SCAQMD for the *Sierra Club vs. County of Fresno*, dated April 6, 2015, the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Furthermore, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD) for the *Sierra Club vs. County of Fresno*, dated April 13, 2015, SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from O₃, as an example is correlated with the increases in ambient level of O₃ in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient O₃ levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's 2012 *Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_x and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O₃ levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify O₃-related health impacts caused by NO_x or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would have a less than significant impact for air quality health impacts.

Cumulative Construction Impacts

With respect to the proposed project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to Federal Clean Air Act mandates. As such, pursuant to SCA AQ-1, the proposed project would comply with SCAQMD Rule 403 requirements and implement all feasible SCAQMD rules to reduce construction air emissions to the extent feasible. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with adopted 2016 AQMP emissions control measures. Pursuant to SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

As discussed above, the project's short-term construction emissions would be below the SCAQMD thresholds and would result in a less than significant impact. Thus, it can be reasonably inferred that the project's construction emissions would not contribute to a cumulatively considerable air quality impact for nonattainment criteria pollutants in the Basin. Thus, a less than significant impact would occur in this regard.



Cumulative Operational Impacts

As discussed, the proposed project would not result in long-term air quality impacts as emissions would not exceed SCAQMD-adopted operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the proposed project would be less than significant.

Standard Conditions of Approval:

SCA AQ-1 During construction activities, the project Applicant shall implement all required South Coast Air Quality Management District (SCAQMD) dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.) to reduce construction air emissions to the extent feasible.

Mitigation Measures: No mitigation measures are required.

c) ***Expose sensitive receptors to substantial pollutant concentrations?***

Less Than Significant Impact.

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting CO, NO_x, PM_{2.5}, and/or PM₁₀. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The project site is located within Source Receptor Area (SRA) 21, Capistrano Valley. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction and operational impacts (stationary sources only).

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The closest sensitive receptors are residences adjoining the project site to the south and west.

Non-Residential Receptors

Commercial and industrial uses (i.e., non-residential receptors) are not included in the definition of sensitive receptor because employees and patrons do not typically remain on-site for a full 24 hours and are usually on-site for eight hours or less. The LST Methodology explicitly states that "*LSTs based on shorter averaging periods, such as the NO₂ and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to*



assume that a worker at these sites could be present for periods of one to eight hours.”³ Commercial and industrial uses are not present within 500 meters of the project site. Therefore, non-residential receptor LST thresholds are not applicable to this project.

Construction LST

The SCAQMD's guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. Based on default information provided by CalEEMod, the project is anticipated to disturb up to 66 acres during the grading phase.⁴ The grading phase would take approximately 132 days in total to complete. As such, the project would actively disturb an average of approximately 0.5-acre per day (66 acres divided by 132 days). Therefore, the LST thresholds for one acre was utilized for the construction LST analysis. As the nearest sensitive receptors adjoin the project site, the lowest available LST values for 25 meters were used.

Table 4.3-3, *Localized Emissions Significance*, shows the localized construction-related emissions for NO_x, CO, PM₁₀, and PM_{2.5} compared to the LSTs for SRA 21. It is noted that the localized emissions presented in Table 4.3-3 are less than those in Table 4.3-1 because localized emissions include only on-site emissions (e.g., from construction equipment and fugitive dust) and do not include off-site emissions (e.g., from hauling activities). As shown in Table 4.3-3, the project's localized construction emissions would not exceed the LSTs for SRA 21. Therefore, localized significance impacts from project-related construction activities would be less than significant.

Table 4.3-3
Localized Emissions Significance

Source	Pollutant (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Construction On-Site Emissions^{1,2,3,4,5}				
Year 1	26.39	16.05	3.71	2.42
Year 2	24.74	16.58	3.60	2.32
Year 3	15.62	16.36	0.81	0.76
Year 4	14.38	16.24	0.70	0.66
Maximum Daily Emissions	26.39	16.58	3.71	2.42
<i>Localized Significance Threshold⁶</i>	91	696	4	3
Thresholds Exceeded?	No	No	No	No

³ South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, revised July 2008.

⁴ The disturbed acreage during the grading phase is based on the cumulative distance traversed by the grading equipment. In order to properly grade the project site, multiple passes with grading equipment would be required. As a result, the cumulative distance traversed by the grading equipment would equate to 66 acres.



Table 4.3-3 [cont'd]
Localized Emissions Significance

Source	Pollutant (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}

Notes:

1. The grading phase emissions would present the worst-case scenario for NO_x, CO, PM₁₀, and PM_{2.5} in Year 1.
2. The grading phase emissions would present the worst-case scenario for NO_x, PM₁₀, and PM_{2.5} and the building construction phase emissions would present the worst-case scenario for CO in Year 2.
3. The building construction phase emissions would present the worst-case scenario for NO_x, CO, PM₁₀, and PM_{2.5} in Year 3.
4. The building construction phase emissions would present the worst-case scenario for NO_x, CO, PM₁₀, and PM_{2.5} in Year 4.
5. The reduction/credits for construction emissions applied in CalEEMod are based on the application of dust control techniques as required by SCAQMD Rule 403. The dust control techniques include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads three times daily; and limit speeds on unpaved roads to 15 miles per hour.
6. The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_x, CO, PM₁₀, and PM_{2.5}. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 0.5 acre; therefore the 1-acre threshold was used) and Source Receptor Area 21.

Refer to Appendix A for assumptions used in this analysis.

Operational LST

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses. Thus, due to the lack of such emissions, no long-term LST analysis is needed. Operational LST impacts would be less than significant in this regard.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (e.g., adversely affecting residents, school children, hospital patients, and the elderly).

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area under State standards. There has been a decline in CO emissions even though vehicle miles traveled (VMT) on U.S. urban and rural roads have increased; estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions.⁵ Three major control programs have contributed to the reduced per-vehicle CO emissions, including exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

According to the SCAQMD *CEQA Air Quality Handbook*, a potential CO hotspot may occur at any location where the background CO concentration already exceeds 9.0 parts per million (ppm), which is the 8-hour California ambient air quality standard. As previously discussed, the site is located in SRA 21. Communities within SRAs are expected to have similar climatology and ambient air pollutant concentrations. The monitoring station representative of SRA 21 is the Mission Viejo station, which is located approximately 8.7 miles northeast of the site. The CO concentration at Mission Viejo station was measured at 0.963 ppm in 2019. Given that the background CO concentration does not

⁵ U.S. Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed March 5, 2020.



currently exceed 9.0 ppm, a CO hotspot would not occur at the project site. Therefore, CO hotspot impacts would be less than significant in this regard.

Air Quality Health Impacts

As evaluated above, the project's air emissions would not exceed the SCAQMD's LST thresholds, and CO hotspots would not occur as a result of the proposed project. Therefore, the project would not exceed the most stringent applicable Federal or State ambient air quality standards for emissions of CO, NO_x, PM₁₀, or PM_{2.5}. It should be noted that the ambient air quality standards are developed and represent levels at which the most susceptible persons (children and the elderly) are protected. In other words, the ambient air quality standards are purposefully set in a stringent manner to protect children, elderly, and those with existing respiratory problems. Thus, an air quality health impact would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less Than Significant Impact. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by requiring equipment to be shut off when not in use or limiting idling time to no more than five minutes. Compliance with these existing regulations would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also be required to comply with the SCAQMD Regulation XI, *Rule 1113 – Architectural Coating*, which would minimize odor impacts from ROG emissions during architectural coating. Any odor impacts to existing adjacent land uses would be short-term and negligible. As such, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.



4.4 BIOLOGICAL RESOURCES

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

This section is primarily based upon the following technical studies:

- *Biological Resources Report, 1 O'Hill Ridge, Garg Residence, Laguna Niguel, Orange County, California* (Biological Resources Report), prepared by LSA Associates, Inc., October 2017;
- *Coastal California Gnatcatcher Protocol Survey Results: March 17, to April 30, 2018, 1 O'Hill Ridge Property in Laguna Niguel, Orange County, California* (CAGN Protocol Survey), prepared by LSA Associates, Inc., June 26, 2018;
- *Technical Assistance Related to the 9.42-Acre Property at 1 O'Hill Ridge – Garg Residence in Laguna Niguel, Orange County, California* (LSA Technical Assistance Letter), prepared by LSA Associates, Inc., September 4, 2018; and
- *Garg Residence Project, 1 O'Hill Ridge, Laguna Niguel, Orange County, California Letter* (USFWS Letter), prepared by the U.S. Fish and Wildlife Service, February 21, 2020.

These studies are included in Appendix B, Biological Resources Reports.



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

Less Than Significant Impact With Mitigation Incorporated. A Biological Resources Report was prepared for the project and included field surveys to evaluate existing biological conditions on and surrounding the project site in 2016 and 2017. In addition to the field surveys, a literature review was conducted, which consisted of a query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) for the San Juan Capistrano, San Clemente, Dana Point, Laguna Beach, Canada Gobernadora, Santiago Peak, El Toro, and Tustin, California U.S. Geological Survey 7.5-minute quadrangles for reported locations of listed and special-status plant and wildlife species as well as special-status vegetation communities. The California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants and U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation online database supplied information regarding the distribution and habitats of special-status species in the project vicinity. Current aerial photographs of the project area and maps of USFWS-designated critical habitat were also reviewed. The habitat assessment evaluated the ability of the plant communities found on-site to provide suitable habitat for relevant special-status plant and wildlife species.

Plant Communities

According to the Biological Resources Report, the study area is comprised of coastal sage scrub (CSS; 5.13 acres), disturbed CSS (0.57 acre), nonnative grassland (0.90 acre), ruderal (1.91 acres), ornamental (0.63 acre), oak trees (0.09 acre), and disturbed habitat (0.43 acre), as described below; refer to Exhibit 4.4-1, Plant Communities.

Coastal Sage Scrub

CSS is found on the steep south-facing slopes of the eastern portion of the site. California sagebrush (*Artemisia californica*) is the dominant species and coyote bush (*Baccharis pilularis*) is the co-dominant species. Other species in this plant community include California bush sunflower (*Encelia californica*) and deerweed (*Acmispon glaber*).

Disturbed Coastal Sage Scrub

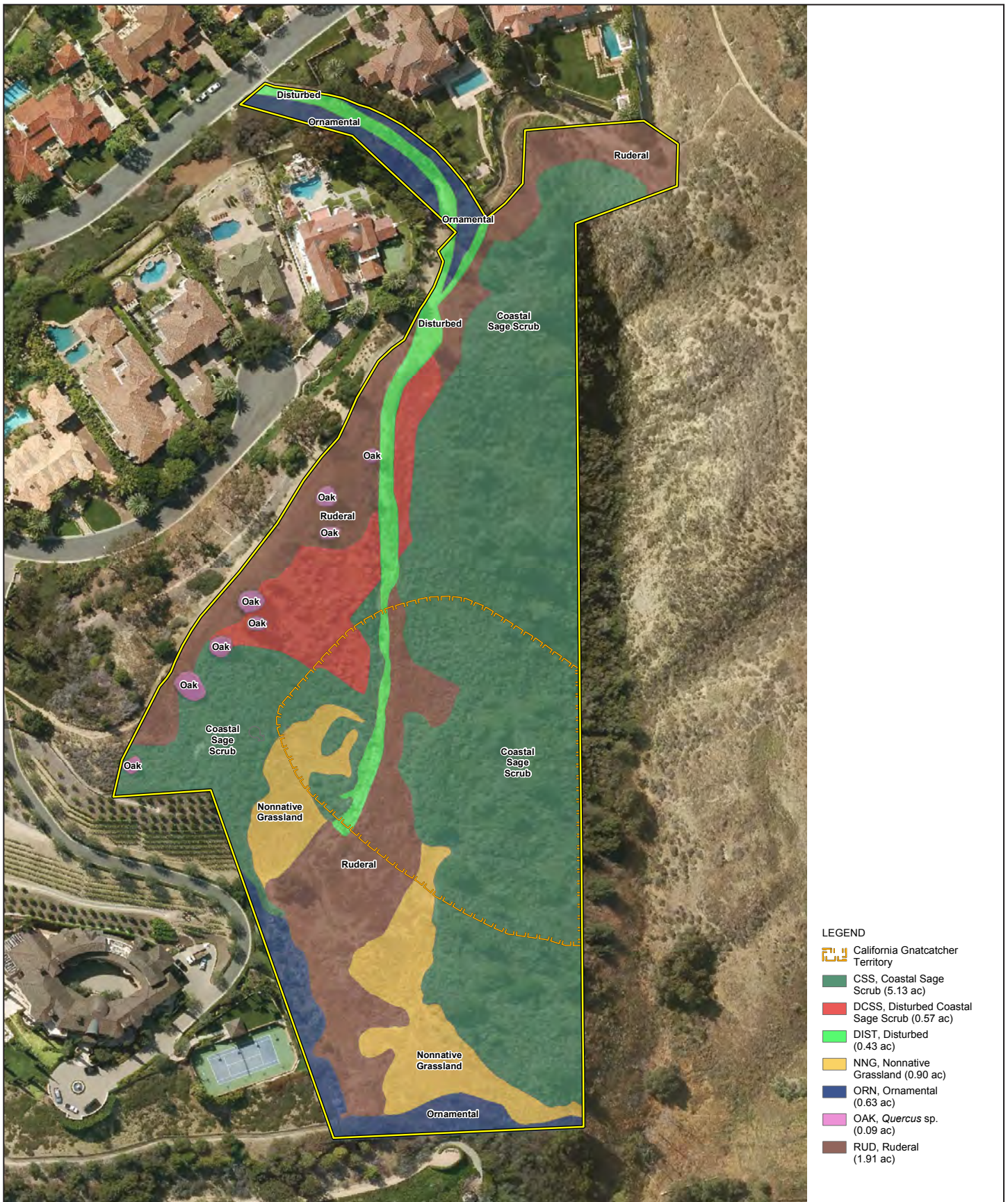
Disturbed CSS is primarily found in the central portion of the site, generally in proximity to the disturbed areas and adjacent to those areas occupied with California sagebrush and sagebrush scrub. Species observed on-site in this plant community include California sagebrush, California bush sunflower, coyote bush, orange bush monkeyflower (*Mimulus aurantiacus*), goldenbush (*Isocoma menziesii*), telegraph weed (*Heterotheca grandiflora*), horsetweed (*Conyza canadensis*), and wild cucumber (*Marah macrocarpus*). This lower quality CSS is also mixed with weedy nonnative species (e.g., black mustard [*Brassica nigra*]).

Nonnative Grassland

Nonnative grassland consists of early successional grassland dominated by pioneering grasses and herbaceous plants that readily colonize disturbed ground. Dominant genera in these areas include *Bromus* and *Avena*.

Ruderal

Ruderal vegetation is indicative of disturbed areas and is dominated by weedy introduced species. Vegetation in the northern and western portions of the site as well as in the central and southern portions of the site where development is anticipated to occur falls under this classification. Species observed on-site include, but are not limited to, black mustard, pampas grass (*Cortaderia* sp.), fennel (*Foeniculum vulgare*), tree tobacco (*Nicotiana glauca*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*).



Source: Source: LSA Associates, 2017.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Plant Communities

Exhibit 4.4-1



Ornamental

Ornamental plant material located in the study area is limited to the southern, southwestern, and northern edges of the site in areas adjacent to existing residential development. Observed species in this plant community include eucalyptus (*Eucalyptus* sp.), acacia (*Acacia* sp.), and Peruvian pepper (*Schinus molle*).

Oak Trees

A few scattered native oak trees (*Quercus* sp.) were present, interspersed along the western edge of the site.

Disturbed

The disturbed area on-site comprises a dirt access road from O'Hill Ridge and a small amount of vegetation dominated by nonnative weedy species, including black mustard, fennel, artichoke thistle (*Cynara cardunculus*), and redstem filaree (*Erodium cicutarium*).

Special-Status Species

Eighteen Federal and/or State-listed threatened or endangered species were identified as occurring in the site vicinity. However, potential habitat on-site was identified for only the following three threatened and/or endangered species:

- Laguna Beach dudleya (*Dudleya stolonifera*): low potential;
- Big-leaved crownbeard (*Verbesina dissita*): low potential; and
- Coastal California gnatcatcher (CAGN; *Poliophtila californica californica*): present.

No threatened or endangered plant species were observed during the field surveys. As listed above, two threatened or endangered plant species (Laguna Beach dudleya and big-leaved crownbeard) have a low potential for occurrence on-site. However, the only known populations of Laguna Beach dudleya and big-leaved crownbeard in the project vicinity are found in Laguna Beach, primarily on north-facing cliffs associated with sandstone or gravelly soils. Neither exhaustive nor focused surveys for such species were conducted during the field surveys. However, due to the clay and clay loam soils that occupy the project site, it is highly unlikely that either species would grow on-site. Therefore, focused surveys for these species are not warranted.

Coastal California Gnatcatcher

One CAGN was audibly detected in CSS habitat in the northeastern and western portion of the site. At least one pair of CAGN is known to occupy the site and was observed during the field survey in 2016. This pair also used adjacent off-site habitat to the northeast. No other threatened or endangered wildlife species were observed during the surveys.

To further evaluate the presence of CAGN on-site, six focused protocol surveys were conducted between March 17, 2018 and April 30, 2018. According to the CAGN Protocol Survey, one pair of CAGN and one additional male were observed on-site. CAGN were observed foraging throughout the middle portion of the project site in areas mapped as CSS, disturbed CSS, nonnative grassland, and ruderal vegetation. CAGN nesting was also observed about 250 feet east of the project site.

LSA consulted with the USFWS to identify potential project modifications and mitigation measures to reduce impacts to CAGN and associated habitat. As detailed in the LSA Technical Assistance Letter and USFWS Letter, development of the proposed project would impact 3.95 acres of gnatcatcher foraging habitat, including 2.15 acres of CSS, 0.53 acre of non-native grassland, and 1.27 acres of ruderal vegetation to construct the proposed residence and associated fuel modification zone per Orange County Fire Authority (OCFA) requirements. In addition, the project could result in



disturbance to nesting CAGN as a result of construction activities and could lead to degradation of adjacent undisturbed habitat as a result of re-colonization of graded areas with invasive plant species.

Based on the consultation with USFWS, Mitigation Measures BIO-1 through BIO-9 are required to avoid and minimize project impacts to CAGN and its habitat. The project applicant would be required to create, enhance, and/or preserve 5.66 acres of CSS on-site to support CAGN foraging in accordance with a USFWS-approved Vegetation Enhancement Plan per Mitigation Measures BIO-1 and BIO-2. The proposed fuel modification zone is required to be planted with local native shrub species approved for use by the OCFA and regularly maintained (Mitigation Measure BIO-3). The preserved CSS is required to be recorded under a USFWS-approved Conservation Site Restrictive Covenant and a revised Bear Brand Ranch Association landscape easement per Mitigation Measure BIO-4. Additionally, Mitigation Measures BIO-5 through BIO-9 require vegetation removal to occur between September 1 and February 14 (outside of CAGN nesting season); installation of highly visible barriers around all CSS habitat outside of the proposed grading limits; implementation of a Worker Environmental Awareness Program for all construction personnel; and pre-construction and construction monitoring. Implementation of Mitigation Measures BIO-1 through BIO-9 would reduce project impacts to CAGN and associated habitat to less than significant levels.

Special-Interest Species

Special-interest species have limited population distribution in Southern California, and development is further reducing their ranges and numbers. These species have no official State or Federal protection status but merit consideration under CEQA. A total of 81 non-listed special-interest species were recorded in the literature as occurring in the vicinity of the study area. One species, Cooper's hawk (*Accipiter cooperii*), was observed during the field survey in 2016; no additional special-interest species were observed during the subsequent surveys. Because much of the project site is in a disturbed condition and is surrounded by residential development, impacts to the special-interest species are not considered significant.

Conclusion

Overall, project implementation would impact CAGN and associated habitat. However, implementation of Mitigation Measures BIO-1 through BIO-9, as required by USFWS, would reduce such impacts to less than significant levels.

Mitigation Measures:

- BIO-1 The project applicant shall create/enhance 2.15 acres of coastal sage scrub (0.76 acre within the grading limits and 1.39 acres outside the grading limits) and preserve an additional 3.51 acres of coastal sage scrub on-site for a total of 5.66 acres of created, enhanced, and/or preserved coastal sage scrub to support coastal California gnatcatcher (*Poliophtila californica californica*) foraging outside of the project's fuel modification zone; refer to Exhibit 4.4-2, *Created, Enhanced, and Preserved Coastal Sage Scrub*.
- BIO-2 The 2.15 acres of coastal sage scrub creation/enhancement (2.05 acres creation and 0.10 acre of enhancement) required under Mitigation Measure BIO-1 shall occur prior to project construction activities that require fuel modification (e.g., framing). The creation/enhancement activities shall be conducted consistent with a Vegetation Enhancement Plan submitted to the U.S. Fish and Wildlife Service for review and approval before creation/enhancement is initiated. The Vegetation Enhancement Plan shall include methods of site preparation and planting, a plant palette, and annual monitoring and reporting in perpetuity.
- BIO-3 The proposed residence shall be surrounded by a 2.55-acre fuel modification zone, composed of 1.12 acres of hardscape (i.e., pools, fountains, pathways, and planters) and 1.43 acres of local native shrub species approved by the Orange County Fire Authority; refer to Exhibit 4.4-3, *Fuel Modification Zone*. The composition, spacing, and required maintenance within the fuel modification zone shall be included in the Vegetation Enhancement Plan (per Mitigation Measure BIO-2). Vegetation maintenance shall be conducted within the fuel modification zone as follows:



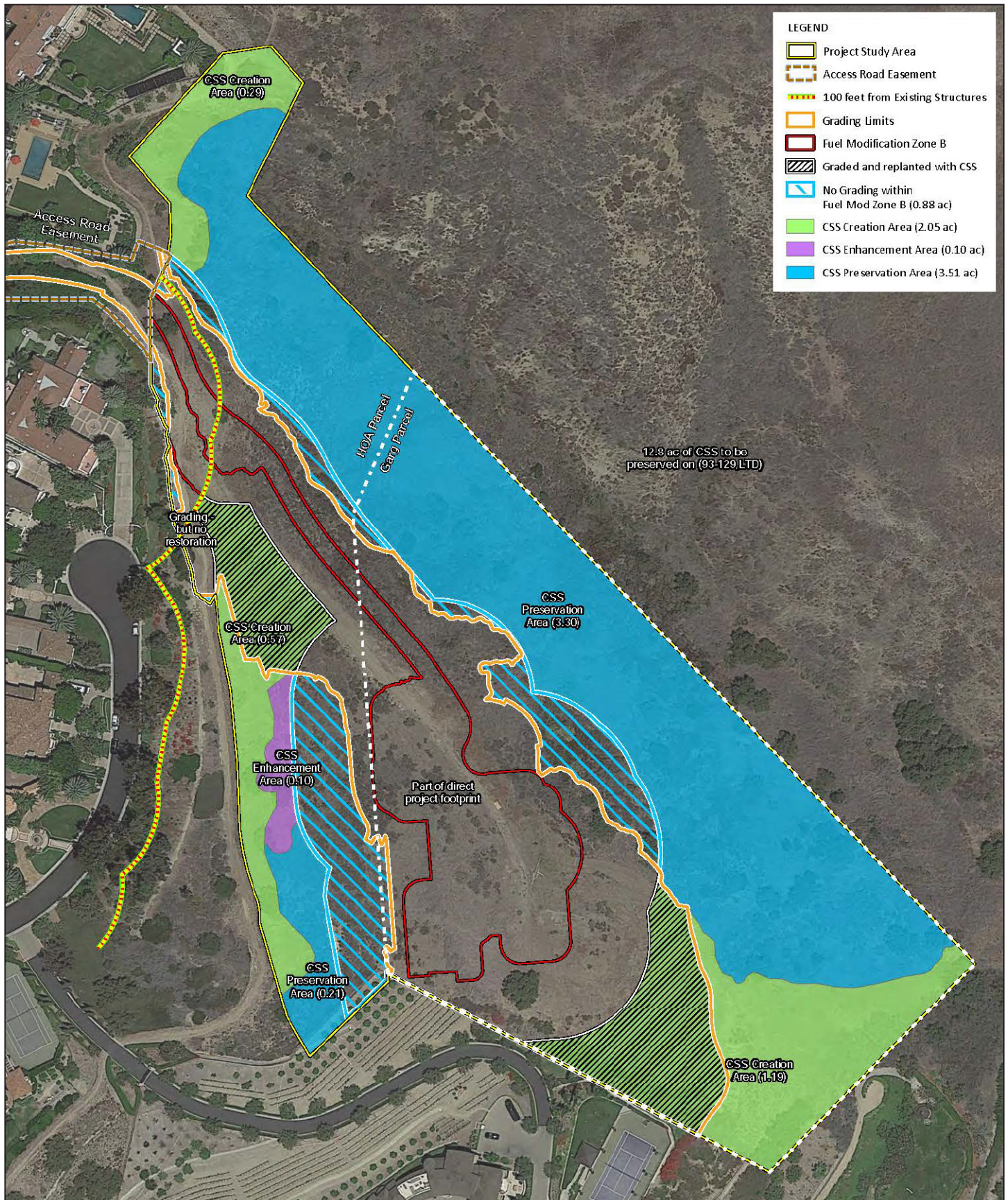
- a. Supplemental planting with approved native plants shall be conducted by the property owner as necessary to maintain initial plant densities;
- b. The fuel modification zone shall be planted with vegetation associated with coastal California gnatcatcher (CAGN; *Poliophtila californica californica*) habitat (i.e., coastal sage scrub species) as detailed in the Vegetation Enhancement Plan approved by the U.S. Fish and Wildlife Service per Mitigation Measure BIO-2. Planted areas within the fuel modification zone shall be created using xeriscaping principles to match surrounding coastal sage scrub habitat water requirements to ensure that excess water does not run off into surrounding habitats; and
- c. Maintenance of the fuel modification zone shall be conducted between September 1 and February 14, outside of CAGN breeding season.

BIO-4 The project applicant shall preserve a total of 5.66 acres of on-site coastal sage scrub outside of the proposed fuel modification zone in perpetuity as depicted in Exhibit 4.4-4, Preserved Coastal Sage Scrub. A Conservation Site Restrictive Covenant, applicable to 4.30 acres of coastal sage scrub areas (including 0.71 acre of native shrubs in the fuel modification zone) within the Garg Parcel shall be recorded that runs with the land and with the U.S. Fish and Wildlife Service (USFWS) as a third-party beneficiary. An additional 2.79 acres of coastal sage scrub (including 0.72 acre of native shrubs in the fuel modification zone) shall be protected within the existing Bear Brand Ranch Association landscape easement. The landscape easement shall be revised to include the anticipated location and extent of coastal sage scrub that is to be maintained in the easement and shall include the USFWS as a third-party beneficiary to the easement. Both the Conservation Site Restrictive Covenant and revised Bear Brand Ranch Association landscape easement shall specify the anticipated maintenance within the fuel modification zone (per the USFWS-approved Vegetation Enhancement Plan prepared under Mitigation Measure BIO-2) and coordination with the USFWS should the fuel modification zone require changes by the Orange County Fire Authority.

An endowment with a USFWS-approved third-party endowment holder shall be established to provide sufficient funding to conduct an annual inspection of the 7.09 acres of coastal sage scrub proposed for preservation and to prepare a brief annual monitoring report for the USFWS. The inspection is to ensure that coastal sage scrub in the preserved open space is being maintained over time. The inspection shall be conducted by a USFWS-approved biologist familiar with the life history and ecology of the coastal California gnatcatcher (CAGN; *Poliophtila californica californica*). The estimated long-term endowment amount is \$46,404. The final endowment amount shall reflect increases in the California Consumer Price Index since the initial cost estimation was completed. Any extra funds generated by the endowment fund shall be used only to improve habitat quality within the 7.09 acres on-site; refer to Exhibit 4.4-4.

Prior to the initiation of vegetation removal within the grading limits, the project applicant shall complete the following actions:

- a. Record a final USFWS-approved Conservation Site Restrictive Covenant over 4.30 acres of coastal sage scrub;
- b. Record a USFWS-approved revised Bear Brand Ranch Association landscape easement that identifies the location of 2.79 acres of coastal sage scrub that shall be maintained for CAGN; and
- c. Deposit the final endowment amount with a USFWS-approved endowment holder.



Source: Source: LSA Associates, 2019.

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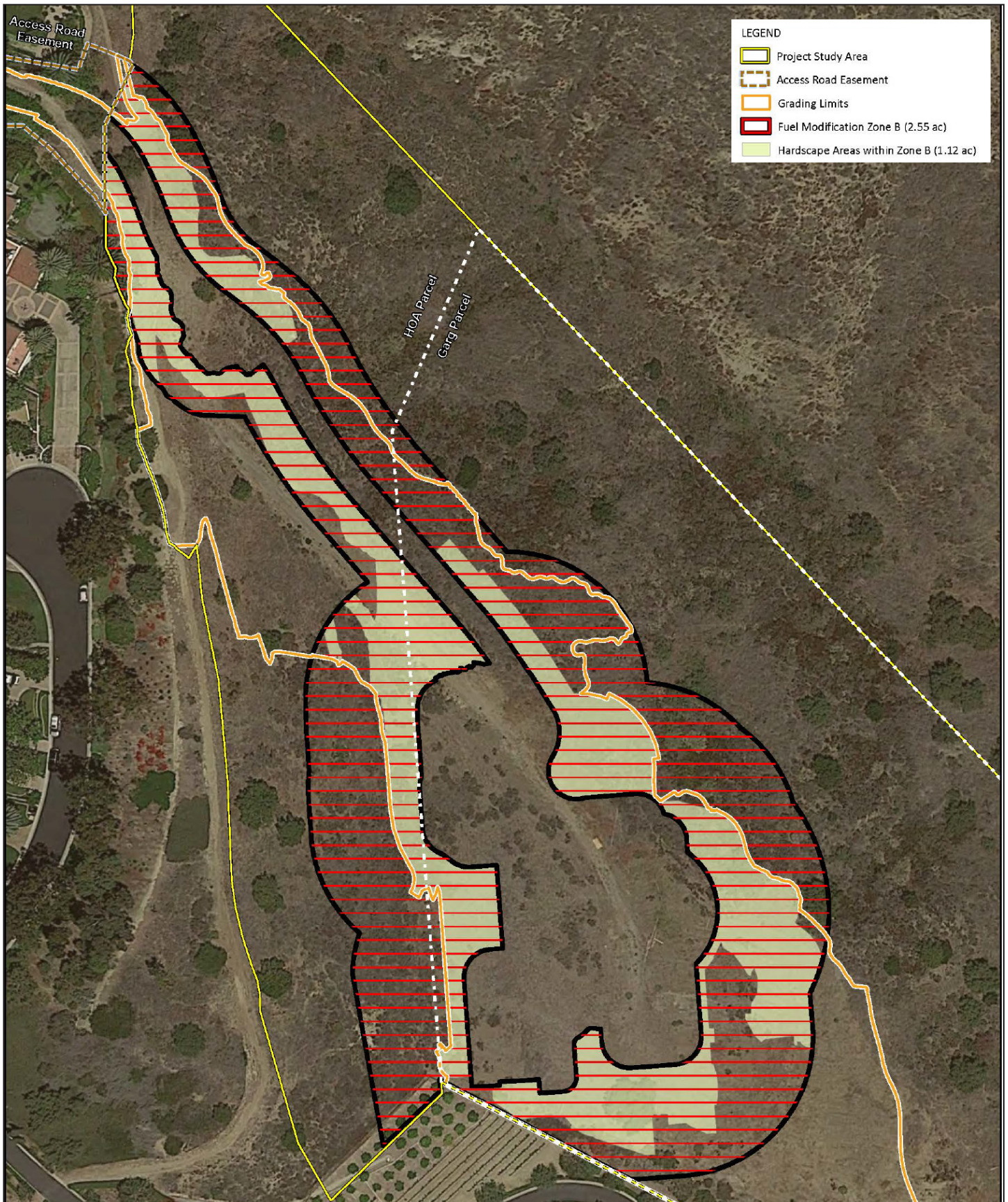


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1 O'HILL RIDGE – GARG RESIDENCE PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Created, Enhanced, and Preserved Coastal Sage Scrub

Exhibit 4.4-2



Source: Source: LSA Associates, 2019.

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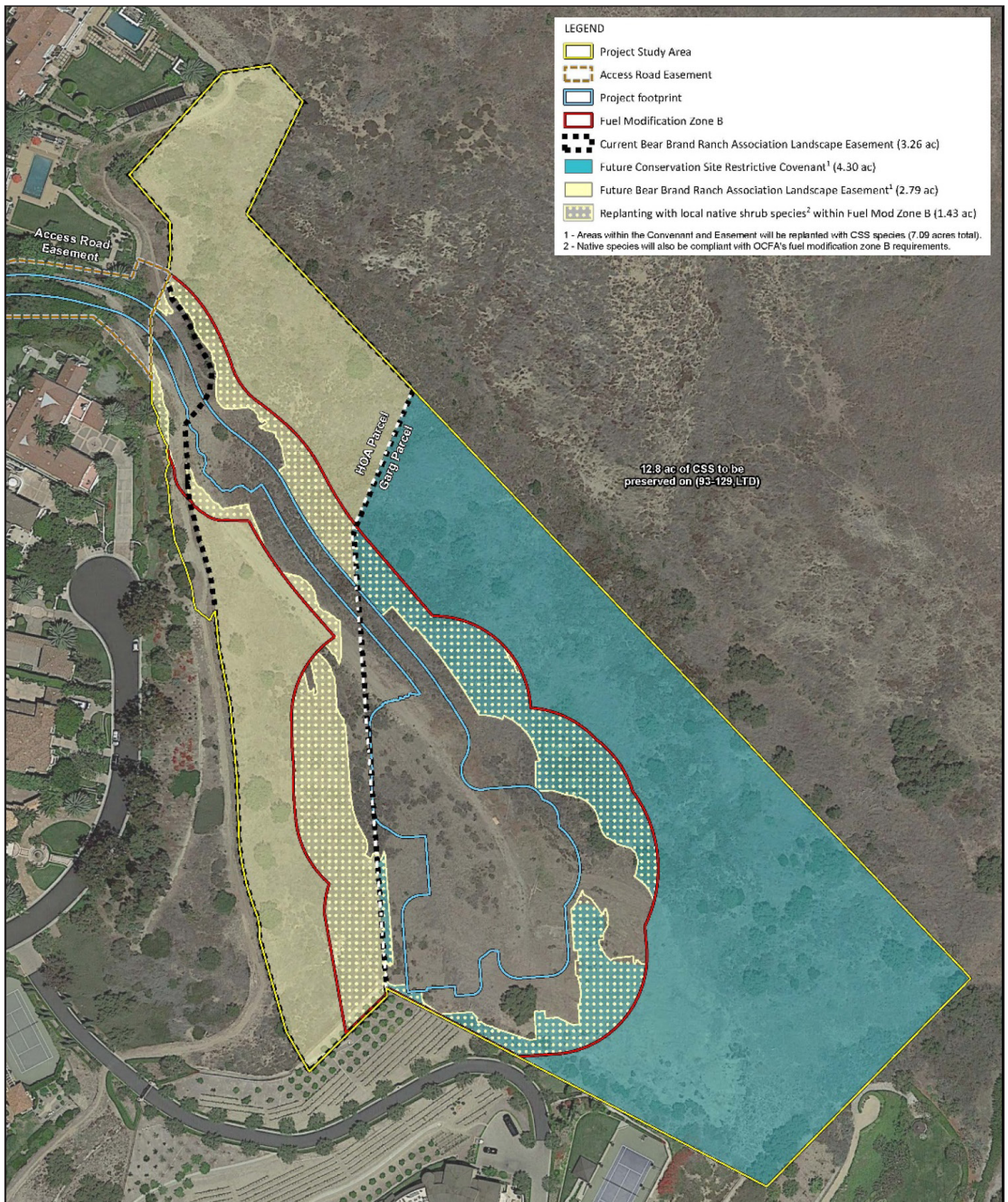


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Fuel Modification Zone

Exhibit 4.4-3



Source: Source: LSA Associates, 2019.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Preserved Coastal Sage Scrub

Exhibit 4.4-4



- BIO-5 Vegetation removal by construction personnel shall take place between September 1 and February 14 (outside of coastal California gnatcatcher [*Poliophtila californica californica*] breeding season), no more than one year prior to the initiation of construction activities, including site preparation, grading, excavation, and building construction.
- BIO-6 Prior to construction activities, the construction contractor shall install highly visible barriers (e.g., orange snow fencing) around all areas of coastal sage scrub habitat to be avoided outside of the grading limits to designate Environmentally Sensitive Areas (ESAs) to be preserved. No grading or fill activity of any type is permitted within these ESAs. In addition, no construction activities, materials, structures, incidental storage equipment, or other equipment is allowed within the ESAs. All construction equipment shall be operated in a manner to prevent accidental damage to nearby ESAs. Silt fence barriers shall be installed at the ESA boundaries to prevent accidental deposition of cut or fill material in areas where coastal sage scrub vegetation is adjacent to planned grading activities.
- BIO-7 Prior to construction activities, a qualified biologist familiar with the life history and ecology of the coastal California gnatcatcher (CAGN; *Poliophtila californica californica*), shall be retained to provide a Worker Environmental Awareness Program (WEAP) for all personnel working on-site during construction. The WEAP shall include: (a) a description of CAGN and its habitat on the project site, (b) construction limits, and (c) the measures that shall be implemented by construction personnel in conjunction with construction activities (i.e., Mitigation Measures BIO-5 and BIO-6). A copy of the WEAP shall be provided to the City of Laguna Niguel Community Development Department.
- BIO-8 Prior to vegetation-disturbing activities, a qualified biologist familiar with the life history and ecology of the coastal California gnatcatcher (CAGN; *Poliophtila californica californica*) shall be retained by the project applicant to conduct a survey to locate CAGN within 500 feet of the outer extent of projected disturbance activities. The locations of any such species shall be clearly marked and identified on the construction/grading plans. A monitoring biologist approved by the U.S. Fish and Wildlife Service (USFWS) shall be on-site during any vegetation or ground-disturbing activities. The USFWS shall be advised at least seven calendar days prior to the clearing of any habitat occupied by CAGN to allow the USFWS to consult with the monitoring biologist, if desired.
- BIO-9 During construction activities, a qualified biologist approved by the U.S. Fish and Wildlife Service (USFWS) shall conduct weekly inspections in areas adjacent to Environmentally Sensitive Areas (ESA) boundaries, identified by Mitigation Measure BIO-6, to ensure that vegetation preservation and all mitigation measures are properly followed. Particular attention shall be given to monitoring coastal California gnatcatcher (CAGN; *Poliophtila californica californica*) in the area, with the goal of locating active nests. Should any active CAGN nests be found within the 500-foot buffer per Mitigation Measure BIO-8, the USFWS-approved biologist shall consult with the USFWS to prevent construction noise levels from exceeding 60 A-weighted decibels (dBA) and to prevent the abandonment of an active nest. In collaboration with the USFWS, the qualified biologist shall have full authority to stop or modify any and all construction activities judged to be potentially disruptive to nesting CAGN.
- b) ***Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?***

Less Than Significant Impact With Mitigation Incorporated. As shown on Exhibit 4.4-1, the vegetation on the steep lower slopes of the eastern portion of the site and the upper slopes of the central portion of the site is dominated by CSS. CSS habitat falls under what is considered to be a sensitive natural community. As analyzed in Response 4.4(a) and detailed in the USFWS Letter, development of the proposed project would directly impact 2.15 acres of CSS to construct the proposed residence and associated fuel modification zone per OCFA requirements. Nevertheless, implementation of Mitigation Measures BIO-1 through BIO-4 and BIO-6 would ensure project impacts to CSS are



reduced to less than significant levels. The project applicant would be required to create, enhance, and/or preserve 5.66 acres of CSS on-site in accordance with a USFWS-approved Vegetation Enhancement Plan per Mitigation Measures BIO-1 and BIO-2. The proposed fuel modification zone is required to be planted with local native shrub species (e.g., CSS species) approved by the OCFA and regularly maintained (Mitigation Measure BIO-3). The preserved CSS is required to be recorded under a USFWS-approved Conservation Site Restrictive Covenant and a revised Bear Brand Ranch Association landscape easement per Mitigation Measure BIO-4, and Mitigation Measure BIO-6 would require the construction contractor to install highly visible barriers (e.g., orange snow fencing) around all areas of CSS habitat to be avoided outside of the grading limits and designated as ESAs to be preserved. As such, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measures BIO-1 through BIO-4 and BIO-6.

- c) ***Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

No Impact. According to the Biological Resources Report, potential jurisdictional waters of the United States, including jurisdictional wetlands, are not present on-site due to a lack of an ordinary high water mark or nexus to other waters regulated by the United States Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. Therefore, project development would not adversely impact State or Federally protected wetlands. No impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- d) ***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

Less Than Significant Impact. Wildlife movement includes seasonal migration along migrational corridors, as well as daily movement for foraging. Migrational corridors may include corridors for unobstructed movement of deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and roosting and feeding sites for raptors and shorebirds. In some cases, noncontiguous patchworks of similar habitat types may act as corridors for some bird species by providing a “stepping-stone” function between areas composed of similar habitat types some distance apart from one another.

The project site is surrounded by existing residential development and roadways that reduce the likelihood that large mammals (e.g., mule deer) use the project area. Development of the project may impede the occasional movement of mammals in the area but would not have a significant effect on wildlife corridors. Mitigation required to reduce impacts to CSS habitat on-site (Mitigation Measures BIO-1 through BIO-4 and BIO-6) would ensure the site fulfills the same function as a wildlife corridor as it does under existing conditions. Therefore, project development is not anticipated to have a significant effect on wildlife movement in the project area.

Several existing trees on-site, including blue elderberry (*Sambucus nigra*) and Peruvian pepper may provide suitable nesting habitat for nesting birds and raptors protected under the Migratory Bird Treaty Act (MBTA). The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. The Vegetation Enhancement Plan required under Mitigation Measure BIO-2 includes a conservation measure to conduct a pre-construction nesting bird clearance survey within three days prior to commencement of vegetation removal to determine the presence/ absence, location, and status of any active nests on or adjacent to the project site. If the nesting bird clearance survey indicates the presence of nesting birds, construction activities are required to stay outside of a buffer around the active nest to be determined by the qualified biologist to ensure that any nesting birds are protected pursuant to the MBTA. As such, the project's potential impacts in this regard would be less than significant.



Mitigation Measures: No mitigation measures are required.

- e) ***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

No Impact. The City does not have any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Thus, project implementation would not conflict with any local policies or ordinances protecting biological resources. No impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- f) ***Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

Less Than Significant Impact With Mitigation Incorporated. The project site is in an area classified as “Existing Use” under the *County of Orange Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan* (NCCP/HCP). Existing Use Areas are comprised of areas with important populations of Identified Species, including CAGN, but which are geographically removed from the Reserve System. “Take” under the NCCP/HCP Implementation Agreement is defined as Incidental Take pursuant to the Federal Endangered Species Act and includes harm, harassment, modification of habitat, and any other activity prohibited or otherwise limited. Take in Existing Use Areas is not authorized. Within the jurisdiction of agencies that are signatory to the NCCP/HCP, project proponents would simply have to pay a mitigation fee for development impacts outside the Reserve System; however, the mitigation fee option does not automatically apply in Existing Use Areas. Per the NCCP/HCP Implementation Agreement, the mitigation fee option is not available for Take by non-participating landowners on lands located within Existing Use Areas unless (1) located within a signatory local government jurisdiction and (2) specifically authorized by the USFWS and/or the CDFW.

Because the City is not currently a signatory to the NCCP/HCP, the project site does not meet either of the two requirements to be automatically eligible for the mitigation fee option for project impacts on CAGN and its associated habitat on-site. As stated above, the applicant has consulted with USFWS to mitigate such impacts; refer to Mitigation Measures BIO-1 through BIO-9. Implementation of such measures would ensure project impacts are adequately mitigated to ensure compliance with the provisions of the NCCP/HCP. Thus, impacts would be less than significant in this regard.

Mitigation Measures: Refer to Mitigation Measures BIO-1 through BIO-9.



4.5 CULTURAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?				✓
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		✓		
c. Disturb any human remains, including those interred outside of dedicated cemeteries?			✓	

This section is primarily based upon the following technical studies:

- *Validity of the July 2007 Cultural Resources Assessment for Site Development Permit SP 07-01P (1 O'Hill Ridge – Curtone Residence) Located in the City of Laguna Niguel, Orange County, California*, prepared by LSA Associates, Inc., December 7, 2009; and
- *Cultural Resources Assessment Site Development Permit 07-01P (1 O'Hill Ridge-Curtone Residence) City of Laguna Niguel, Orange County California* (Cultural Resources Assessment) prepared by LSA Associates, Inc., July 2007.

These studies are included in Appendix C, Cultural Resources Assessment.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?

No Impact. The Cultural Resources Assessment included a field survey conducted in 2007 and use of a 2006 records search conducted for an adjacent parcel. The 2006 records search of the California Historical Resources Inventory System (CHRIS) completed at the South Central Coast Information Center (SCCIC) was conducted to identify previously recorded cultural resources and previously conducted cultural resources studies within a 0.5-mile radius of the adjacent parcel. Sources of the record search include the National Register of Historic Places (NRHP), California Register of Historical Places (CRHP), California Historical Landmarks, California Points of Historical Interest, and various local historical registers. The project site is within the area examined for the 2006 records search. As no activity (construction or archaeological) has occurred on-site since the 2006 records search, the results of that research were utilized in the Cultural Resources Assessment.

The records search identified ten previously recorded cultural resource studies conducted within 0.5-mile radius of the adjacent parcel. Of these, two previous surveys examined the entire project site, and one survey examined a small portion of the site. It is noted that the entire project site was last examined in 1986. The record search also identified four previously recorded archaeological sites within a 0.5-mile radius of the adjacent parcel, none of which are located within the proposed project site. The nearest previously recorded resource (CA-ORA-493) is located approximately 500 feet to the north of the project site. This site was originally recorded in 1974 and described as a scatter of chipping waste exposed on the eastern slope of a knoll summit and containing one small basalt core, one chert core, seven chert flakes, three quartzite flakes, and one white chert flake. The site was determined ineligible for listing on either the NRHP or CRHP, and would not qualify as a unique archaeological resource; refer to Appendix C. It should also be noted that a records search was conducted in 2014 for a separate project, also inclusive of the project site, which



similarly did not identify any new previously recorded cultural resources or previously conducted cultural resources studies.¹

Further, no cultural resources were identified during the 2007 field survey. Most of the project site consists of moderate to steep slopes where intact cultural resources or significant archaeological deposits would not be anticipated. In addition, on-site soils consist of Bosanko series clays that developed by the weathering of underlying bedrock and were in place prior to human occupation of the area. As such, any cultural material should be on or near the ground surface, and the likelihood of previously intact subsurface cultural deposits to be present within the project site is very low. Due to the lack of identified cultural resources within the project site, project implementation would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant Impact With Mitigation Incorporated. As discussed in Response 4.5(a) above and detailed in the Cultural Resources Assessment, no previously record cultural resources were identified within the project site during the records search or field survey, and the likelihood of previously intact subsurface cultural deposits to be present within the project site is considered to be very low. Proposed earthwork for the project would involve approximately 41,127 cubic yards of cut and approximately 6,520 cubic yards of fill. Thus, although a low likelihood, project construction has the potential to uncover previously undiscovered archaeological resources. As such, Mitigation Measure CUL-1 requires archaeological and Native American monitoring during all ground-disturbing activities. If, during initial ground disturbance, the monitors determine that the ground disturbing activities have low or no potential to impact cultural resources, the qualified archaeologist may recommend that monitoring may be reduced or eliminated. If cultural resources are encountered during ground disturbing activities, work within the immediate area must halt and the find must be evaluated for local and/or State significance. With implementation of Mitigation Measure CUL-1, the project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines, and impacts would be reduced to less than significant levels.

Mitigation Measures:

CUL-1 A qualified archaeologist, defined as an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology, and qualified Native American monitor shall be retained to monitor all initial ground disturbing activities associated with the project (i.e., grubbing, weed abatement, grading, and excavation). The monitors shall complete daily monitoring logs with a description of the daily activities, including construction activities, locations, soil, and any cultural materials identified. In addition, the monitors are required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the California Environmental Quality Act, California Public Resources Code Division 13, Section 21083.2 (a) through (k).

If, during initial ground disturbance, the monitors determine that the ground disturbing activities have low or no potential to impact cultural resources, and/or the monitors determine that ground disturbances would occur within previously disturbed and non-native soils, the qualified archaeologist may recommend that monitoring may be reduced or eliminated. This decision will be made in consultation with the Native American monitor and the City of Laguna Niguel. If cultural resources are encountered during ground disturbing activities, work within the immediate area must halt and the find must be evaluated for local and/or State significance.

¹ Cogstone Resource Management, *California Historical Resources Information Center Records Search at the South Central Coast Information Center*, April 2, 2014.



c) *Disturb any human remains, including those interred outside of dedicated cemeteries?*

Less Than Significant Impact. Due to the level of disturbance in the site vicinity, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during earth removal or ground-disturbing activities. Nonetheless, if human remains are found, those remains would require proper treatment in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5 through 7055 describe the general provisions for human remains. Specifically, State Health and Safety Code Section 7050.5 requires if any human remains are accidentally discovered during excavation of a site, the County Coroner shall be notified of the find immediately, and 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. As required by State law, if the remains are determined to be Native American, the County Coroner shall 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 and shall have the opportunity to offer recommendations for the disposition of the remains. Following compliance with the aforementioned regulations, impacts related to the disturbance of human remains would be less than significant.

Mitigation Measures: No mitigation measures are required.



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4.6 ENERGY

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			✓	
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			✓	

- a) ***Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

Less Than Significant Impact.

Regulatory Framework

California Building Energy Efficiency Standards

The 2019 California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as “Title 24,” became effective on January 1, 2020. In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Under 2019 Title 24 standards, residential buildings will use about 53 percent less energy (mainly due to solar photovoltaic panels and lighting upgrades) when compared to those constructed under 2016 Title 24 standards. The 2019 Title 24 standards require installation of energy efficient windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

California Green Building Standards

The 2019 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as CALGreen, went into effect on January 1, 2020. CALGreen is the first-in-the-nation mandatory green buildings standards code. The California Building Standards Commission developed CALGreen in an effort to meet the State’s landmark initiative Assembly Bill (AB) 32 goals, which established a comprehensive program of cost-effective reductions of greenhouse gas (GHG) emissions to 1990 levels by 2020. CALGreen was developed to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, and healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the environmental directives of the administration. CALGreen requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g. lighting, heating/ventilation and air conditioning [HVAC], and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicles charging infrastructure. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.

Project-Related Sources of Energy Consumption

This analysis focuses on three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development and for project construction. The analysis of operational electricity/natural gas usage is based on the California Emissions Estimator Model version 2016.3.2



(CalEEMod) modeling results for the project, which quantifies energy use for occupancy. The project's estimated electricity/natural gas consumption is based primarily on CalEEMod's default settings for Orange County, and consumption factors provided by San Diego Gas and Electric (SDGE) and the Southern California Gas Company (SoCalGas) (the electricity and natural gas providers for the City of Laguna Niguel and the project site). The results of the CalEEMod modeling are included in Appendix A, Air Quality/GHG/Energy Analysis. The amount of operational fuel consumption was estimated using the California Air Resources Board's Emissions Factor 2017 (EMFAC2017) computer program which provides projections for typical daily fuel usage in Orange County, and the project's annual vehicle miles traveled (VMT) outputs from CalEEMod. The estimated construction fuel consumption is based on the project's construction equipment list timing/phasing, and hours of duration for construction equipment.

The project's estimated energy consumption is summarized in Table 4.6-1, Energy Consumption. As shown in Table 4.6-1, the project's electricity usage would constitute an approximate 0.0002 percent increase over Orange County's typical annual electricity and an approximate 0.0001 percent increase over Orange County's typical annual natural gas consumption. The project's construction and operational vehicle fuel consumption would increase Orange County's consumption by 0.0935 percent and 0.0003 percent, respectively.

**Table 4.6-1
Energy Consumption**

Energy Type	Project Annual Energy Consumption ¹	Orange County Annual Energy Consumption ²	Percentage Increase Countywide ²
Electricity Consumption	34 MWh	20,196,975 MWh	0.0002%
Natural Gas Consumption	260 therms	575,133,597 therms	0.0001%
Fuel Consumption			
• Construction (Heavy-Duty Diesel Vehicle) Fuel Consumption ³	115,896 gallons	123,935,784 gallons	0.0935%
• Operational Automotive Fuel Consumption ³	3,728 gallons	1,149,476,040 gallons	0.0003%

Notes:

1. As modeled in CalEEMod version 2016.3.2.
2. The project increases in electricity and natural gas consumption are compared to the total consumption in Orange County in 2018. The project increases in automotive fuel consumption are compared with the projected Countywide fuel consumption in 2018.
Orange County electricity consumption data source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>, accessed March 24, 2020.
Orange County natural gas consumption data source: California Energy Commission, *Gas Consumption by County*, <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>, accessed March 24, 2020.
3. Project fuel consumption calculated based on CalEEMod results. Countywide fuel consumption is from the California Air Resources Board EMFAC2017 model.

Refer to Appendix A, Air Quality/GHG/Energy Analysis, for assumptions used in this analysis.

Construction-Related Energy Consumption

Project construction would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading and construction. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid



wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.¹

Reductions in energy inputs for construction materials can be achieved by selecting green building materials composed of recycled materials that require less energy to produce than non-recycled materials.² The integration of green building materials can help reduce environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source materials.³ The project-related incremental increase in the use of energy, bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas), would not substantially increase demand for energy compared to overall local and regional demand for construction materials. As indicated in Table 4.6-1, the project's fuel consumption from construction would be approximately 115,896 gallons, which would increase fuel use in the County by 0.0935 percent. As such, construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, a less than significant impact would occur in this regard.

Operational Energy Consumption

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. Table 4.6-1 provides an estimate of the daily fuel consumed by vehicles traveling to and from the site. As indicated in Table 4.6-1, project operations are estimated to consume approximately 3,728 gallons of fuel per year, which would increase the Orange County's automotive fuel consumption by 0.0003 percent. The project would not result in any unusual characteristics that would result in excessive operational fuel consumption. Fuel consumption associated with project-related vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. As such, a less than significant impact would occur in this regard.

Electricity Demand

The project would consume energy for interior and exterior lighting; heating, ventilation, and air conditioning (HVAC); refrigeration; electronics systems; appliances; and security systems, among other common household features. The project would be required to comply with Title 24 standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Further, the Title 24 standards, includes mandated photovoltaic solar panels and other lighting upgrades and would ensure residential structures use 53 percent less energy than those constructed under the previous Title 24 standards. Implementation of the Title 24 standards significantly reduces energy usage. Furthermore, the electricity provider, SDGE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires

¹ U.S. Green Building Council, *Green Building Costs and Savings*, <https://www.usgbc.org/articles/green-building-costs-and-savings>, accessed March 24, 2020.

² California Department of Resources Recycling and Recovery, *Green Building Materials*, <https://www.calrecycle.ca.gov/greenbuilding/materials#Material>, accessed March 24, 2020.

³ Ibid.



investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. As indicated in Table 4.6-1, operational energy consumption would represent an approximate 0.0002 percent increase in electricity consumption over the current Countywide usage. Therefore, the project would not result in the inefficient, wasteful, or unnecessary consumption of building energy, and impacts in this regard would be less than significant.

As indicated in Table 4.6-1, operational energy consumption would represent an approximate 0.0002 percent increase in electricity consumption and a 0.0001 percent increase in natural gas consumption over the current Countywide usage. The project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards. Additionally, the project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure. The project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

b) *Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?*

Less than Significant Impact. The City of Laguna Niguel does not have an adopted renewable energy or energy efficiency plan. State and local plans for renewable energy and energy efficiency include the California Public Utilities Commission's (CPUC) Energy Efficiency Strategic Plan, the Title 24 standards and the CALGreen standards. The project would be required to comply with Title 24 and CALGreen standards. Compliance with Title 24 standards and CALGreen standards would ensure the project incorporates energy efficient windows, solar panels, insulation, lighting, ventilation systems, as well as water efficient fixtures and electric vehicles charging infrastructure. Adherence to the CPUC's energy requirements would ensure conformance with the State's goal of promoting energy and lighting efficiency. Therefore, the proposed project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Mitigation Measures: No mitigation measures are required.



4.7 GEOLOGY AND SOILS

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

This section is primarily based upon the following technical studies:

- *Preliminary Geotechnical Investigation for New Single-Family Residence, 1 O'Hill Ridge, Bear Brand Ranch, Laguna Niguel, California* (Geotechnical Investigation), prepared by Geofirm, August 17, 2018; refer to Appendix D, Geotechnical Investigation; and
- *Paleontological Resources Assessment, 1 O'Hill Ridge – Garg Residence Project, Laguna Niguel, Orange County, California* (Paleontological Resources Assessment), prepared by LSA Associates, Inc., April 2020; refer to Appendix E, Paleontological Resources Assessment.

- a) ***Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:***
- 1) ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***

No Impact. The project site, like the rest of southern California, is located within a seismically active margin between the North American and Pacific tectonic plates. According to the Geotechnical Investigation, no faults were mapped



within close proximity of the site, and the area is not within an Alquist-Priolo earthquake fault zone. As such, no impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

2) ***Strong seismic ground shaking?***

Less Than Significant Impact. The Geotechnical Investigation states that the closest published active faults to the site are the offshore extension of the Newport-Inglewood Fault Zone, approximately 5.0 miles to the west, and the San Joaquin Hills Fault, approximately 5.2 miles from the site. Further from the site are the Palos Verdes Fault, approximately 20.6 miles to the northwest; the Coronado Bank Fault, approximately 21.4 miles to the south; and the San Andreas Fault, approximately 52.0 miles to the northeast.

Based on the site's proximity to several known active faults, strong seismic ground shaking can be expected during the project's lifetime. The project would be required to comply with existing seismic design requirements of the California Building Code as incorporated by reference in Municipal Code Section 8-1-12, *Adoption of California Building Code and Related Codes*, as well as site-specific seismic design recommendations identified in the Geotechnical Investigation to minimize the potential for damage and major injury during a seismic event; refer to Appendix D. For example, according to the Geotechnical Investigation, shear keys associated with the retaining walls should be constructed with soil cement, consisting of Type 5 Portland Cement at eight percent of the dry weight of soil, and should be tested on a regular basis to verify the soil shear strength to resist lateral force created by the lateral load from the soil and seismic force due to a potential earthquake. Additionally, tieback anchor installation and design associated with the retaining walls are recommended to incorporate the design, construction, and testing criteria published within the Post-Tensioning Institute's *Recommendations for Prestressed Rock and Soil Anchors Manual* and be designed as encapsulated anchors for corrosion protection from the potentially corrosive nature of the site soil and bedrock materials. Thus, following conformance with the seismic design recommendations identified in the Geotechnical Investigation and California Building Code, impacts related to seismic ground shaking would be less than significant.

Mitigation Measures: No mitigation measures are required.

3) ***Seismic-related ground failure, including liquefaction?***

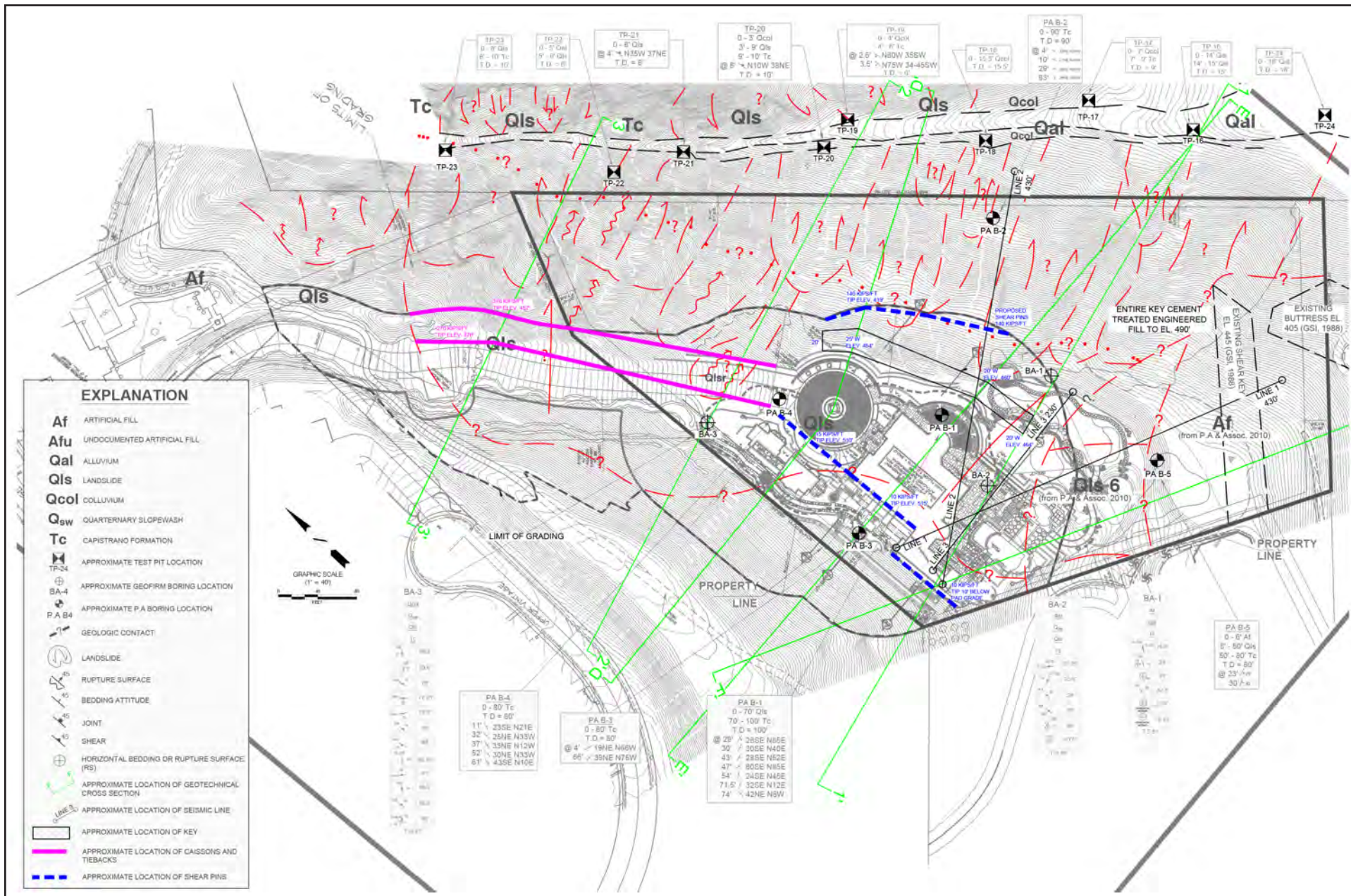
No Impact. Liquefaction and seismically-induced settlement or ground failure is generally related to strong seismic shaking events where the groundwater occurs at shallow depth (generally within 50 feet of the ground surface) or where lands are underlain by loose, cohesionless deposits. Liquefaction typically results in the loss of shear strength of a soil, which occurs due to the increase of pore water pressure caused by the rearrangement of soil particles induced by shaking or vibration. During liquefaction, soil strata behave similarly to a heavy liquid.

According to the Geotechnical Investigation, groundwater in the form of seepage was observed during one of the bore drillings at a depth of 88 feet. The canyon east of the site and the location of numerous trenches/test pits reported no groundwater observations on-site. Given that no shallow groundwater was observed, the Geotechnical Investigation concluded that the potential for liquefaction is negligible. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

4) ***Landslides?***

Less Than Significant Impact With Mitigation Incorporated. Exhibit 4.7-1, Geotechnical Map, provides a geotechnical map identifying on-site soils; approximate landslide and bedding/rupture surfaces; approximate test pit and boring locations; and approximate locations of proposed caissons, tiebacks, and shear pins.



Source: Geofirm, 2018

NOT TO SCALE

Michael Baker
INTERNATIONAL



07/2020 JN 176443

1 O'HILL RIDGE – GARG RESIDENCE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Geotechnical Map

Exhibit 4.7-1



- **Temporary Slope Stability:** The preliminary architectural design depicts the construction of retaining walls into the natural slope ascending from the proposed building pad. All temporary cuts for the retaining walls with a maximum height over five feet would be required to utilize a temporary shoring system or integrated shoring-retention system. Additionally, all designed permanent slopes should possess a safety factor equal to or in excess of the engineering required minimum for static and pseudostatic conditions. Preliminary remedial grading recommendations for graded slopes and retaining wall cuts are provided in the Geotechnical Investigation and would be finalized during final grading plan check review.
- **Natural Slope Stability:** The descending slopes on the eastern project boundary have terrain features indicative of both recent and ancient landslides; refer to Exhibit 4.7-1. Currently, these slopes do not provide adequate permanent or pseudostatic factors of safety. Preliminary remedial recommendations (e.g., locations of caissons, tiebacks, and shear pins), as indicated on Geotechnical Map, Plate 1, of the Geotechnical Investigation would stabilize the natural slope and be finalized during final grading plan check review. The proposed grading would not adversely affect the stability of these natural slopes as no grading is proposed in these natural areas. Additionally, natural slopes ascending from the proposed building pad have not exhibited signs of distress based on the available historic aerial photographs.
- **Landslides:** The Geotechnical Investigation indicates the presence of ancient landslides underlying the site and canyon side slopes. The proposed development could be adversely impacted by identified landslides within and adjacent to the proposed residential building pad and associated improvements. Based on subsurface boring data and available information for the tract to the north of the east-west trending canyon just east of the project site, two types of landslides impact the site: a) relatively shallow (on the order of 10 to 25 feet) translational landslides flanking the canyon sidewall, with failure surfaces that mimic the existing topography, and b) landslides impacting the proposed building area, which is hanging on the canyon sidewall substantially higher in elevation than the existing canyon bottom; refer to Exhibit 4.7-1. Recommendations for the partial removal, shear key, shear pins, and a tieback and caisson system are detailed in the Geotechnical Investigation.

The deeper ancient landslide beneath the proposed building area is composed of blocks of the Capistrano Formation that have translated along low angle to near horizontal weakened clay bedding planes or rupture surfaces. All three borings in this area encountered sheared and remolded clay materials at about the same elevation. Due to the competency of the ancient slide block material, once the disturbed debris and colluvial materials are removed, these deposits are considered to be suitable for the support of structural fill. The proposed design would require grading that further enhances the stability of these deposits. Based on the Geotechnical Investigation, the deeper ancient landslides would possess adequate safety factors for the proposed project design provided the recommendations presented in the Geotechnical Investigation are implemented.

Overall, the project site is susceptible to landslides and the project would require stabilization measures. The stabilization measures in the proposed residential area consists of partial removal of unsuitable landslide materials and stabilization with a shear key and shear pins, as detailed in Appendix D, *Slope Stability Analysis*, of the Geotechnical Investigation. Tiebacks and caissons are also recommended for the proposed access road to minimize grading in the area and stabilize recent shallow landslides along the natural slope descending from the access road. Implementation of Mitigation Measure GEO-1 would ensure the recommended remedial measures in the Geotechnical Investigation have been incorporated into the project design and grading and building plans. As such, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures:

GEO-1 Prior to issuance of a grading permit, the project applicant shall demonstrate, to the satisfaction of the City of Laguna Niguel, that the recommendations for design and construction identified in the *Preliminary*



Geotechnical Investigation for New Single-Family Residence, 1 O'Hill Ridge, Bear Brand Ranch, Laguna Niguel, California, prepared by Geofirm and dated August 17, 2018, have been incorporated into the project design, and grading and building plans. The project's final grading plans, foundation plans, building loads, and specifications shall be reviewed by a State of California Registered Professional Geologist/Registered Professional Engineer to verify that the Geotechnical Investigation's recommendations have been incorporated and updated, as needed.

b) *Result in substantial soil erosion or the loss of topsoil?*

Less Than Significant Impact. As the project would disturb more than one acre of soil, the project would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which would require preparation of a Storm Water Pollution Prevention Plan (SWPPP) for approval by the San Diego Regional Water Quality Control Board prior to construction. The SWPPP would identify best management practices (BMPs) to be implemented with the project in order to prevent erosion, minimize siltation impacts, and protect water quality. In addition, Municipal Code Section 8-1-835, *Erosion Control*, contains regulations regarding erosion control measures for project sites with cut slopes and requires temporary or permanent erosion control devices, such as desilting basins, check dams, riprap, or other water quality requirements to be employed. Effective planting and sprinkler systems of all slopes in excess of five feet would also be required to minimize soil erosion potential. Further, Municipal Code Section 8-1-836, *Erosion Control Plan*, requires erosion control plans to be prepared in accordance with the City's Grading Manual prior to issuance of grading permits. Thus, following conformance with the NPDES and Municipal Code requirements, impacts concerning substantial soil erosion and loss of topsoil would be less than significant.

Mitigation Measures: No mitigation measures are required.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less Than Significant Impact With Mitigation Incorporated. Refer to Responses 4.7(a)(3), 4.7(a)(4), and 4.7(d) for a discussion concerning liquefaction, landslides, and expansive soils.

Lateral spreading is limited displacement ground failure, often associated with liquefaction. Lateral spreading is typically exemplified by the formation of vertical cracks on the surface of liquefied soils, and usually takes place on gently sloping ground or level ground with nearby free surface such as a drainage or stream channel. Given the negligible potential for liquefaction on-site, the probability of lateral spreading occurring during a seismic event is also considered to be unlikely. No impacts would occur in this regard.

Subsidence can occur in various ways during an earthquake. Large areas of land can subside drastically during an earthquake because of offset along fault lines; land subsidence can also occur as a result of settling and compacting of unconsolidated sediment (i.e., settlement) from seismic shaking. Collapsible soils generally have loose soil structures that can greatly decrease in volume upon wetting, additional loading, or both. Soil collapse typically occurs due to the addition of water. Based on the Geotechnical Investigation, secondary seismic hazards (e.g., subsidence, collapse, settlement) is considered remote for the project site following recommended remedial construction. The project would be subject to the site-specific seismic design recommendations identified in the Geotechnical Investigation to minimize the potential for geologic hazards; refer to Mitigation Measure GEO-1. Recommendations include those related to conventional foundations and slabs-on-grade, moisture content of slab subgrade soils, structural design of the retaining walls, hardscape design and construction, and utility trench backfill. Following implementation of Mitigation Measure GEO-1, including conformance with the seismic design recommendations identified in the Geotechnical Investigation, would reduce impacts to less than significant levels in this regard.

Mitigation Measures: Refer to Mitigation Measure GEO-1.



- d) ***Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

Less Than Significant Impact With Mitigation Incorporated. Expansive soils are those that undergo volume changes as moisture content fluctuates, swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement, and distorting structural elements. According to the Geotechnical Investigation, on-site soils reportedly exhibit a high expansion potential. As such, the Geotechnical Investigation recommends that the foundation and slabs be designed to resist the effects of expansive soils in accordance with Section 1806.6 of the California Building Code by utilizing a conventional foundation system with a deepened perimeter footing. More specifically, the minimum recommended slab thickness is five inches, with bars spaced 12 inches apart in both directions. It is also recommended that interior footings be interconnected so that the structure would respond relatively monolithically (as one) to differential soil movement. Additionally, presoaking of slab subgrade soils to at least 140 percent of optimum moisture content and to a minimum depth of 18 inches is required prior to construction of slabs and placement of gravel on top. Implementation of Mitigation Measure GEO-1 would ensure site-specific design recommendations identified in the Geotechnical Investigation are reflected in the project design and grading and building plans. As such, impacts related to expansive soils would be less than significant.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

- e) ***Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

No Impact. No septic tanks or alternative wastewater systems would be constructed as part of the project. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- f) ***Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Less Than Significant Impact With Mitigation Incorporated. The Paleontological Resources Assessment included a literature review, fossil locality search, and field survey to determine the presence and sensitivity of paleontological resources in the project area.

Literature Review

Three geologic units are mapped within the project area: Late Holocene Landslide Deposits, Pliocene Niguel Formation, and the Mio-Pliocene Capistrano Formation.

Landslide Deposits (Qls)

The Landslide Deposits consist of highly fragmented to largely coherent, unconsolidated to consolidated active landslides. The slides are caused by several different agents: steep slopes, expansive soils, and weathering of the bedrock. Many of the slides originated in the Pleistocene, and all or part were reactivated during the Holocene. Although the late Holocene age of these deposits indicates that landslide activity occurred within the last 4,200 years, the deposits involved are from the underlying and nearby Niguel and Capistrano Formations. There is potential to find fossils in the Landslide Deposits, however, because these deposits have been transported from their original location and context, fossils recovered from them may not be scientifically significant. Therefore, the Landslide Deposits are considered to have low paleontological sensitivity.



Niguel Formation (Tn)

The Niguel Formation is Pliocene in age (2.6 to 5.3 million years ago). It has an angular unconformity on the underlying Capistrano Formation and is a shallow marine deposit that consists of fine-grained sandstone interbedded with a sandy siltstone, with a basal conglomerate. The formation also has thin layers of clay that are formed from chemical weathering.

The Niguel Formation has produced a diverse collection of mollusks, as well as a few vertebrate fossils. From outcrops of this formation in Orange County, there are records of 12 microfossil species, three echinoderm species, more than 50 gastropod (snail) species, more than 40 bivalve (clam) species, one scaphopod (tusk shell) species, and two arthropod (crabs and barnacle) species, as well as shark teeth, ray teeth, fish bones and teeth, bird bones, and marine mammal bones and teeth. This formation has produced scientifically important fossils in the region and is considered to have high paleontological sensitivity.

Capistrano Formation (Tc)

The marine Capistrano Formation was deposited during the early Pliocene to late Miocene (3.6 to 11.6 million years ago). This formation has produced abundant and diverse scientifically significant fossils, many of which come from the siltstone facies, which are present in the project area. These fossils include bony fish, sharks, whales, porpoises, sea lions, sea cows, and marine birds. As the Capistrano Formation has produced an abundant and diverse scientifically significant paleontological resources, it is considered to have high paleontological sensitivity.

Fossil Locality Search

A fossil locality search was completed through the Natural History Museum of Los Angeles County (LACM) for an adjacent parcel in August 2006, and the results of that research include the current project site. Therefore, the results of the 2006 locality search were used for the proposed project. The purpose of the locality search was to establish the status and extent of previously recorded paleontological resources within and surrounding the project area.

The 2006 locality search did not identify records of fossil localities within the project site, nor from the Niguel Formation or the Landslide Deposits. However, LACM has records of two fossil localities near the project area from the Capistrano Formation: LACM 5792 and LACM 5889. Both of these localities are east-northeast of the project area, north of San Juan Creek, and east of Interstate 5. LACM 5792 produced extensive marine fauna, including sharks, rays, bony fishes, eared seals, whales, and sea cows, as well as terrestrial fauna that include western pond turtle, birds, antelopes, and camels.

Field Survey

A systematic field survey conducted in June 2007 consisted of a visual inspection of exposed soil and ground surfaces. The purpose of the survey was to note the sediments within the project area and to identify any paleontological resources that may be impacted by the proposed project. The project area is largely undisturbed with a graded dirt access road crossing the project area to the location of the future residence. Much of the project area consists of moderate to steep slopes. Ground visibility ranged from excellent over much of the area to poor on the steep slopes on the northeast portion of the project area. Approximately 50 percent of the project area had been recently mowed and was essentially devoid of ground cover, whereas the steep slopes above a drainage on the northeast portion of the project site were covered with dense thistles and coastal sage scrub. Due to the presence of surface soils, the contact between the Niguel Formation and the underlying Capistrano Formation could not be located. No fossils were noted during the field survey.



Conclusion

The project area contains Landslide Deposits, which have low paleontological sensitivity, and the Niguel and Capistrano Formations, both of which have high paleontological sensitivity. Development of the proposed project would involve ground disturbance in the high-sensitivity Niguel and Capistrano Formations and, therefore, has the potential to impact scientifically significant, non-renewable paleontological resources. In order to mitigate these potential impacts, Mitigation Measures GEO-2 through GEO-4 would require preparation of a monitoring program, monitoring of ground-disturbing construction activities, appropriate treatment of newly discovered resources, and preparation of a final monitoring report. Implementation of Mitigation Measures GEO-2 through GEO-4 would ensure project impacts to paleontological resources are reduced to less than significant levels.

Mitigation Measures:

GEO-2 Prior to issuance of any grading permits, the project applicant shall retain a qualified, professional paleontologist who meets the standards set by the Society of Vertebrate Paleontology (SVP) to develop a Paleontological Resources Impact Mitigation Program (PRIMP). The PRIMP shall be consistent with the guidelines of the SVP and shall include the methods that will be used to protect paleontological resources that may exist within the project limits, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of ground disturbance.

GEO-3 All ground-disturbing construction activities in deposits with high paleontological sensitivity (i.e., Niguel Formation and Capistrano Formation) shall be monitored by a qualified paleontological monitor following a PRIMP; refer to Mitigation Measure GEO-2. No monitoring is required for excavations in deposits with no or low paleontological sensitivity (i.e., Landslide Deposits).

If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and the paleontologist shall be contacted to assess the find and determine the appropriate actions.

GEO-4 Under the direction of the qualified paleontologist, collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. At the conclusion of the monitoring program required under Mitigation Measure GEO-2, the qualified paleontologist shall prepare a report of findings to document the results of the monitoring program.



4.8 GREENHOUSE GAS EMISSIONS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Global Climate Change

California is a substantial contributor of global greenhouse gases (GHGs), emitting over 420 million metric tons of carbon dioxide equivalent (MMTCO₂e) per year.¹ Methane (CH₄) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

The impact of human activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO₂, CH₄, and nitrous oxide (N₂O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO₂ concentrations ranged from 180 to 300 parts per million (ppm). For the period from approximately 1750 to the present, global CO₂ concentrations increased from a pre-industrialization period concentration of 280 to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range. As of March 2020, the highest monthly average concentration of CO₂ in the atmosphere was recorded at 416 ppm.²

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm carbon dioxide equivalent (CO₂e)³ concentration is required to keep global mean warming below 2 degrees Celsius (°C), which in turn is assumed to be necessary to avoid dangerous climate change.

¹ California Air Resources Board, *California Greenhouse Gas Emissions for 2000 to 2017*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf, accessed March 30, 2020.

² Scripps Institution of Oceanography, *Carbon Dioxide Concentration at Mauna Loa Observatory*, <https://scripps.ucsd.edu/programs/keelingcurve/>, accessed March 30, 2020.

³ Carbon Dioxide Equivalent (CO₂e) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.



Regulatory Framework

Federal

U.S. Environmental Protection Agency Endangerment Finding. The U.S. Environmental Protection Agency's (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 Clean Air Act 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 (CO₂, CH₄, N₂O, hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF₆]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Clean Air Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

State

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on Statewide GHG emissions. AB 32 requires that Statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then the California Air Resources Board (CARB) should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Senate Bill 32. Signed into law in September 2016, SB 32 codifies the 2030 target in the recent Executive Order B-30-15. The bill authorizes the state board to adopt an interim GHG emissions level target to be achieved by 2030. SB 32 states that the intent is for the legislature and appropriate agencies to adopt complementary policies which ensure that the long-term emissions reductions advance specified criteria. In December 2017, CARB approved the *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* that provides guidance for compliance with SB 32.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities' strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which Statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of Cal/EPA created the California Climate Action Team, made up of



members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Title 24, Part 6. The California Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Part 6 of Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 standards took effect on January 1, 2020. Under 2019 Title 24 standards, residential buildings will use about 53 percent less energy, mainly due to solar photovoltaic panels and lighting upgrades, when compared to those constructed under 2016 Title 24 standards.⁴

Title 24, Part 11. The California Green Building Standards Code (CCR Title 24, Part 11), commonly referred to as CALGreen, is a Statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in five green building topical areas. The most recent update to the CALGreen Code went into effect on January 1, 2020.

CARB Scoping Plan. On December 11, 2008, CARB adopted its Climate Change Scoping Plan (Scoping Plan), which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MTCO₂e under a business as usual (BAU)⁵ scenario. This is a reduction of 42 million MTCO₂e, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

In December 2017, CARB approved the *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. This update focuses on implementation of a 40 percent reduction in GHGs by 2030 compared to 1990 levels. To achieve this the updated 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 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 will continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.

⁴ California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed February 19, 2020.

⁵ "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions; refer to <http://www.arb.ca.gov/cc/inventory/data/bau.htm>. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.



- Cleaner Fuels: The Low Carbon Fuel Standard will drive further development of cleaner, renewable transportation fuels to replace fossil fuels.
- Smart Community Planning: Local communities will continue developing plans which will further link transportation and housing policies to create sustainable communities.
- Improved Agriculture and Forests: The Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

Thresholds of Significance

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions and gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors to be considered in the determination of significance (i.e., the extent to which a project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and therefore GHG emissions should be analyzed in the context of CEQA's requirements for cumulative impact analyses (CEQA Guidelines Section 15064(h)(3)).^{6,7} A project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project.⁸

The City of Laguna Niguel (City) has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor have the South Coast Air Quality Management District (SCAQMD), CARB, or any other State or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the project's impacts related to GHG emissions focuses on its consistency with Statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the project's GHG-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the project using recommended air quality models, as described below. The primary purpose of quantifying the project's GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the

⁶ California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, pp. 11-13, 14, 16, December 2009, https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/Final_Statement_of_Reasons.pdf, accessed February 26, 2020.

⁷ State of California Governor's Office of Planning and Research, Transmittal of the Governor's Office of Planning and Research's Proposed SB97 CEQA Guidelines Amendments to the Natural Resources Agency, April 13, 2009, <https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C01.pdf>, accessed February 26, 2020.

⁸ 14 California Code of Regulations Section 15064(h)(3).



significance of the project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the project.

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

Less Than Significant Impact.

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions would include emissions from direct and indirect sources. The proposed project would result in direct and indirect emissions of CO₂, N₂O, and CH₄, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. The California Emissions Estimator Model version 2016.3.2 (CalEEMod) relies upon trip generation rates and project specific land use data to calculate emissions. Trip generation rates are based on the Institute of Transportation Engineers (ITE) *Trip Generation Rate Manual*, 10th Edition, trip generation rate of 9.52 trips per day for Single-Family Detached Housing (ITE Code 210). Therefore, the project would generate approximately 10 average daily trips. However, given the nature of the proposed project as a large residential estate with a main residence and guest house, a more conservative trip generation rate of 12 trips per day and assumption of two dwelling units (main residence and guest house) is utilized. Based on these assumptions, the project would generate approximately 24 average daily trips. Table 4.8-1, *Estimated Greenhouse Gas Emissions*, presents the estimated CO₂, N₂O, and CH₄ emissions of the proposed project. The CalEEMod outputs are contained within the Appendix A, *Air Quality/GHG/Energy Analysis*.

Direct Project-Related Sources of Greenhouse Gases

- **Construction Emissions.** Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.⁹ As seen in Table 4.8-1, the proposed project would result in 57.09 MTCO₂e/yr, which represents 1,712.60 MTCO₂e when amortized over 30 years.
- **Area Source.** The project would directly result in 0.47 MTCO₂e/yr from area source emissions; refer to Table 4.8-1.
- **Mobile Source.** As previously discussed, the project is anticipated to generate approximately 24 average daily trips. The project would directly result in 29.89 MTCO₂e/yr of mobile source-generated GHG emissions; refer to Table 4.8-1.

⁹ 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, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008).



Table 4.8-1
Estimated Greenhouse Gas Emissions

Source	CO ₂	CH ₄		N ₂ O		Total Metric Tons of CO ₂ e ^{2,4}
	Metric Tons/yr ¹	Metric Tons/yr ¹	Metric Tons of CO ₂ e ¹	Metric Tons/yr ¹	Metric Tons of CO ₂ e ¹	
Direct Emissions						
• Construction (amortized over 30 years)	56.85	0.01	0.37	0.00	0.00	57.09
• Area Source	0.47	0.00	0.00	0.00	0.00	0.47
• Mobile Source	29.86	0.00	0.03	0.00	0.00	29.89
Indirect Emissions						
• Energy	12.38	0.00	0.01	0.00	0.04	12.43
• Water Demand	24.81	0.02	0.39	0.00	0.16	25.36
• Waste	3.39	0.20	5.02	0.00	0.00	8.41
Total Project-Related Emissions ^{2,3}	133.65 MTCO ₂ e/yr					

Notes:

1. Emissions were calculated using CalEEMod version 2016.3.2, as recommended by the SCAQMD.
 2. Totals may be slightly off due to rounding.
 3. The reduction/credits for operational emissions are based on "mitigation" included in CalEEMod and are required by 2019 Title 24 Standards. Additionally, the project would be ten percent more efficient than 2019 Title 24 Standards. The emissions results in this table represent the "mitigated" emissions shown in [Appendix A](#).
 4. Carbon dioxide equivalent values calculated using the U.S. Environmental Protection Agency Website, *Greenhouse Gas Equivalencies Calculator*, <http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>, accessed March 9, 2020.
- Refer to [Appendix A](#) for detailed model input/output data.

Indirect Project-Related Sources of Greenhouse Gases

- Energy Consumption. Energy consumption emissions were calculated using CalEEMod and project-specific land use data. San Diego Gas and Electric (SDGE) would provide electricity to the project site. The project would indirectly result in 12.43 MTCO₂e/year due to energy consumption; refer to [Table 4.8-1](#).
- Water Demand. Project operations would result in 25.36 MTCO₂e/year from indirect energy impacts due to water demands would result in; refer to [Table 4.8-1](#).
- Solid Waste. Solid waste associated with operations of the proposed project would result in 8.41 MTCO₂e/year; refer to [Table 4.8-1](#).

Total Project-Related Sources of Greenhouse Gases

As shown in [Table 4.8-1](#), the total amount of proposed project-related GHG emissions from direct and indirect sources combined would total 133.65 MTCO₂e/yr.

Consistency with Applicable GHG Plans, Policies, or Regulations

2017 Scoping Plan Consistency

As stated above, the goal to reduce GHG emissions to 1990 levels by 2020 (Executive Order S-3-05) was codified by the California Legislature as AB 32. In 2008, CARB approved a Scoping Plan as required by AB 32. The Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The 2017 Scoping Plan identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the Scoping Plan (2013 Scoping Plan). Although a number of these measures are currently established as policies and measures,



some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted subsequently as required to achieve Statewide GHG emissions targets.

Table 4.8-2, *Project Consistency with the 2017 Scoping Plan*, summarizes the project's consistency with applicable policies and measures of the 2017 Scoping Plan. As summarized, the project would not conflict with any of the provisions of the 2017 Scoping Plan and would support four of the action categories through energy efficiency, water conservation, recycling, and landscaping.

Table 4.8-2
Project Consistency with the 2017 Scoping Plan

Sector/Source	Category/Description	Consistency Analysis
Area		
SCAQMD Rule 445 (Wood Burning Devices)	Restricts the installation of wood-burning devices in new development.	Mandatory Compliance. Approximately 15 percent of California's major anthropogenic sources of black carbon include fireplaces and woodstoves. ¹ The project would not include hearths (woodstove and fireplaces) as mandated by this rule.
Energy		
California Renewables Portfolio Standard, Senate Bill 350 (SB 350) and Senate Bill 100 (SB 100)	Increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020. SB 350 requires 50 percent by 2030. SB 100 requires 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	No Conflict. The project would utilize electricity provided by SDGE, which is required to meet the 2020, 2030, 2045, and 2050 performance standards. In 2018, 43 percent of SDGE's electricity came from renewable resources. ²
California Code of Regulations, Title 24, Building Standards Code	Requires compliance with energy efficiency standards for residential and nonresidential buildings.	Mandatory Compliance. The project is required to meet the applicable requirements of the 2019 Title 24 Building Energy Efficiency Standards, including installation of rooftop solar panels and additional CALGreen requirements (see discussion under CALGreen Code Requirements below). Further, the project would achieve energy efficiency ten percent higher than 2019 Title 24 Building Energy Efficiency Standards.



Table 4.8-2 [cont'd]
Project Consistency with the 2017 Scoping Plan

Sector/Source	Category/Description	Consistency Analysis
California Green Building Standards (CALGreen) Code Requirements	All bathroom exhaust fans are required to be ENERGY STAR compliant.	Mandatory Compliance. The project construction plans are required to demonstrate that energy efficiency appliances, including bathroom exhaust fans, and equipment are ENERGY STAR compliant.
	HVAC system designs are required to meet American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards.	Mandatory Compliance. The project construction plans are required to demonstrate that the HVAC system meets the ASHRAE standards.
	Air filtration systems are required to meet a minimum efficiency reporting value (MERV) 8 or higher.	Mandatory Compliance. The project is required to install air filtration systems (MERV 13 or higher) as part of its compliance with 2019 Title 24 Section 150.0, <i>Mandatory Features and Devices</i> .
	Refrigerants used in newly installed HVAC systems shall not contain any chlorofluorocarbons.	Mandatory Compliance. The project must meet this requirement as part of its compliance with the CALGreen Code.
	Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to eight percent of total parking spaces is required for such vehicles.	Mandatory Compliance. The project would meet this requirement as part of its compliance the CALGreen Code. Per the 2019 CALGreen Code Residential Mandatory Measure 4.106.4.1, new single-family homes with attached private garages are required to install a raceway to accommodate a future electric vehicle (EV) charging space.
Mobile Sources		
Mobile Source Strategy (Cleaner Technology and Fuels)	Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems, and reduction of vehicle miles traveled.	Consistent. The project would be consistent with this strategy by supporting the use of zero-emission and low-emission vehicles; refer to CALGreen Code discussion above.
Senate Bill (SB) 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.	Consistent. The project would comply with the Southern California Association of Governments (SCAG) <i>2016–2040 Regional Transportation Plan/Sustainable Communities Strategy</i> (2016–2040 RTP/SCS), and therefore, the project would be consistent with SB 375. Consistency with the 2016–2040 RTP/SCS is discussed below in <u>Table 4.8-3, Project Consistency with the 2016-2040 RTP/SCS.</u>
Water		
CCR, Title 24, Building Standards Code	Title 24 includes water efficiency requirements for new residential and non- residential uses.	Mandatory Compliance. See discussion under 2019 Title 24 Building Standards Code and CALGreen Code above.



Table 4.8-2 [cont'd]
Project Consistency with the 2017 Scoping Plan

Sector/Source	Category/Description	Consistency Analysis
Water Conservation Act of 2009 (Senate Bill X7-7)	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.	Consistent. See discussion under 2019 Title 24 Building Standards Code and CALGreen Code above.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341	The IWMA mandates that State agencies develop and implement an integrated waste management plan which outlines the steps to divert at least 50 percent of solid waste from disposal facilities. AB 341 directs the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling and sets a Statewide goal for 75 percent disposal reduction by the year 2020.	Mandatory Compliance. These regulations apply to municipal agencies who are responsible for reducing landfill disposal of solid wastes collected in their jurisdictions. GHG emissions related to solid waste generation from the project would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would then in return decrease the amount of methane released from the decomposing solid waste. Project-related GHG emissions from solid waste generation provided in <u>Table 4.8-1</u> includes a 50-percent reduction in solid waste generation source emissions.

Notes:

1. California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, Figure 4: California 2013 Anthropogenic Black Carbon Emission Sources, November 2017.
2. California Energy Commission, *2018 Power Content Label San Diego Gas & Electric*, https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_San_Diego_Gas_and_Electric.pdf, accessed March 27, 2020.
3. California Energy Commission, *2013 California Energy Efficiency Potential and Goals Study*, Appendix Volume I, August 15, 2013.

2016-2040 RTP/SCS

At the regional level, the 2016-2040 RTP/SCS is an applicable plan adopted for the purpose of reducing GHGs resulting from vehicular emissions by passenger vehicles and light duty trucks. In order to assess the project's consistency with the 2016-2040 RTP/SCS, this section also analyzes the project's land use assumptions for consistency with those utilized by SCAG in its SCS. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as the 2016-2040 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. Table 4.8-3, Project Consistency with the 2016-2040 RTP/SCS, addresses the project's consistency with the actions and strategies set forth in the 2016-2040 RTP/SCS.



Table 4.8-3
Project Consistency with the 2016-2040 RTP/SCS

Actions and Strategies	Responsible Party(ies)	Consistency Analysis
Land Use Strategies		
Focus new growth around transit.	Local Jurisdictions	Consistent. The nearest transit facilities include bus stops along Golden Lantern served by the Orange County Transportation Authority (OCTA).
Provide more options for short trips through Neighborhood Mobility Areas and Complete Communities.	SCAG; Local Jurisdictions	Consistent. The Complete Communities strategy supports the creation of mixed-use districts through a concentration of activities with housing and a mix of retail and services located in close proximity to each other. The project proposes a single-family residence within a suburban area. However, the Ocean Ranch Village shopping center is located within a mile of the proposed project. Therefore, the project would support this strategy by providing residential uses within close proximity to retail and services. Neighborhood Mobility Areas provide sustainable transportation options to make short trips within urban neighborhoods. The project would support this strategy by installing a raceway to accommodate future EV charging spaces. Further, the project would be located within cycling distance (i.e. within one mile) to retail and services.
Respond to changing housing needs.	Local Jurisdictions; Private Developers	Consistent. The project would support this strategy by providing a single-family residence on a currently vacant lot.
Transportation Strategies		
Manage congestion through programs like the Congestion Management Program, Transportation Demand Management, and Transportation Systems Management strategies.	County Transportation Commissions; Local Jurisdictions	Not Applicable. This strategy applies to public agencies that govern transportation facilities and transportation programs.
Technological Innovation and 21st Century Transportation		
Promote zero-emissions vehicles.	SCAG; Local Jurisdictions	Not Applicable. This action/strategy is directed at regional and local agencies, and not at individual development projects. However, per the 2019 CALGreen Code Residential Mandatory Measure 4.106.4.1, the project would be required to install a raceway to accommodate future EV charging spaces.

Source: Southern California Association of Governments, 2016-2040 *Regional Transportation Plan/Sustainable Communities Strategy*, Chapter 5: The Road to Greater Mobility and Sustainable Growth, April 2016.

In summary, the project would be consistent with applicable plans, policies, regulations, and GHG reduction actions/strategies outlined in the 2017 Scoping Plan and 2016-2040 RTP/SCS. Therefore, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs, and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.



4.9 HAZARDS AND HAZARDOUS MATERIALS

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

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Exposure of the public or the environment to hazardous materials could occur through improper handling or use of hazardous materials or hazardous wastes particularly by untrained personnel, a transportation accident, environmentally unsound disposal methods, or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors.

Construction

Project construction could expose construction workers and the public to temporary hazards related to the transport, use, and maintenance of construction materials (i.e., oil, diesel fuel, transmission fluid, etc.). These activities would be short-term, and the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. All project construction activities would demonstrate compliance with the applicable laws and regulations governing the use, storage, and transportation of hazardous materials, ensuring that all potentially hazardous materials are used and handled in an appropriate manner. Impacts concerning the routine transport, use, or disposal of hazardous materials during project construction would be less than significant.



Operations

Hazardous materials are not typically associated with residential uses. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner, and would minimize the potential for safety impacts to occur. Impacts concerning the routine transport, use, or disposal of hazardous materials during project operations would be less than significant.

Mitigation Measures: No mitigation measures are required.

- b) ***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

Less Than Significant Impact.

Construction

During project construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and Federal law. Impacts in this regard would be less than significant.

Operations

Refer to Response 4.9(a) for a description of impacts related to project operations. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

- c) ***Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

No Impact. The proposed project would not result in hazardous emissions or hazardous materials that would pose a potential health hazard. The only emissions that would occur are those resulting from the use of construction equipment. Additionally, the nearest school to the project site is Beacon Hill KinderCare, located at 25189 Beacon Hill Way, approximately 0.3-mile northwest of the proposed residence. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- d) ***Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

No Impact. Government Code Section 65962.5 requires the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB) to compile and update a regulatory sites list (pursuant to the criteria of the Section). The California Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Health and Safety Code Section 116395. Government Code Section 65962.5 requires the



local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the California Code of Regulations, to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

The project site is not listed pursuant to Government Code Section 65962.5.¹ Thus, no impact would result in this regard.

Mitigation Measures: No mitigation measures are 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?***

No Impact. The nearest airport to the project site is the John Wayne Airport in the City of Santa Ana, approximately 15.8 miles to the northwest. According to the *Airport Environs Land Use Plan for John Wayne Airport* (AELUP), the project site is located outside of the Airport Impact Zones, AELUP Notification Area, Federal Aviation Regulation Part 77 Notification Area, and Airport Safety Zones.² Additionally, the project site is not located within the vicinity of a private airstrip or related facilities. Therefore, project implementation would not expose people residing or working in the project area to excessive airport noise levels or safety hazards. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- f) ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Less Than Significant Impact. The proposed residence would be accessed via a private access road from O'Hill Ridge. The proposed project would not cause any permanent alterations to vehicular circulation routes and/or patterns or obstruct public access or travel. All construction staging would occur within the boundaries of the project site and would not interfere with circulation along O'Hill Ridge, Old Ranch Road, Golden Lantern, or any other nearby roadways. Therefore, the proposed project would not be expected to interfere with any adopted emergency response plan or emergency evacuation plan. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- g) ***Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

Less Than Significant Impact. According to the California Department of Forestry and Fire Protection's Very High Fire Hazard Severity Zone Map for Laguna Niguel, the project site is not located in a very high fire hazard severity zone under local or State/Federal responsibility areas.³

Nevertheless, it should be noted that the project site consists of sloping hillside terrain and is surrounded by undeveloped open space to the north and east; refer to Exhibit 2-2, Site Vicinity. Thus, as shown on Exhibit 2-11, Conceptual Fuel Modification Plan, and in accordance with Orange County Fire Authority (OCFA) requirements, the project is proposing to establish two fuel modification zones (Zone A "Set Back Zone" and Zone B "Fully Irrigated Wet Zone") to minimize wildland fire hazard risks. Zone A is defined as a 5- to 20-foot wide setback zone for non-combustible

¹ California Environmental Protection Agency, *Cortese Listing*, <https://calepa.ca.gov/sitecleanup/corteselist/>, accessed February 20, 2020.

² Orange County Airport Land Use Commission, *Airport Environs Land Use Plan for John Wayne Airport*, April 17, 2008.

³ California Department of Forestry and Fire Protection, *Very High Fire Hazard Severity Zones in LRA: Laguna Niguel*, October 2011.



construction only. Zone B is defined as the first 95- to 150-feet from Zone A and is required to be permanently irrigated and fully landscaped with approved drought-tolerant, deep rooted, and moisture retentive material. The Fuel Modification Plan proposes a minimum 120-foot wide fuel modification zone along the northern and eastern project boundaries, consisting of a 20-foot wide Zone A and a 100-foot wide Zone B. Along the southwestern edge, there would be a 5- to 20-foot wide Zone A and an 80- to 95-foot wide Zone B. Along the western project boundary, the existing terrain slopes upwards away from the proposed residence and leads to existing landscaped irrigated areas and Upper Vintage. On each side of the access road, the project proposes a 30- to 40-foot wide Zone B. A minimum six-foot radiant heat wall is also proposed along the southern project boundary adjacent to the existing residence at 1 Upper Vintage.

Additionally, the project includes a Fire Master Plan and Fire Protection Plan, both of which are subject to OCFA approval. Prior to the delivery of any combustible construction materials on-site, the Fire Master Plan requires the proposed access road meet OCFA access requirements and fire hydrants, water supply, and adequate fire flow be properly installed. Further, the paved access road would include a fire truck turnaround area approximately mid-way between O'Hill Ridge and the proposed residence. "No Parking-Fire Lane" signs would be posted along the access road along with an "End of Fire Access" sign approximately 300 feet from the entrance of the main residence.

Implementation of these proposed fire safety measures would ensure people and structures are not exposed to significant risk of loss, injury, or death involving wildland fires. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.



4.10 HYDROLOGY AND WATER QUALITY

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
1) Result in substantial erosion or siltation on- or off-site?			✓	
2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?			✓	
3) 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?			✓	
4) Impede or redirect flood flows?			✓	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

This section is primarily based upon the following technical studies:

- *Hydrology Report for Garg Residence, 1 O'Hill Ridge, Laguna Niguel, CA* (Hydrology Report), prepared by Gilbert Engineering & Associates, Inc., March 2019; and
- *Preliminary Water Quality Management Plan for SP-17-03, Garg Residence, 1 O'Hill Ridge, Laguna Niguel, CA* (WQMP), prepared by Gilbert Engineering & Associates, Inc., revised July 18, 2019;

These reports are included in Appendix F, Hydrology Report and WQMP.

a) ***Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

Less Than Significant Impact. As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the National Pollution Discharge Elimination System (NPDES) program to control direct stormwater discharges. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The project site is located within the jurisdiction of the San Diego RWQCB.



Impacts related to water quality typically range over three different periods: 1) during the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest; 2) following construction, prior to the establishment of ground cover, when the erosion potential may remain relatively high; and 3) following completion of the project, when impacts related to sedimentation would decrease markedly, but those associated with urban runoff would increase.

Construction

Project construction could result in short-term impacts to water quality due to the handling, storage, and disposal of construction materials, maintenance and operation of construction equipment, and earthmoving activities. Potential pollutants associated with these activities could damage downstream waterbodies. Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the SWRCB's General Permit for Discharges of Stormwater Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (General Construction Permit). The General Construction Permit requires the project Applicant to prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP would specify best management practices (BMPs) to be used during construction of the project to minimize or avoid water pollution, thereby reducing potential short-term impacts to water quality. Upon completion of the project, the Applicant would be required to submit a Notice of Termination to the SWRCB to indicate that construction has been completed.

Further, the project would be subject to compliance with the City's *Water Quality Local Implementation Plan* (LIP) as a "High Priority Project – Hillside Development Greater than 5,000 Square Feet."¹ The LIP describes the activities that the City is undertaking to meet the requirements of the San Diego RWQCB Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100, NPDES Permit No. CAS0109266 (also known as the "Fifth Term Permit"). LIP Section A-8, *Construction Component*, includes a detailed set of erosion and sediment controls and waste and materials management BMPs to prevent or minimize the impacts of urban runoff generated by construction activities within the City on receiving water bodies. According to LIP Section A-2, *Program Management*, the City of Laguna Niguel Public Works Department and Community Development Department would verify project compliance with applicable LIP requirements. Compliance with the General Construction Permit requirements and LIP Section A-8 in accordance with Standard Conditions of Approval HYD-1 and HYD-2 would reduce the project's short-term impacts to water quality to less than significant levels.

Operations

According to the WQMP, project operations are anticipated to generate pollutants of concern with the potential to impact downstream receiving waters including suspended solids/sediments, nutrients, pesticides, oil/grease, and trash/debris; refer to [Appendix F](#).

In conformance with LIP requirements, a project-specific WQMP was prepared for the project to identify overall site design BMPs, low impact development (LID) BMPs, and hydromodification BMPs capable of minimizing stormwater pollutants of concern during project operations.

The proposed project would install an on-site storm drain system to direct runoff traveling southwesterly on-site through a sediment settling chamber prior to entering an on-site lake (detention basin) near the southeastern portion of the project site. The lake is designed to capture a 100-year storm event. Any flow in excess of the lake's capacity would enter an overflow spillway into a storm drain and pass through a modular wetland for treatment. The runoff would then flow down the hill into a proposed energy dissipation rip rap structure near the existing ravine at the bottom of the canyon. Eventually, stormwater runoff would sheet flow into an existing 30-inch storm drain under Peppertree Bend that ultimately outlets to the San Juan Creek Channel and Pacific Ocean at Doheny Beach. In addition to treating flows

¹ City of Laguna Niguel, *Water Quality Local Implementation Plan*, January 2019.



traveling northwesterly towards O'Hill Ridge, a curb inlet media filter would be installed within the existing storm drain catch basin in O'Hill Ridge to remove pollutants of concern. Other BMPs identified by the WQMP include common area landscape management and litter control measures, stenciling storm drains with prohibitive language and/or graphical icons to prevent dumping, use of efficient irrigation systems/landscape design, water conservation, smart controllers, and source control to minimize runoff, and other non-structural and structural BMPs; refer to Appendix F. Following compliance with the conditions and requirements identified in the project's WQMP, long-term impacts to water quality would be reduced to less than significant levels.

Standard Condition of Approvals:

- SCA HYD-1 The Applicant shall obtain coverage under the State Water Resources Board (SWRCB) General Permit for Discharges of Stormwater Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (General Construction Permit). As part of the General Construction Permit, the project Applicant shall prepare and implement a stormwater pollution prevention plan (SWPPP) and associated construction-related best management practices to minimize or avoid water pollution. Upon completion of the project, the Applicant shall submit a Notice of Termination to the SWRCB to indicate that construction has been completed.
- SCA HYD-2 The project shall comply with the City of Laguna Niguel's Water Quality Local Implementation Plan (LIP), including LIP Section A-8, *Construction Component*, which includes a detailed set of erosion and sediment controls and waste and materials management best management practices to prevent or minimize the impacts of urban runoff generated by construction activities within the City of Laguna Niguel on receiving water bodies. The City of Laguna Niguel Public Works Department and Community Development Department shall verify project compliance with applicable LIP requirements.

Mitigation Measures: No mitigation measures are required.

- b) ***Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

Less Than Significant Impact. Although the proposed project would increase impervious surfaces at the project site by 19.5 percent as compared to existing conditions, the project site is not underlain by a groundwater basin.² Thus, implementation of the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of a basin. The proposed project is an allowed use under the site's existing Residential Detached land use designation; refer to Section 4.11, Land Use and Planning. As a result, water consumption associated with the proposed project is accounted for in the Moulton Niguel Water District (MNWD) *Urban Water Management Plan* and is not anticipated to adversely impact MNWD groundwater supplies; refer to Section 4.20, Utilities and Service Systems. In addition, the MNWD provided a will-serve letter for the proposed project stating MNWD will provide water services to the proposed development and that no water pipe upsizing would be required.³ A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

² California Department of Water Resources, *SGMA Basin Prioritization Dashboard*, <https://gis.water.ca.gov/app/bp-dashboard/final/>, accessed March 9, 2020.

³ Moulton Niguel Water District, *Proposed Development Castelnuevo Del Garg located at O'Hill Ridge Laguna Niguel*, September 11, 2017.



- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

- 1) **Result in substantial erosion or siltation on- or off-site?**

Less Than Significant Impact. The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river. As discussed in Response 4.10(a), compliance with the requirements identified in the General Construction Permit and LIP would minimize erosion and water quality impacts during construction to less than significant levels.

Table 4.10-1, *Existing and Proposed Hydrology*, details existing and proposed runoff volumes during the 100-year, 25-year, 10-year, and 2-year storm event. Refer also to Hydrology Report Appendix 5, *Hydrology Exhibits*.

**Table 4.10-1
Existing and Proposed Hydrology**

Drainage Area	Storm Event Flow (cubic feet per second)			
	100-Year	25-Year	10-Year	2-Year
Existing Conditions				
A-1: Travels down the hillside	12.88	9.94	8.17	4.18
B-1: Travels towards O'Hill Ridge	1.84	1.42	1.17	0.60
Post-Development				
A-1 through A-4: Travels down hillside into detention lake	13.40	10.35	8.58	4.52
B-1 and B-2: Travels down hillside into detention lake	4.34	3.35	2.79	1.48
C-1: Travels down hillside into detention lake	2.85	2.21	1.84	0.98
D-1: Travels towards O'Hill Ridge	1.68	1.30	1.08	0.57

Source: Gilbert Engineering & Associates, Inc., *Hydrology Report for Garg Residence, 1 O'Hill Ridge, Laguna Niguel, CA*, March 2019.

As shown, the two pre-development drainage areas would be divided into several drainage areas under post-development conditions. Overall, runoff flowing towards O'Hill Ridge under existing conditions (Drainage Area B-1) and post-development conditions (Drainage Area D-1) would experience decreased flows by approximately 0.1 cubic feet per second (cfs) in each storm event. Runoff traveling down the hillside during post-development conditions (Drainage Area A-1 through A-4, B-1, B-2, and C-1) would flow into the detention lake at various points. The lake has been designed to capture the 100-year storm runoff increase so no additional water would exit the lake downstream into the ravine. If the lake begins to overflow in the 100-year or larger storm event, the runoff would enter an overflow spillway and into a storm drain, which runs down the hill into a proposed energy dissipation rip rap structure. The lake's normal water surface elevation would be approximately 510.50 feet with a surface edge of 510.83 feet. There would be approximately 1.67 feet of storage depth above the normal surface elevation prior to entrance to the overflow outlet. Therefore, adequate storage would be provided by the proposed lake to accommodate runoff volumes during the 100-year storm event.

Further, while the project would result in a 19.5 percent increase in impervious surfaces, the project site would not include large areas of exposed soils that would be subject to runoff. As described, the proposed project would include operational stormwater improvements (i.e., on-site lake, overflow spillway, modular wetland, and energy dissipation rip rap structure) and BMPs in conformance with LIP requirements in order to reduce long-term water quality impacts to less than significant levels. Thus, impacts in this regard would be less than significant.



Mitigation Measures: No mitigation measures are required.

2) ***Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?***

Less Than Significant Impact. As indicated above, post-development runoff volumes during the 100-year, 25-year, 10-year, and 2-year storm event would be adequately accommodated by existing stormwater drains in O'Hill Ridge and the project's on-site detention lake; refer to Response 4.10(c)(1) and Table 4.10-1. As noted, runoff in excess of the lake's design-capture volume would flow downhill into a proposed energy dissipation rip rap structure near the existing ravine at the bottom of the canyon. Eventually, stormwater runoff would sheet flow into an existing 30-inch storm drain under Peppertree Bend. Based on the Hydrology Study and WQMP, there would be no adverse impacts on the downstream ravine or the storm drain under Peppertree Bend. As a result, project implementation is not anticipated to substantially increase the rate of surface runoff in a manner which would result in flooding on- or off-site. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

3) ***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?***

Less Than Significant Impact. As noted in Response 4.10(c)(1), post-development runoff volumes during the 100-year, 25-year, 10-year, and 2-year storm event would be adequately accommodated by existing stormwater drains in O'Hill Ridge and the project's on-site detention lake; refer to Response 4.10(c)(1) and Table 4.10-1. Runoff in excess of the lake's design-capture volume would flow downhill into a proposed energy dissipation rip rap structure near the existing ravine at the bottom of the canyon. Eventually, stormwater runoff would sheet flow into an existing 30-inch storm drain under Peppertree Bend. In addition, runoff stored in the lake would be used for on-site irrigation. Based on the Hydrology Study and WQMP, the proposed project is not anticipated to exceed the capacity of existing/planned stormwater drainage systems. Further, as indicated in Response 4.10(a), less than significant impacts related to potential polluted runoff from the site would occur. As a result, project implementation is not anticipated to 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. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

4) ***Impede or redirect flood flows?***

Less Than Significant Impact. Refer to Responses 4.10(c)(2) and 4.10(c)(3).

Mitigation Measures: No mitigation measures are required.

d) ***In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***

No Impact.



Flood Hazard

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06059C0443J, Panel 060231, the project site is located outside of the 100-year flood hazard area.⁴ As a result, no impacts would occur in this regard.

Tsunami

A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a sea floor associated with large, shallow earthquakes. The project site is located in a hillside area over two miles inland from the Pacific Ocean and thus is located at a sufficient elevation and distance to avoid tsunami-related hazards. No impacts would occur in this regard.

Seiche

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. According to the National Oceanic and Atmospheric Association, seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other.⁵ The project site is not located within the vicinity of a reservoir, harbor, or lakes capable of creating a seiche. All water storage reservoirs located within the project vicinity are fully enclosed and thus would not be exposed to strong winds or have the capacity to result in a seiche. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

e) ***Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

No Impact. The *Water Quality Control Plan for the San Diego Basin* (Basin Plan) designates beneficial uses for water bodies in the San Diego Region and establishes water quality objectives and implementation plans to protect those beneficial uses. As noted above, the project would not result in significant impacts to water quality following implementation of the proposed storm drain improvements and conformance with the Construction General Permit, LIP requirements, and BMPs in the project's WQMP.

The SGMA requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans or prepare an alternative to a groundwater sustainability plan. According to the California Department of Water Resources SGMA Basin Prioritization Dashboard, the project is not underlain by a groundwater basin.⁶ As indicated in Response 4.10(b), the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. Thus, the proposed project is not anticipated to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and no impact would occur.

Mitigation Measures: No mitigation measures are required.

⁴ Federal Emergency Management Agency, *FEMA Flood Map Service Center: Search By Address*, <https://msc.fema.gov/portal/search?#searchresultsanchor>, accessed March 9, 2020.

⁵ National Oceanic and Atmospheric Association, *What is a Seiche?*, <https://oceanservice.noaa.gov/facts/seiche.html>, accessed March 9, 2020.

⁶ California Department of Water Resources, *SGMA Basin Prioritization Dashboard*, <https://gis.water.ca.gov/app/bp-dashboard/final/>, accessed March 9, 2020.



4.11 LAND USE AND PLANNING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?			✓	
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

a) *Physically divide an established community?*

Less Than Significant Impact. Factors that could physically divide a community include, but are not limited to:

- Construction of major highways or roadways;
- Construction of storm channels;
- Closing bridges or roadways; and
- Construction of utility transmission lines.

The key factor with respect to this question is creating physical barriers that change the connectivity between areas of a community to the extent that persons are separated from other areas of the community. The project site is an undeveloped residential estate hillside parcel within the Bear Brand Ranch Community, which is a gated residential community consisting of over 120 uniquely designed single-family residences. Project development would not physically divide the established community. Rather, the project would contribute to the existing community as another uniquely designed single-family residence. Additionally, as shown on [Exhibit 2-3, Conceptual Site Plan](#), the proposed access road from O'Hill Ridge to the project's circular entryway would not physically divide the row of existing residences along O'Hill Ridge. As such, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

b) *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Less Than Significant Impact.

General Plan Consistency

Based on the General Plan Land Use Map, the project site is primarily designated Residential Detached with the proposed access road crossing through Open Space designated land. The General Plan defines the Residential Detached designation as areas characterized by one single-family dwelling constructed on each individual subdivided lot or legal building site. Areas designated Open Space are primarily intended for passive recreation, or visual enhancement or resource conservation uses, such as natural hillsides and landscaped slopes or buffers, and trails. As the proposed project involves development of one detached single-family residence and accessory uses, the project is an allowed use under the site's existing Residential Detached land use designation. While the proposed access road would cross Open Space designated land, a trail segment across the access road is proposed that would connect two ends of an existing unnamed trail in the Open Space designated area and would not conflict with the area's existing Open Space designation. Further, the residence and accessory structures would be surrounded by proposed



landscaped slopes and buffers and a fuel modification zone that would preserve the natural hillsides and slopes of the adjacent open space area.

Table 4.11-1, *General Plan Consistency Analysis*, analyzes the project's consistency with relevant General Plan Land Use Element goals and policies. Given that the project is a single-family residence within an existing residential community, only several General Plan policies are relevant. Nevertheless, as demonstrated in Table 4.11-1, the project is consistent with the applicable General Plan Land Use Element goals and policies.

Table 4.11-1
General Plan Land Use Consistency Analysis

Relevant Policies	Project Consistency Analysis
Goal LU 3: Compatible relationships between land uses in the community.	
LU 3.4: Ensure that residential densities are compatible with the surrounding land uses and buildings are in scale with the neighborhood character.	Consistent. The proposed single-family residence would be constructed on an approximately six-acre site. Nearby residences within the Bear Brand Ranch Community are also large-lot, single-family estates on properties at least four acres in size. Thus, the project's density (approximately 0.2 dwelling units per acre) would be compatible with the existing density of the community. Further, given that the Bear Brand Ranch Community is made up of individually designed large, single-family residences (i.e., mansions), the proposed residence, guest house, backyard amenities, and terraced walls complement the scale and character of the community as a large, uniquely designed, and architecturally attractive development.
Goal LU 4: Urban design that provides community gathering areas and other pedestrian spaces.	
LU 4.1: Emphasize attractive and functional urban design in new development.	Consistent. While Goal LU 4 is related to urban design in public places, the proposed project is also uniquely designed and functional in its design as a single-family residence. The terraced walls along the eastern, southern, and western boundaries of the main residence building provide attractive architectural features while also providing stability along a sloping hillside to minimize hazards associated with soil erosion and landslides. The preservation of open space along the eastern and southern project perimeter provides open views while also minimizing impacts to the natural grade of the hillside and coastal sage scrub (CSS) habitat. Further, the proposed residence is nestled within the hillside at the end of a gently curved access road rather than on top of the existing ridgeline along O'Hill Ridge to minimize aesthetic impacts on surrounding public areas.
Goal LU 5: Preservation and enhancement of the natural setting of the City.	
LU 5.1: Preserve existing sensitive open space areas within the City.	Consistent. As detailed in Section 4.4, <i>Biological Resources</i> , the vegetation on the steep lower slopes of the eastern portion of the site and the upper slopes of the central portion of the site is dominated by CSS habitat. Development of the proposed project would directly impact 2.15 acres of CSS to construct the proposed residence and associated fuel modification zone. Nevertheless, implementation of Mitigation Measures BIO-1 through BIO-4 and BIO-6 would ensure project impacts to CSS are reduced to less than significant levels. The project applicant would be required to create, enhance, and/or preserve 5.66 acres of CSS on-site in accordance with a U.S. Fish and Wildlife Service-approved Vegetation Enhancement Plan per Mitigation Measures BIO-1 and BIO-2. The proposed fuel modification zone is required to be planted with local native shrub species (e.g., CSS species) approved by the Orange County Fire Authority and regularly maintained (Mitigation Measure BIO-3).



Table 4.11-1 [cont'd]
General Plan Land Use Consistency Analysis

Relevant Policies	Project Consistency Analysis
	The preserved CSS area is to be recorded under a USFWS-approved Conservation Site Restrictive Covenant and a revised Bear Brand Ranch Association landscape easement per Mitigation Measure BIO-4, and Mitigation Measure BIO-6 would require the construction contractor to install highly visible barriers (e.g., orange snow fencing) around all areas of CSS habitat to be avoided outside of the grading limits and designated as Environmentally Sensitive Areas to be preserved. As such, the project would not adversely impact existing open space areas and associated sensitive plant communities in the project vicinity.
<u>LU 5.3:</u> Strive to maintain or improve the City's existing environmental quality.	<u>Consistent.</u> As analyzed throughout this Initial Study, the project would result in less than significant environmental impacts with implementation of existing regulatory requirements and/or mitigation measures. The City's existing environmental quality would not be substantially degraded or adversely impacts by project development.

Zoning Code Consistency

According to the *City of Laguna Niguel Zoning Map* (Zoning Map), the project site is primarily zoned Rural Residential (RS-1) District with the proposed access road crossing through an area zoned Open Space (OS) District. Municipal Code Section 9-1-31.1, *RS-1 Rural Residential District*, defines RS-1 zones as large-lot rural estates with abundant open space on each lot. OS zones are intended to preserve and protect open space areas for the purposes of passive recreation, visual enhancement, and resource conservation per Municipal Code Section 9-1-50.2, *OS Open Space District*. As stated, while the proposed access road would cross an OS zone, a trail segment across the access road is proposed that would connect two ends of an existing unnamed trail in the existing OS zone. Further, the residence and accessory structures would be surrounded by proposed landscaped slopes and buffers and a fuel modification zone that would preserve the natural hillsides and slopes of the adjacent open space area.

Given that the project site is predominantly zoned RS-1, Table 4.11-2, RS-1 Development Standards Consistency Analysis, analyzes the project's consistency with applicable RS-1 development standards. Additionally, the following discretionary approvals are required for the proposed project.

- Site Development Permit. A Site Development Permit is required to ensure the proposed development complies with all applicable RS-1 standards, including, but not limited to permitted uses, development standards and all supplemental regulations. As analyzed in Table 4.11-2, the project would comply with all applicable RS-1 development standards with approval of the requested discretionary approvals.
- Use Permit. A Use Permit is required to relocate the access driveway through Open Space (OS) zone. According to Municipal Code Section 9-1-114.2, *Use Permits and Minor Use Permits*, approval of a use permit requires consistency of the use with the General Plan, Zoning Code, and applicable development standards, and compliance with CEQA. The proposed use is also prohibited from creating conditions that are materially detrimental to the public health, safety, and general welfare of surrounding uses in the vicinity. The proposed access driveway would be consistent with the General Plan, Zoning Code, and RS-1 development standards and would not create conditions detrimental to surrounding residential uses. Further, as analyzed in this Initial Study, the overall project would comply with CEQA.
- Minor Adjustment. The project requires a Minor Adjustment to develop over-height retaining walls and fences. Per Municipal Code Section 9-1-35.2, *Fences and Walls*, fences higher than the maximum allowed heights may be permitted if a Minor Adjustment is approved by the City. In addition to the findings required for approval of the project's Site Development Permit, the following findings are also required in conjunction with approval of a fence height increase: (1) the height and location of the fence as proposed would not result in or create



a traffic hazard; and (2) the location, size, design, and other characteristics of the fence would not result in a material adverse effect on adjacent residents or their properties, including but not limited to, any views available to such residents prior to construction of the proposed "over-height" fence. The proposed retaining walls and fences would be located on- and off-site; however, the walls would be located off the main roadway (i.e., O'Hill Ridge) and thus, would not create traffic hazards on adjacent roadways. Additionally, given that the site naturally slopes downwards to the east, the retaining walls and fences are primarily located on the eastern portion of the main residence to counter the site's downward slope and would not impact views from adjacent residential uses to the south and uphill to the west.

- **Variance.** A Variance is requested to adjust the required fuel modification zone. Municipal Code Section 9-1-54.5, *Fuel Modification Regulations*, details the location and width of required fuel modification zones; minimum setback, wet, and thinning zones; encroachment restrictions; and fuel modification plan and maintenance program requirements. Based on Municipal Code Section 9-1-54.5, *Fuel Modification Regulations*, the project is required to provide at least a 120-foot fuel modification zone, including setback, wet zone, and thinning zone, around the proposed structures. However, the adjoining property, proposed project boundary, and required open space limit the available space for the required fuel modification zone. As such, the Applicant is requesting a Variance to implement the proposed conceptual fuel modification plan shown on Exhibit 2-11, Conceptual Fuel Modification Plan.

Table 4.11-2
RS-1 Development Standards Consistency Analysis

Development Standard	Requirement	Proposed Project	Does Project Satisfy Requirement?
RS-1 Standards			
Minimum Setbacks			
Front Yard	20 feet	20 feet and 9 inches	Yes
Side Yard	8 feet	32 feet and 2 inches	Yes
Rear Yard	25 feet	368 feet	Yes
Maximum Building Height ¹	35 feet	35 feet	Yes
Minimum Lot Size	4 acres	6 acres	Yes
Minimum Driveway Length	20 feet	860 feet	Yes
Minimum Driveway Width	10 feet	20 feet	Yes
Accessway Grade	+/- 20% (including transitions)	Up to 20 percent with transitions	Yes
Minimum Parking Spaces	Two enclosed parking spaces and 0.5 guest parking spaces	11-car attached garage	Yes
Maximum Fence Height ²	Within side/rear yard setbacks: 6 feet; Within front yard setbacks: 42 inches; Within main building area: 12 feet	The project proposes walls greater than 42 inches in height within the front yard setback and terraced, retaining walls up to 12 feet in height within the main building area.	Yes, upon approval of a Minor Adjustment.



Table 4.11-2 [cont'd]
RS-1 Development Standards Consistency Analysis

Development Standard	Requirement	Proposed Project	Does Project Satisfy Requirement?
Guest House Standards³			
Building Height	Shall not exceed the height of the primary residence	Given the sloped nature of the project site, the heights of the main residence and guest house vary depending on which elevation is measured. Nevertheless, both the main residence and guest house would not exceed the 35-foot building height limit of RS-1; refer to <u>Exhibit 2-8a, Building Elevation – North</u> and <u>Exhibit 2-8c, Building Elevation – South</u> .	Yes
Architecture	Shall be architecturally compatible with the primary residence	The architecture, building materials, and design would be similar to the main residence; refer to <u>Exhibit 2-8a</u> .	Yes
Maximum Floor Area	640 square feet	The proposed guest house is approximately 2,937 square feet in size. However, Municipal Code Section 9-1-114.1(g), <i>Alternate Development Standards</i> , would accommodate the oversized guest house under the proposed Site Development Permit.	Yes
Facilities	Permitted: Sanitation facilities; Prohibited: Cooking facilities	The guest house includes bathrooms for each of the three suites; no kitchens or cooking facilities are proposed.	Yes
Use	Shall be used only by the occupants of the primary residence, their non-paying guests, or domestic employees; shall not be rented or otherwise occupied separately from the primary residence	As proposed, the guest house would only be used by occupants of the primary residence and their non-paying guests. The guest house would not be utilized as a rental unit or for a separate household.	Yes
Minimum Parking Spaces	One additional parking space	11-car attached garage	Yes

Notes:

- ¹ Building height is measured from “ground level,” defined as the lower of the following (i.e. whichever is the lowest level above sea level): the finish grade at the exterior wall of an existing or proposed building, or the existing grade on the site.
- ² Fence height is measured from finish grade at the base of the fence to the top on that side which results in the greatest height. Retaining walls are considered “accessory structures” and require a three-foot top-or-toe of slope setback.
- ³ Guest house development standards per Municipal Code Section 9-1-35.8, *Guest Houses*.

Source: City of Laguna Niguel, *Laguna Niguel Municipal Code*, current through Ordinance No. 2019-197, enacted June 4, 2019.

Based on the analysis above and upon approval of the requested entitlements, including a Site Development Permit, Use Permit, Minor Adjustment, and Variance, the proposed project would not conflict with applicable goals and policies in the General Plan or applicable Zoning Code regulations. As such, the project would result in less than significant impacts in this regard.

Mitigation Measures: No mitigation measures are required.



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4.12 MINERAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The California Geological Survey designates areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists as Mineral Resource Zone 2 (MRZ-2). The project site is not mapped as MRZ-2; instead, the site is mapped as MRZ-1, which is defined as areas where no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.¹ Additionally, according to the General Plan Open Space/Parks/Conservation Element, there are no mineral resources within the City. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Refer to Response 4.12(a).

Mitigation Measures: No mitigation measures are required.

¹ California Geological Survey Division of Mines and Geology, *Special Report 143: Mineral Land Classification of the Greater Los Angeles Area: Part III - Classification of Sand and Gravel Resource Areas, Orange County-Temescal Valley Production-Consumption Region, Mineral Land Classification Map Plate 3.32*, 1981.



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4.13 NOISE

<i>Would the project result in:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b. Generation of excessive groundborne vibration or groundborne noise levels?			✓	
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear de-emphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately three dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 p.m. and 7:00 a.m. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.

Regulatory Framework

State

State Office of Planning and Research Noise Element Guidelines. The State Office of Planning and Research Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use



compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the Community Noise Equivalent Level (CNEL).

Caltrans Transportation and Construction Vibration Guidance Manual. The Transportation and Construction Vibration Guidance Manual prepared by the California Department of Transportation (Caltrans) identifies various vibration damage criteria for different building classes. As the nearest structures to project construction are residences, the architectural damage criterion for continuous vibrations at older residential structures of 0.3 inch-per-second peak particle velocity (PPV) is utilized.¹

Local

City of Laguna Niguel General Plan Noise Element. The *City of Laguna Niguel General Plan* (General Plan) Noise Element provides guidance for the control of noise to protect residents, workers, and visitors from potentially adverse noise impacts. The City has adopted local guidelines based on the community noise compatibility guidelines established by the California Department of Health Services, for use in assessing the compatibility of various land use types with a range of noise levels; refer to [Table 4.13-1, Land Use Compatibility for Community Noise Environments](#).

Table 4.13-1
Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multiple Family	50 – 65	60 – 70	70 – 75	70 – 85
Transient Lodging - Motel, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 – 85	NA

Notes: NA = Not Applicable; L_{dn} = Day/Night Average; CNEL = community noise equivalent level; dBA = A-weighted decibels

Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable - New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable - New construction or development should generally not be undertaken.

Source: State of California Governor's Office of Planning and Research, *General Plan Guidelines*, July 2017.

Further, the General Plan includes interior and exterior noise standards as summarized in [Table 4.13-2, Land Use with Noise Standards](#). [Table 4.13-2](#) shows standards and criteria that specify acceptable limits of noise for various land

¹ California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, Table 19, September 2013.



uses throughout the City. The City uses the standards identified in [Table 4.13-1](#) and [Table 4.13-2](#) as the primary tools to ensure compatibility between land uses and outdoor ambient noise.

Table 4.13-2
Land Use with Noise Standards

Land Use	Interior Standard	Exterior Standard
Residential Detached Residential Attached	45	65
Neighborhood Commercial Community Commercial	–	70
Professional Office	50	70
Community Commercial/Professional Office	–	70
Industrial/Business Park	55 ¹	75
Professional Office/Industrial/Business Park Industrial/Business Park/Professional Office/Community Commercial	–	75
Public/Institutional Public Institutional/Professional Office	60	70
Schools	50 ²	65 ²
Parks and Recreation	–	70

Notes:

1. Where quiet is a basis for use.

2. In interior or exterior Classroom Areas during school operating hours.

Source: City of Laguna Niguel, *The City of Laguna Niguel General Plan, Noise Element*, Adopted August 4, 1992.

The Noise Element of the General Plan includes the following goals, policies, actions that are applicable to the development of the proposed project:

Goal 1 Establishment of exterior and interior noise environments for land uses that will protect citizens from excessive noise.

Policy 1.1 Discourage noise sensitive land uses in noisy exterior environments unless measures can be implemented to reduce exterior and interior noise to acceptable levels. Alternatively, encourage less sensitive uses in areas adjacent to major noise generators but require appropriate interior working environments.

Action 1.1.1 Incorporate measures into all development projects to attenuate exterior/interior noise levels to acceptable levels. The City's noise standards for land use compatibility are provide in Table N-9 (Table 4.13-2). These standards shall be adhered to and implemented during the review of all proposed development projects.

Goal 3 Promote the control of noise between land uses.

Policy 3.1 Limit the maximum permitted noise levels which cross property lines and impact adjacent land uses.

Action 3.1.1 Implement the City's Noise Ordinance to regulate noise for various land use categories and for sensitive time periods.



Goal 4 The Control of noise from significant noise generators in the community.

Policy 4.1 Regulate noise from construction activities.

Action 4.1.1 Enforce the Noise Ordinance for all non-emergency construction operations.

Laguna Niguel Municipal Code. Chapter 6 Article VI of the Municipal Code contains the City's noise control regulations. The following sections of the Municipal Code are applicable to the proposed project.

Section 6-6-4 – Designated Noise Zone.

The entire territory of the City is hereby designated as Noise Zone 1

Section 6-6-5 – Exterior Noise Standards.

(a) *The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone (refer to Table 4.13-3, Exterior Noise Standards):*

**Table 4.13-3
Exterior Noise Standards**

Noise Zone	Noise Level	Time Period
1	55 dB(A)	7:00 a.m. – 10:00 p.m.
	50 dB(A)	10:00 p.m. – 7:00 a.m.

Notes: dB(A)= A-weighted decibels

1. 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 such noise causes the noise level, when measured on any other residential property, to exceed:*

1. *The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or*
2. *The noise standard plus five (5) dBA(A) for a cumulative period of more than fifteen (15) 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 minute in any hour; or*
5. *The noise standard plus twenty (20) dB(A) for any period of time.*

(c) *If the ambient noise level exceeds any of the first four noise limit categories in subsection (b) of this section, the cumulative period applicable to such category shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.*



Section 6-6-6 – Interior Noise Standards.

- (a) *The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone (refer to Table 4.13-4, Interior Noise Standards):*

**Table 4.13-4
Interior Noise Standards**

Noise Zone	Noise Level	Time Period
1	55 dB(A)	7:00 a.m. – 10:00 p.m.
	45 dB(A)	10:00 p.m. – 7:00 a.m.

Notes: dB(A)= A-weighted decibels

1. 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 such noise causes the noise level, when measured within any other dwelling unit on any residential property, to exceed:*
1. *The interior noise 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 minute in any hour; or*
 3. *The interior noise standard plus ten (10) dB(A) for any period of time.*
- (c) *If the ambient noise level exceeds either of the first two noise limit categories in subsection (b) of this section, the cumulative period applicable to the category shall be increased to reflect such ambient noise level. If the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under the category shall be increased to reflect the maximum ambient noise level.*

Section 6-6-7 – Exemptions from article

The following activities shall be exempted from the provisions of this article:

5. *Noise sources associated with construction, repair, remodeling or grading of any real property, provided such 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 Federal holiday.*

Existing Conditions

Stationary Sources

The project area is located within an urbanized area. The primary sources of stationary noise in the project vicinity are urban-related residential activities (i.e., mechanical equipment, parking areas, and pedestrians). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.



Mobile Sources

The majority of the existing noise near the project area is generated from vehicle sources along Golden Lantern. According to the General Plan, traffic noise levels along Golden Lantern at 100 feet from the centerline range from 68.7 to 70.0 dBA Community Noise Equivalent Level (CNEL).^{2,3}

Noise Measurements

In order to quantify existing ambient noise levels in the vicinity of the project site, three noise measurements were taken on February 27, 2020; refer to [Table 4.13-5, Noise Measurements](#). The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. Ten-minute measurements were taken, between 9:00 a.m. and 10:30 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day.

Table 4.13-5
Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Peak (dBA)	Time
1	31881 Peppertree Bend	50.3	47.0	62.7	81.8	9:18 a.m.
2	At the Cul-de-sac of Henley Drive	44.8	37.0	62.8	85.0	9:40 a.m.
3	At the Cul-de-sac of O'Hill Ridge	45.2	39.9	55.3	84.1	10:17 a.m.

Notes: dBA = A-weighted decibels, L_{eq} = Equivalent Sound Level; L_{min} = Minimum Sound Level; L_{max} = Maximum Sound Level, Peak = Highest Instantaneous Sound Level

Source: Michael Baker International, February 27, 2020.

Meteorological conditions were partially cloudy, cool temperatures, with light wind speeds (0 to 1 mile per hour), and low humidity. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for sound level meters. The results of the field measurements are included in [Appendix G, Noise Analysis](#).

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Less Than Significant Impact. It is difficult to specify noise levels that are generally acceptable to everyone; noise that is considered a nuisance to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or based on studies of the ability of people to sleep, talk, or work under various noise conditions.

Construction

Construction of the proposed project would occur over approximately 36 months and would include grading, building construction, and architectural coating. Groundborne noise and other types of construction-related noise impacts would typically occur during the grading construction phase and have the potential to create the highest levels of noise. As

² City of Laguna Niguel, *Laguna Niguel General Plan*, Table N-7, Future CNEL Range at 100 Feet from Centerline, Adopted August 4, 1992.

³ The Community Noise Equivalent Level (CNEL) is a rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 p.m. to 10:00 p.m., and +10 dBA for the night, 10:00 p.m. to 7:00 a.m.



such, the grading phase represents the worst-case condition for short-term construction noise levels that may occur at the nearest adjoining noise-sensitive receptors.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time each piece is in operation, condition of each piece of equipment, and number of pieces that would operate on the site. Construction equipment produce maximum noise levels when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites typically operates under less than full power conditions, or partial power. To more accurately characterize construction-period noise levels, the average (L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage. These noise levels are typically associated with multiple pieces of equipment simultaneously operating on part power. Grading, building construction, and architectural coating phases would utilize typical construction equipment, such as graders, excavators, rubber tired dozer, tractors/loaders/backhoes, and cranes; refer to Appendix A, Air Quality/GHG/Energy Analysis, for the complete list of modeled equipment.

The maximum sound level (L_{max}) construction noise levels from the typical construction equipment would vary from 77 dBA to 85 dBA at a distance of 50 feet.⁴ Pursuant to the Municipal Code Section 6-6-7, construction activities may occur between the hours of 7:00 a.m. and 8:00 p.m. on weekdays and Saturdays, and are prohibited on Sundays or Federal holidays. These permitted hours of construction recognize that construction activities undertaken during daytime hours are a typical part of living in an urban environment and do not cause a significant disruption. Given the sporadic and variable nature of proposed project construction and the implementation of time limits specified in the Municipal Code, short-term construction noise impacts would be less than significant. Additionally, to further reduce the potential for noise impacts, best management practices to further reduce noise levels during construction would be implemented. These best management practices would include making sure that all construction equipment, fixed or mobile, are equipped with properly operating and maintained mufflers and other state-required noise attenuation devices. With the implementation of the best management practices and adherence to the City's limitation on the allowable hours of construction, short-term noise impacts would be less than significant.

Operations

Mobile Noise

Future development generated by the proposed project would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, a doubling of traffic volumes would result in a 3 dB increase in traffic noise levels, which is barely detectable by the human ear.⁵ Based on the Institute of Transportation Engineers (ITE) *Trip Generation Rate Manual*, 10th Edition, trip generation rate of 9.52 trips per day for Single-Family Detached Housing (ITE Code 210), project development would generate approximately 10 average daily trips. However, given the nature of the proposed project as a large residential estate with a main residence and guest house, a more conservative trip generation rate of 12 trips per day and assumption of two dwelling units (main residence and guest house) is utilized. Based on these assumptions, the project would generate approximately 24 average daily trips. According to the Orange County Transportation Authority (OCTA), Golden Lantern experiences approximately 29,000 average daily trips and Beacon Hill Way experiences approximately 3,000 average daily trips.⁶ As such, the project's minimal trip generation (approximately 24 average trips per day) would not double existing traffic volumes along nearby

⁴ Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054)*, January 2006.

⁵ U.S. Department of Transportation, *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, updated August 24, 2017, https://www.fhwa.dot.gov/Environment/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed March 20, 2020.

⁶ Orange County Transportation Authority, *2019 Traffic Flow Map Orange County California*, accessed March 23, 2020.



roadways and an increase in traffic noise along local roadways would be imperceptible. Therefore, project-related traffic noise would be less than significant.

Stationary Noise

Stationary noise sources associated with the project would include those typical of suburban areas (e.g., dogs/pets, landscaping activities, weekly garbage collection, and cars parking). These noise sources are typically intermittent and short in duration and would be comparable to existing sources of noise experienced at surrounding residential uses. Further, all stationary noise activities would be required to comply with the City's Noise Ordinance and the California Building Code requirements pertaining to noise attenuation. As such, impacts from stationary sources would be less than significant.

Mechanical Equipment

The project would include heating, ventilation, and air conditioning (HVAC) units located at the exterior of the proposed residence and guest house on the ground level. HVAC units typically generate noise levels of approximately 52 dBA L_{eq} at 50 feet from the source.⁷ The closest HVAC unit to the nearest off-site residential property is associated with the guest house and would be located as close as approximately 175 feet from the off-site residences to the west; refer to Exhibit 2-3, Conceptual Site Plan. HVAC noise levels at this distance would be approximately 41 dBA. Therefore, the City's exterior daytime (55 dBA) and nighttime (50 dBA) noise standards per Municipal Code Section 6-6-5 would not be exceeded as a result of HVAC stationary noise at the project site. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Caltrans *Transportation and Construction Vibration Manual* identifies various vibration damage criteria for different building classes. This evaluation uses the Caltrans architectural damage criterion for continuous vibrations at older residential structures of 0.3 inch-per-second PPV. As the nearest structures to project construction are residences, this threshold is considered appropriate. The types of construction vibration impact 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.

The highest degree of groundborne vibration would be generated during the grading construction phase due to the operation of a rubber tired dozer. Based on the Federal Transit Administration (FTA) data, vibration velocities from rubber tired dozer operations would be 0.089 inch-per-second PPV at 25 feet from the source of activity, which is below the 0.3 inch-per-second PPV threshold.⁸ The nearest structure to the project site is located approximately 175 feet to the west of the proposed guest house location. As such, construction would not cause groundborne vibration above the Caltrans significance threshold and impacts would be less than significant.

⁷ Berger, Elliott H., et al., *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

⁸ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.



Mitigation Measures: No mitigation measures are required.

- c) ***For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. The nearest airport to the project site is the John Wayne Airport in the City of Santa Ana, approximately 15.8 miles to the northwest. According to the *Airport Environs Land Use Plan for John Wayne Airport* (AELUP), the project site is located outside of the Airport Impact Zones, AELUP Notification Area, Federal Aviation Regulation Part 77 Notification Area, and Airport Safety Zones.⁹ Additionally, the project site is not located within the vicinity of a private airstrip or related facilities. Therefore, project implementation would not expose people residing or working in the project area to excessive airport noise levels or safety hazards. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

⁹ Orange County Airport Land Use Commission, *Airport Environs Land Use Plan for John Wayne Airport*, April 17, 2008.



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4.14 POPULATION AND HOUSING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

- a) ***Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

Less Than Significant Impact. A project could induce population growth in an area either directly, through the development of new residences or businesses, or indirectly, through the extension of roads or other infrastructure. The proposed project would develop a single-family residence and guest house on a currently vacant site. The proposed project is consistent with the site's Residential Detached land use designation and Rural Residential District (RS-1) zoning; refer to [Section 4.11, *Land Use and Planning*](#). Therefore, development of the project site, as proposed, has been contemplated in the General Plan buildout assumptions and thus, would not directly induce substantial unplanned population growth in the area. Additionally, the proposed access road from O'Hill Ridge would not extend roads or infrastructure beyond what is needed for entry to the main residence and guest house; thus, the project also would not indirectly induce substantial unplanned population growth in the area. As such, less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- b) ***Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

No Impact. As shown on [Exhibit 2-2, *Site Vicinity*](#), the project site is currently vacant, and no housing exists on-site. Therefore, project implementation would not displace any existing housing or people. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.



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4.15 PUBLIC SERVICES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
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 any of the public services:***

1) ***Fire protection?***

Less Than Significant Impact. The Orange County Fire Authority (OCFA) provides fire protection and emergency medical services to the City and project site. There are three fire stations located within Laguna Niguel; the closest fire station is Station #49, located approximately 0.2-mile to the northwest at 31461 Golden Lantern.

Construction

Construction activities associated with the proposed project could create a temporary increased demand for fire protection services at the project site. All construction activities would be subject to compliance with all applicable State and local regulations in place to reduce risk of construction-related fire, such as installation of temporary construction fencing to restrict site access and maintenance of a clean construction site. Additionally, prior to the delivery of any combustible construction materials on-site, the project's Fire Master Plan requires that the proposed access road meet OCFA access requirements and fire hydrants, water supply, and adequate fire flow be properly installed. As a result, project construction would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, and would not adversely impact service ratios, response times, or other OCFA performance standards. A less than significant impact would occur in this regard.

Operations

The proposed project would increase demand for fire protection services in the project area. However, as one single-family residence and guest house, the project would not adversely impact OCFA's existing levels of service and response times nor require the construction of new or physically altered fire protection facilities.



Further, as detailed in Response 4.9(g) and shown on Exhibit 2-11, *Conceptual Fuel Modification Plan*, the project is proposing to establish two fuel modification zones (Zone A “Set Back Zone” and Zone B “Fully Irrigated Wet Zone”) to minimize wildfire risks. Zone A is defined as a 5- to 20-foot wide setback zone for non-combustible construction only. Zone B is defined as the first 95- to 150-feet from Zone A and is required to be permanently irrigated and fully landscaped with approved drought-tolerant, deep rooted, and moisture retentive material. The Fuel Modification Plan proposes a minimum 120-foot wide fuel modification zone along the northern and eastern project boundaries, consisting of a 20-foot wide Zone A and a 100-foot wide Zone B. Along the southwestern edge, there would be a 5- to 20-foot wide Zone A and an 80- to 95-foot wide Zone B. Along the western project boundary, the existing terrain slopes upwards away from the proposed residence and leads to existing landscaped irrigated areas and Upper Vintage. On each side of the access road, the project proposes a 30- to 40-foot wide Zone B. A minimum six-foot radiant heat wall is also proposed along the southern project boundary adjacent to the existing residence at 1 Upper Vintage. The project also includes a Fire Master Plan and Fire Protection Plan, both of which have been preliminarily reviewed and approved by OCFA and are subject to OCFA’s final approval.¹

In addition, the project would be subject to compliance with existing regulations specified in Municipal Code Title 8 Division 1, *Buildings and Construction Generally*, and Title 11 Division 3, *Fire Protection and Explosives*. Article 2, *2016 Edition of the California Building Code*, of Title 8 Division 1 includes standards and requirements for installation of fire protection systems. Division 3 of Title 11 includes the adaptation of the California Fire Code, restrictions on fire usage, and requirements for fire alarm systems. Compliance with these applicable laws, ordinances, and regulations would further reduce the project’s operational impacts. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

2) Police protection?

Less Than Significant Impact. The Orange County Sheriff’s Department (OCSD) provides police protection services to the City and the project site. The closest station is the Laguna Niguel station in City Hall, located approximately 2.2 miles to the northwest at 30111 Crown Valley Pkwy.

Construction

Construction activities associated with the proposed project could temporarily increase demand for police protection services at the project site. However, all construction activities would be subject to compliance with Municipal Code Title 8, *Building Regulations*, and the 2019 California Building Code. Chapter 33, *Safeguards During Construction*, of the California Building Code includes emergency access requirements which would minimize site safety hazards and potential construction-related impacts to police services. Thus, project construction would not result in the need for new or physically altered sheriff protection facilities, the construction of which could cause significant environmental impacts, and would not adversely impact service ratios, response times, or other OCSD performance standards. A less than significant impact would occur in this regard.

Operations

The proposed project would increase demand for police protection services in the project area. However, as one single-family residence and guest house within an established residential community, the project would not adversely impact OCSD’s existing levels of service and response times nor require the construction of new or physically altered police protection facilities. As stated, the proposed access road would meet OCFA fire access requirements and thus, would provide adequate emergency access for OCSD as well. Further, the proposed project would be designed in compliance with Municipal Code Title 8, *Building Regulations*, which includes provisions of the 2019 California Building Code. The California Building Code includes emergency access requirements which would minimize site safety hazards and

¹ Orange County Fire Authority, *OCFA Service Request #218472 Service Fee Code PR 120/PR910, 1 O’Hill Ridge, Laguna Niguel, CA*, April 1, 2019.



potential operational impacts to police services. Following compliance with Municipal Code requirements, the project's operational impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

3) Schools?

Less Than Significant Impact. The Capistrano Unified School District (CUSD) provide school services to the City. The project site is located within the CUSD school boundaries for White Elementary School, located at 25422 Chapparosa Park Road in the City of Laguna Niguel; Niguel Hills Middle School, located at 29070 Paseo Escuela in the City of Laguna Niguel; and Dana Hills High School, located at 33333 Golden Lantern in the City of Dana Point.²

The proposed single-family residence could generate additional students within the CUSD service area. However, the number of students generated by one single-family residence would not be substantial such that new or expanded CUSD school facilities would be required. Furthermore, all new residential, commercial, and industrial construction projects are subject to the collection of CUSD developer fees pursuant to Senate Bill 50 and Municipal Code Title 9 Division 1 Article 6, *Interim School Facilities Fees*. According to Government Code Section 65996, payment of statutory fees under Senate Bill 50 is considered to be full mitigation for new development projects. Thus, payment of developer impact fees would ensure project impacts to CUSD services are offset and reduced to less than significant levels.

Mitigation Measures: No mitigation measures are required.

4) Parks?

Less Than Significant Impact. There are currently 31 parks located within the City.³ The nearest parks to the project site are Pooch Park (a dog park), located approximately 0.2-mile to the northwest and Long View Park, located approximately 0.5-mile to the southwest.

As a single-family residence, the project does not propose public parkland. However, the project includes several outdoor recreational amenities on-site, including a water fountain at the center of the circular driveway entrance; pool cabana, terrace, barbecue/bar, and pool; lake; golf cart storage area; and a proposed trail segment across the access road that would connect two ends of an existing unnamed trail. Indoor recreational amenities include a bowling alley, arcade room, and fitness and sauna rooms. As a single-family residence, the project would introduce a nominal number of new residents, and such increase would not result in the need for new or physically altered parks facilities. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

5) Other public facilities?

Less Than Significant Impact. Other public facilities that could potentially be impacted by the proposed project include library services. Library services for the City, including the project site, are provided by the Orange County Public Library (OCPL). The nearest OCPL library is the San Juan Capistrano Library, approximately 1.2 miles to the east at 31495 El Camino Real in the City of San Juan Capistrano. Based on the project's nominal population increase, project implementation is not anticipated to result in a significant impact on public library services or OCPL's performance standards. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

² Capistrano Unified School District, *MySchool Locator*, <https://betalocator.decisioninsite.com/?StudyID=209898>, accessed February 25, 2020.

³ City of Laguna Niguel, *Facilities Listing*, <https://www.cityoflagunaniguel.org/Facilities>, accessed February 25, 2020.



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4.16 RECREATION

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✓	

- a) ***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?***

Less Than Significant Impact. Refer to Response 4.15(a)(4).

Mitigation Measures: No mitigation measures are 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?***

Less Than Significant Impact. As detailed in Response 4.15(a)(4), the project includes several outdoor recreational amenities on-site, including a water fountain at the center of the circular driveway entrance; pool cabana, terrace, barbecue/bar, and pool; lake; golf cart storage area; and a proposed trail segment across the access road that would connect two ends of an existing unnamed trail. Indoor recreational amenities include a bowling alley, arcade room, and fitness and sauna rooms. The project's potential environmental impacts for construction of the aforementioned recreational amenities are analyzed throughout this Initial Study. Compliance with applicable laws, ordinances, and regulations would ensure that the project's impacts are reduced to less than significant levels in this regard.

Mitigation Measures: No mitigation measures are required.



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4.17 TRANSPORTATION

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

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. According to the General Plan Circulation Element, Golden Lantern is identified as a Major roadway, which is defined as a six-lane divided roadway with a typical right-of-way width of 120 feet and a curb-to-curb pavement width of approximately 100 feet. The nearest transit facilities include bus stops along Golden Lantern served by the Orange County Transportation Authority (OCTA). Class II bicycle lanes are provided along both sides of Golden Lantern and pedestrian sidewalks are provided along O'Hill Ridge, Old Ranch Road, Golden Lantern, and most adjacent roadways.

Based on the Institute of Transportation Engineers (ITE) *Trip Generation Rate Manual*, 10th Edition, trip generation rate of 9.52 trips per day for Single-Family Detached Housing (ITE Code 210), project development would generate approximately 10 average daily trips. However, given the nature of the proposed project as a large residential estate with a main residence and guest house, a more conservative trip generation rate of 12 trips per day and assumption of two dwelling units (main residence and guest house) was utilized. Based on these assumptions, the project would generate approximately 24 average daily trips. Given the minimal average daily trips generated, the project would not adversely impact existing roadway capacities. The project proposes an access road from O'Hill Ridge to the project's main entry; however, no changes to existing roadway, transit, bicycle, or pedestrian facilities in the project vicinity are proposed. Therefore, project development would not conflict with any program plan, ordinance, or policy addressing the circulation system in the project area. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Less Than Significant Impact. The proposed project involves constructing a single-family main residence and guest house on an undeveloped residential estate hillside property in the Bear Brand Ranch Community. Given the small scale of the project, development of the project would not substantially increase vehicle miles traveled locally within Laguna Niguel or regionally within Orange County. As stated, transit, bicycle, and pedestrian facilities are located along O'Hill Ridge, Old Ranch Road, Golden Lantern, and other nearby roadways, and the project site is located near neighborhood-serving retail, restaurant, and commercial uses, such as the Ocean Ranch Village and Laguna Heights Marketplace shopping centers. Thus, project development would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts would be less than significant.



Mitigation Measures: No mitigation measures are required.

- c) ***Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Less Than Significant Impact. The project does not propose changes to the City's circulation system, such as sharp curves or dangerous intersections, and would not introduce incompatible uses to area roadways (e.g., farm equipment or trucking facilities). The project site would be accessed via a proposed 20-foot wide access road from O'Hill Ridge approximately 400 feet north from Old Ranch Road; refer to Exhibit 2-3, Conceptual Site Plan. The access road would gently curve down the sloped hillside towards the main residence's circular driveway entrance. Construction of the new private access road would not result in hazardous traffic conditions as it would only be utilized by residents and guests of the proposed residence and would also be subject to the Orange County Fire Authority (OCFA) review and approval for compliance with applicable fire access and safety standards. Thus, impacts related to hazards due to geometric design features or incompatible uses would be less than significant.

Mitigation Measures: No mitigation measures are required.

- d) ***Result in inadequate emergency access?***

Less Than Significant Impact. As detailed in Response 4.17(c), the project site would be accessed via a proposed 20-foot wide access road from O'Hill Ridge. The private access road would be constructed to meet OCFA's driveway design and fire safety standards. As part of the project's Fire Master Plan and Fire Protection Plan, the access road would also include a fire truck turnaround area, public fire hydrant, and knox key switch at the proposed motorized gate approximately mid-way between O'Hill Ridge and the proposed residence; refer to Exhibit 2-3. "No Parking-Fire Lane" signs would be posted along the access road along with an "End of Fire Access" sign approximately 300 feet from the entrance of the main residence. Thus, project development would not result in inadequate emergency access. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.



4.18 TRIBAL CULTURAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a 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 section 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project.” Section 21074 of AB 52 also defines a new category of resources under CEQA called “tribal cultural resources.” Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of Historical Resources (CRHR) or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

On February 19, 2016, the California Natural Resources Agency proposed to adopt and amend regulations as part of AB 52 implementing Title 14, Division 6, Chapter 3 of the California Code of Regulations, CEQA Guidelines, to include consideration of impacts to tribal cultural resources pursuant to Government Code Section 11346.6. On September 27, 2016, the California Office of Administrative Law approved the amendments to Appendix G of the CEQA Guidelines, and these amendments are addressed within this Initial Study.

In compliance with AB 52, the City of Laguna Niguel distributed letters notifying each tribe that requested to be on the City’s list for the purposes of AB 52 of the opportunity to consult with the City regarding the proposed project; refer to [Appendix H, AB 52 Documentation](#). The letters were distributed by certified mail on March 31, 2020.

On April 22, 2020, Governor Gavin Newsom issued Executive Order N-54-20 (EO) regarding the COVID-19 pandemic. Among other topics, the EO makes changes to Native American consultation required under CEQA (Public Resources Code Section 21080.3.1 and 21082.3). The EO acknowledges that local governments and California Native American groups may be having difficulty in consultation requirements during the COVID-19 crisis. As such, Section 9 of the EO states that “the timeframes set forth in Public Resources Code Sections 21080.3.1 and 21082.3, within which a



California Native American tribe must request consultation and the lead agency must begin the consultation process relating to an Environmental Impact Report, Negative Declaration, or Mitigated Negative Declaration under the California Environmental Quality Act, are suspended for 60 days.” The suspension period was from April 23, 2020 through June 21, 2020. As such, given that the notification letters were distributed on March 31, 2020, the tribes had until June 29, 2020 to respond to the City’s request for consultation.

- a) ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:***
- 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 section 5020.1(k)?***

No Impact. As detailed in Response 4.5(a), no historic resources listed or eligible for listing in a State or local register of historic resources are located on-site. Therefore, no impacts related to historic tribal cultural resources defined in Public Resources Code Section 5020.1(k) would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.***

Less Than Significant Impact With Mitigation Incorporated. As noted above, the City distributed letters to potentially affected Native American tribes which have cultural or traditional affiliation with the City in accordance with AB 52 requirements; refer to Appendix H. The letters were distributed by certified mail on March 31, 2020. Six tribes responded: the Pala Band of Mission Indians, Jamul Indian Village, Rincon Band of Luiseño Indians, Juaneño Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, and San Luis Rey Band of Mission Indians.

The Pala Band of Mission Indians responded on April 15, 2020 stating that the project site is not located within the boundaries of the recognized Pala Indian Reservation; however, the site is within the boundaries of the tribe’s traditional use area and is situated in close proximity to the tribe’s reservation. As such, the tribe requested additional information, including any maps and cultural resource surveys conducted for the project, to determine whether consultation would be required. The City forwarded the requested information to the tribe on May 11, 2020 and on May 12, 2020, the tribe responded that after reviewing the documents, no consultation or monitoring would be required. Therefore, AB 52 consultation with the Pala Band of Mission Indians concluded.

The Jamul Indian Village responded on April 15, 2020 stating that the project site is closer to the Luiseño people (e.g., Pechanga, Pala, Rincon, and La Jolla Bands) and deferred to them for comments. As such, consultation with the Jamul Indian Village concluded.

The Rincon Band of Luiseño Indians responded on April 16, 2020 with no further comments and no request for consultation.

The Juaneño Band of Mission Indians responded on April 17, 2020 requesting the Sacred Lands File search results regarding the project and preliminarily recommending Native American and archaeological monitoring during all ground-disturbing activities. The City provided the SLF results and consulted with the tribe on June 30, 2020. After review of the Cultural Resources Assessment and SLF results, the tribe requested inclusion of a mitigation measure requiring Native American and archaeological monitoring during all ground-disturbing activities with the option to reduce or eliminate monitoring if the monitors determine that the ground-disturbing activities would have low or no potential to



impact cultural resources. As such, Mitigation Measure CUL-1 included in Response 4.5(b) would also be applicable in this regard. The Juaneño Band of Mission Indians agreed to the proposed mitigation and consultation was formally concluded.

The Agua Caliente Band of Cahuilla Indians responded on May 6, 2020 stating that the project site is located outside of the tribe's traditional use areas, deferred to other tribes located closer to the project, and concluded consultation efforts. Similarly, the San Luis Rey Band of Mission Indians responded on May 6, 2020 deferring to other tribes located closer to the project and concluded consultation efforts.

Based on the AB 52 consultation efforts conducted by the City, it was determined that there are no known tribal cultural resources in the project area. However, there is potential to uncover previously unknown tribal cultural resources during ground-disturbing activities. Thus, implementation of Mitigation Measure CUL-1 would ensure impacts in this regard are reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure CUL-1.



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4.19 UTILITIES AND SERVICE SYSTEMS

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

- a) ***Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***

Less Than Significant Impact.

Water

The project site is served by the Moulton Niguel Water District (MNWD). The proposed project would construct private water lines on-site to connect to existing water facilities within O'Hill Ridge. Payment of standard MNWD water connection fees and ongoing user fees would ensure the project's impacts on existing water facilities are adequately offset. Additionally, the MNWD provided a will-serve letter for the proposed project that states MNWD will service the proposed project for water services and that the project would not require water pipe upsizing.¹ Less than significant impacts would occur in this regard.

Wastewater

MNWD would also provide sanitary sewer services to the project site via existing sewer lines. The project proposes to construct a private lateral sewer system connecting to the existing sewer line within O'Hill Ridge. Wastewater generated at the project site would be treated at one of the following three treatment plants: Regional Treatment Plant, Plant 3A, or J.B. Latham Treatment Plant. Based on 2017 data, MNWD treats an average annual flow of 8 million gallons per day (mgd) at the Regional Treatment Plant (with maximum capacity of 12 mgd); 1.8 mgd at Plant 3A (with maximum

¹ Moulton Niguel Water District, *Proposed Development Castelnuevo Del Garg located at O'Hill Ridge Laguna Niguel*, September 11, 2017.



capacity of 6 mgd); and 1.4 mgd at J.B. Latham Treatment Plant (with maximum capacity of 13 mgd).^{2,3} Based on a wastewater generation rate of 125 gallons per day and a conservative assumption of the proposed main residence and guest house as two separate dwelling units, the project is anticipated to generate approximately 250 gallons per day (gpd) of wastewater.⁴ Sufficient capacity exists within MNWD's three treatment plants to accommodate wastewater generated by the proposed project and thus, no new wastewater treatment facilities or expansion of existing facilities would be necessary.

In addition, the project would be required to pay standard wastewater connection fees and ongoing user fees, which would ensure the project's impacts on existing sewer facilities are adequately offset. Payment of these fees would fund improvements and upgrades to surrounding sewer lines, and would offset the project's increase in demand for wastewater collection services. Further, MNWD provided a will-serve letter for the proposed project stating that MNWD will service the proposed project for wastewater services and that the project would not require sewer pipe upsizing.⁵ As such, it is not anticipated that project implementation would require construction of new wastewater facilities or expansion of existing facilities that would result in a significant environmental effect. Impacts would be less than significant in this regard.

Stormwater

The proposed project would include an on-site lake (detention basin) near the southeastern portion of the project site; refer to Section 4.10, Hydrology and Water Quality and Appendix F, Hydrology Study and WQMP. The proposed lake is designed to capture a 100-year storm event. Any flow in excess of the lake's capacity would enter an overflow spillway into a proposed storm drain and pass through a modular wetland for treatment. The runoff would then flow down the hill into a proposed energy dissipation rip rap structure near the existing ravine at the bottom of the canyon. Eventually, stormwater runoff would sheet flow into an existing 30-inch storm drain under Peppertree Bend that ultimately outlets to the San Juan Creek Channel and Pacific Ocean at Doheny Beach. In addition, runoff stored in the lake would be used for on-site landscape irrigation.

The project's potential environmental effects for construction of the abovementioned stormwater drainage improvements are analyzed in this Initial Study. Construction of the storm drain improvements would be subject to compliance with all applicable local, State, and Federal laws, ordinances, and regulations, as well as the specific mitigation measures in this Initial Study. As such, impacts in this regard would be less than significant.

Dry Utilities

Southern California Gas Company and San Diego Gas and Electric would provide natural gas and electricity services to the site, respectively. Telecommunication services would be provided by AT&T, Cox Communication, and/or Frontier Communications. The project would require construction of new private on-site dry utilities; however, payment of standard utility connection fees and ongoing user fees would ensure these utility services are able to accommodate the proposed development. Additionally, the project's potential environmental effects in this regard are analyzed throughout this Initial Study and would be subject to compliance with all applicable local, State, and Federal laws, ordinances, and regulations, as well as the specific mitigation measures throughout this Initial Study. As such, project impacts in this regard would be less than significant.

² Moulton Niguel Water District, *2015 Urban Water Management Plan*, <https://www.mnwd.com/app/uploads/2013/05/2015-UWMP-June-Final-Documents-Part-1.pdf>, June 2016.

³ Moulton Niguel Water District, *Wastewater Treatment in Moulton Niguel Water District*, <https://www.mnwd.com/app/uploads/2017/03/CAC060717-Handout.pdf>, June 7, 2017.

⁴ Moulton Niguel Water District, *Development Requirements for Establishing and Modifying potable Water, Recycled Water, and Wastewater Service*, <https://www.mnwd.com/app/uploads/2019/02/Complete-Doc-DEVELOPMENT-REQUIREMENTS-SIG-PAGE-PART-I-APPENDICES-AND-PART-II-FINAL.pdf>, January 2019.

⁵ Moulton Niguel Water District, *Proposed Development Castelnuevo Del Garg located at O'Hill Ridge Laguna Niguel*, September 11, 2017.



Mitigation Measures: No mitigation measures are required.

- b) ***Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

Less Than Significant Impact. As discussed above, MNWD would provide water services to the project site. Based on MNWD's 2015 Urban Water Management Plan (UWMP), Table 4.19-1, MNWD Total Water Demand Projections, details MNWD's anticipated total water demand projections from 2015 through 2040.

**Table 4.19-1
MNWD Total Water Demand Projections**

	2015	2020	2025	2030	2035	2040
Potable and Raw Water Demand	26,823.6	27,804.5	25,690.8	25,159.7	25,167.4	25,250.4
Recycled Water Demand	7,988.1	8,110.6	10,009.9	9,998.1	9,986.3	9,974.9
Total Water Demand	34,811.7	35,915.1	35,700.7	35,157.8	35,153.7	35,225.3

Notes: Units are in acre-feet.

Source: Moulton Niguel Water District, 2015 Urban Water Management Plan, Appendix Table 2-8: DWR Table 4-3: Total Water Demands, June 2016.

MNWD relies on a combination of imported potable water (75 percent) and recycled water (25 percent) to meet its water demands.⁶ MNWD's imported water sources include the State Water Project and Colorado River Aqueduct via Metropolitan Water District of Southern California.⁷ According to the UWMP, MNWD is able to meet projected demands during normal, dry, and multiple dry years through 2040; refer to Tables 4.19-2, Normal Year Supply and Demand Comparison, through 4.19-4, Multiple Dry Year Supply and Demand Comparison.

**Table 4.19-2
Normal Year Supply and Demand Comparison**

	2020	2025	2030	2035	2040
Supply Totals	40,929	44,178	44,938	45,391	45,391
Demand Totals	35,915	35,701	35,158	35,154	35,225
Difference	5,014	8,477	9,781	10,237	10,166

Notes: Units are in acre-feet.

Source: Moulton Niguel Water District, 2015 Urban Water Management Plan, Appendix Table 2-20: DWR Table 7-2 Retail: Normal Year Supply and Demand Comparison, June 2016.

⁶ Moulton Niguel Water District, *Operations (webpage)*, <https://www.mnwd.com/operations/>, accessed March 20, 2020.

⁷ Psomas, *Laguna Niguel Gateway Specific Plan Water Supply Assessment*, page 1, May 2011.



Table 4.19-3
Single Dry Year Supply and Demand Comparison

	2020	2025	2030	2035	2040
Supply Totals	39,147	38,914	38,322	38,318	38,396
Demand Totals	39,147	38,914	38,322	38,318	38,396
Difference	0	0	0	0	0

Notes: Units are in acre-feet.

Source: Moulton Niguel Water District, 2015 *Urban Water Management Plan*, Appendix Table 2-21: DWR Table 7-3 Retail: Single Dry Year Supply and Demand Comparison, June 2016.

Table 4.19-4
Multiple Dry Year Supply and Demand Comparison

		2020	2025	2030	2035	2040
First Year	Supply Totals	39,147	38,914	38,322	38,318	38,396
	Demand Totals	39,147	38,914	38,322	38,318	38,396
	Difference	0	0	0	0	0
Second Year	Supply Totals	39,147	38,914	38,322	38,318	38,396
	Demand Totals	39,147	38,914	38,322	38,318	38,396
	Difference	0	0	0	0	0
Third Year	Supply Totals	35,915	35,701	35,158	35,154	35,225
	Demand Totals	35,915	35,701	35,158	35,154	35,225
	Difference	0	0	0	0	0

Notes: Units are in acre-feet.

Source: Moulton Niguel Water District, 2015 *Urban Water Management Plan*, Appendix Table 2-22: DWR Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison, June 2016.

Based on a water demand factor of 350 gpd per dwelling unit and a conservative assumption of the proposed main residence and guest house as two separate dwelling units, project implementation is anticipated to result in a water demand of approximately 700 gpd, or 0.78 acre-feet per year.⁸ The project's estimated water demand of 0.78 acre-feet per year would represent less than 0.1 percent of the City's total water demand of 35,915 acre-feet for 2020 and 35,225 acre-feet for 2040; refer to [Table 4.19-1](#). Additionally, given that the proposed project is an allowed use under the site's existing land use designation and zoning, development of the site, as proposed, was already contemplated in the General Plan. Thus, the UWMP has also contemplated development of the site as a single-family detached residence. The project would also be required to comply with water efficiency standards in the 2019 California Building Energy Efficiency Standards and 2019 California Green Building Standards Code. Thus, project implementation would result in a less than significant impact in this regard.

Mitigation Measures: No mitigation measures are required.

⁸ Moulton Niguel Water District, *Development Requirements for Establishing and Modifying Potable Water, Recycled Water, and Wastewater Service*, <https://www.mnwd.com/app/uploads/2019/02/Complete-Doc-DEVELOPMENT-REQUIREMENTS-SIG-PAGE-PART-I-APENDICES-AND-PART-II-FINAL.pdf>, January 2019.



- c) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less Than Significant Impact. Development of the proposed project would generate additional wastewater beyond existing conditions; refer to Response 4.19(a). However, as analyzed above, there is substantial remaining capacity to treat project-generated wastewater at the three MNWD wastewater treatment plants. Thus, following compliance with the relevant laws, ordinances, and regulations, project-generated wastewater, in addition to MNWD's existing commitments, would be adequately accommodated by existing wastewater facilities. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

Less Than Significant Impact. CR&R Environmental Services, Inc. (CR&R) provides residential waste collection for the City, including the project site. In 2018, a total of 39,094 tons of solid waste generated in the City were disposed of in six landfills, with the majority being disposed of at the Prima Deshecha Landfill in San Juan Capistrano; refer to Table 4.19-5, *Landfills Serving the City*.⁹

Table 4.19-5
Landfills Serving the City

Landfill/Location	Maximum Daily Throughput (tons per day)	Remaining Capacity (cubic yards)	Anticipated Closure Date
Prima Deshecha Landfill 32250 Avenida La Pata, San Juan Capistrano, CA 92675	4,000	134,300,000	12/31/2102
Frank R. Bowerman Sanitary Landfill 11002 Bee Canyon Access Road, Irvine, CA 92618	11,500	205,000,000	12/31/2053
Simi Valley Landfill and Recycling Center 2801 Madera Road, Simi Valley, CA 93065	9,250	88,300,000	01/31/2052
Olinda Alpha Sanitary Landfill 1942 North Valencia Avenue, Brea, CA 92823	8,000	34,200,000	12/31/2021
Azusa Land Reclamation Co. Landfill 1211 West Gladstone Street, Azusa, CA 91702	8,000	51,512,201	01/01/2045
El Sobrante Landfill 10910 Dawson Canyon Road, Corona, CA 91719	16,054	143,977,170	01/01/2051

Source: California Department of Resources Recycling and Recovery, *SWIS Facility/Site Search*, <https://www2.calrecycle.ca.gov/SWFacilities/Directory>, accessed February 26, 2020.

Construction

Project construction is not anticipated to generate significant quantities of solid waste with the potential to affect the capacity of regional landfills. All construction activities would be subject to conformance with relevant Federal, State, and local requirements related to solid waste disposal. Specifically, the project would be required to demonstrate compliance with the California Integrated Waste Management Act of 1989 (AB 939), which requires all California cities

⁹ California Department of Resources Recycling and Recovery, *Jurisdiction Disposal By Facility, Disposal During 2018 for Laguna Niguel*, <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed February 26, 2020.



“reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible.” AB 939 requires that at least 50 percent of waste produced is recycled, reduced, or composted. The project would also be required to demonstrate compliance with the 2019 Green Building Code, which includes design and construction measures that act to reduce construction-related waste through material conservation and other construction-related efficiency measures. Compliance with these programs would ensure the project’s construction-related solid waste impacts would be less than significant.

Operations

Based on a single-family residential solid waste generation rate of 12.23 pounds per day per unit and a conservative assumption of the proposed main residence and guest house as two separate dwelling units, project operations is expected to generate approximately 24.5 pounds per day, or approximately 0.01 tons per day.¹⁰ This represents less than 0.1 percent of the daily permitted throughput capacities identified in Table 4.19-5. As such, the project is not anticipated to generate solid waste in excess of State or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

- e) ***Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?***

Less Than Significant Impact. Refer to Response 4.19(d). The proposed project would comply with all Federal, State, and local statutes and regulations related to solid waste, including AB 939. Specifically, the project would be required to recycled, reduced, or composted at least 50 percent of construction and demolition debris. Compliance with existing laws and regulations would ensure project’s impacts related to solid waste are reduced to less than significant levels.

Mitigation Measures: No mitigation measures are required.

¹⁰ California Department of Resources Recycling and Recovery, *Estimated Solid Waste Generation Rates*, <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>, accessed March 23, 2020.



4.20 WILDFIRE

<i>If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

a) ***Substantially impair an adopted emergency response plan or emergency evacuation plan?***

No Impact. According to the California Department of Forestry and Fire's *Orange County Very High Fire Hazard Severity Zones in LRA Map*, the project site is not located in or near a State responsibility area nor is the project site designated as a very high fire hazard severity zone.¹ Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

b) ***Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

No Impact. Refer to Responses 4.15(a)(1) and 4.20(a).

Mitigation Measures: No mitigation measures are required.

c) ***Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?***

No Impact. Refer to Response 4.20(a).

Mitigation Measures: No mitigation measures are required.

¹ California Department of Forestry and Fire Protection, *Orange County Very High Fire Hazard Severity Zones in LRA Map*, October 2011.



- d) ***Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?***

No Impact. Refer to Response 4.20(a).

Mitigation Measures: No mitigation measures are required.



4.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

- 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 Impact With Mitigation Incorporated. As concluded in Section 4.4, Biological Resources, the project would impact special status wildlife species and sensitive natural communities, including the coastal California gnatcatcher (*Poliophtila californica californica*) and coastal sage scrub habitat. Implementation of Mitigation Measures BIO-1 through BIO-9 would reduce such impacts to less than significant levels. Additionally, as indicated in Section 4.5, Cultural Resources, and Section 4.18, Tribal Cultural Resources, implementation of Mitigation Measure CUL-1 would reduce the project's potential environmental effects to cultural and tribal cultural resources. Therefore, the proposed project would not potentially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Impacts in this regard would be less than significant with mitigation incorporated.

- 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. A significant impact may occur if a proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately, but would be significant when viewed together. As concluded in Sections 4.1 through 4.20, the proposed project would not result in any significant and unavoidable impacts in any environmental categories with implementation of existing



regulatory requirements and/or project-specific mitigation measures. Implementation of mitigation measures at the project-level would reduce the potential for the incremental effects of the proposed project to be considerable when viewed in connection with the effects of past projects, current projects, or probable future projects. Thus, impacts in this regard would be less than significant with mitigation incorporated.

- c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

Less Than Significant Impact With Mitigation Incorporated. Previous sections of this Initial Study reviewed the proposed project's potential impacts related to aesthetics, air quality, noise, hazards and hazardous materials, transportation, and other issues. As concluded in these previous discussions, the proposed project would not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly, following conformance with the existing regulatory framework and mitigation measures. Further, as a residential development, project features would be designed to meet the needs of humans and are not anticipated to result in direct or indirect adverse effects. Impacts would be less than significant upon implementation of mitigation measures detailed in this Initial Study.



4.22 REFERENCES

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<https://www.calrecycle.ca.gov/greenbuilding/materials#Material>, accessed March 24, 2020.

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5.0 CONSULTANT RECOMMENDATION

Based on the information and environmental analysis contained in the Initial Study/Environmental Checklist, we recommend that the City of Laguna Niguel prepare a mitigated negative declaration for the 1 O'Hill Ridge – Garg Residence Project. We find that the proposed project could have a significant effect on a number of environmental issues, but that mitigation measures have been identified that reduce such impacts to a less than significant level. We recommend that the second category be selected for the City of Laguna Niguel's determination (see Section 6.0, Lead Agency Determination).

7/30/2020

Date

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Frances Yau, AICP, Project Manager
Michael Baker International



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6.0 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 in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒

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

☐

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

☐

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

☐

Signature:

A handwritten signature in black ink, appearing to read "Adam Johnson", written over a horizontal line.

Title:

Senior Planner

Printed Name:

Adam Johnson

Agency:

City of Laguna Niguel

Date:

7.20.20



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