



**Revised and Recirculated
Initial Study / Mitigated Negative Declaration**

**Proposed Ocean Ranch Estates
Tentative Subdivision Map Project**

February 2019

PROJECT NAME: Ocean Ranch Estates Tentative Subdivision Map Project

PROJECT LOCATION: 512 - 538 S. Nardo Avenue, Solana Beach, CA 92075

APN: 298-121-24, 298-121-25, 298-121-55, 298-121-56

PROJECT APPLICANT: Nicholas P. Nicholas
Ocean Ranch Estates, LLC
9345 Mira Mesa Boulevard
San Diego, California 92126

LEAD AGENCY: City of Solana Beach
Community Development Department
635 South Highway 101
Solana Beach, California 92075
Contact: Corey Andrews, Principal Planner
(858) 720-2400
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PUBLIC REVIEW PERIOD: February 8, 2019, to March 11, 2019

This Revised and Recirculated Mitigated Negative Declaration and Initial Study Checklist has been prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). It is available for a 30-day public review period as shown above.

Comments regarding this Mitigated Negative Declaration and Initial Study Checklist must be made in writing to Ms. Corey Andrews, Principal Planner, 635 South Highway 101, Solana Beach, California 92075. All comments must be received in the Community Development Department office no later than 5:00 p.m. on the last day of the public review period.

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Chapter 1

INTRODUCTION

Overview

The City of Solana Beach (City) Community Development Department has prepared this Revised and Recirculated Initial Study/Mitigated Negative Declaration (IS/MND) to evaluate the potential environmental consequences associated with the Ocean Ranch Estates Tentative Subdivision Map Project. As part of the discretionary approval process by the Community Development Department, the proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA). One of the main objectives of CEQA is to disclose to the public and the decision makers the potential environmental effects of the proposed activities. CEQA requires that the lead agency prepare an Initial Study to determine whether an Environmental Impact Report (EIR), Negative Declaration (ND), or a Mitigated Negative Declaration (MND) is needed. The City is the Lead Agency for the proposed project under CEQA. A description of the proposed project is found in Chapter 2 of this document.

The new and/or revised information contained in this document includes an analysis of both the Phase 1 (subdivision and improvements) and Phase 2 (potential construction on each lot). Additional detail has been added that more completely describes the stormwater improvements, roadway improvements as well sidewalk improvements on Bell Ranch Road and Nardo Avenue.

Authority

The preparation of this IS/MND is governed by CEQA (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). Specifically, the preparation of an IS/MND is guided by the State CEQA Guidelines Section 15063, which describes the requirements for an Initial Study, and Sections 15070-15075, which describe the process for the preparation of an MND. Where appropriate and supportive to an understanding of the issues, reference will be made to either the CEQA statute or State CEQA Guidelines. This IS/MND contains all of the contents required by CEQA, which includes a project description, a description of the environmental setting, an analysis of potential environmental impacts, identification of mitigation measures for any significant effects, and a determination of the project's consistency with applicable plans and policies.

Scope

This IS/MND evaluates the proposed project's potential effects on the following resource topics:

- aesthetics
- agriculture and forestry resources
- air quality
- biological resources
- cultural resources
- 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/traffic
- tribal cultural resources
- utilities and service systems
- mandatory findings of significance

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Chapter 2**ENVIRONMENTAL SETTING
AND PROJECT DESCRIPTION****City of Solana Beach
Initial Study & Mitigated Negative Declaration**

PROJECT TITLE:	Ocean Ranch Estates Tentative Subdivision Map Project
LEAD AGENCY NAME AND ADDRESS:	City of Solana Beach 635 South Highway 101 Solana Beach, California, 92075
CONTACT PERSON AND PHONE NUMBER:	Corey Andrews, Principal Planner Community Development Department City of Solana Beach (858) 720-2447 or CAndrews@cosb.org
PROJECT LOCATION:	512 - 538 S. Nardo Avenue, Solana Beach, California
PROJECT APPLICANT NAME AND ADDRESS:	Nicholas P. Nicholas Ocean Ranch Estates, LLC 9345 Mira Mesa Boulevard San Diego, California 92126
GENERAL PLAN DESIGNATION:	Low Density Residential (3 DU/Acre)
ZONING DESIGNATION:	Low Residential (LRc)

OVERVIEW AND DESCRIPTION OF PROPOSED PROJECT:

The proposed project consists of the subdivision and redevelopment of an existing L-shaped 4.2-acre site located at 512, 516, 524, and 538 South Nardo Avenue in the southeast portion of the City (Figures 1 and 2). The Assessor's Parcel Numbers (APNs) of the site are 298-121-24, 298-121-25, 298-121-55, and 298-121-56.

The proposed project consists of two phases. Phase 1 is a request for approval of a Development Review Permit (DRP) and a Major Subdivision (Tentative Subdivision Map) to subdivide an existing 4.2 gross acre parcel into eight single-family residential lots as shown in Table 1 (see Figure 3). Phase 2 consists of the future development of eight additional single-family homes as well as purchasing one offsite townhome or apartment that would be rented at the low-income affordability level as required by the Solana Beach Municipal Code (SBMC) Section 17.70.020.D.¹ The affordable housing unit will be purchased offsite within City boundaries before the fourth building permit is granted. At this time, construction of the eight new single-family homes is not proposed by the applicant. Phase 2 (future residential home construction) will be subject to subsequent review and approval by the City of Solana Beach. However, potential impacts from Phase 1 and future Phase 2 have been analyzed on a worst-case basis as a part of this IS/MND.

The existing General Plan land use designation for the project site is low density residential. The existing zoning designation for the project site is Low Residential (LRc) which allows up to 3 dwelling units per acre and specifies a minimum 14,000 square foot (sf) parcel/lot size. This zone is intended for residential development in areas characterized by detached single-family homes on older subdivided lots.

The proposed gross lot sizes are shown in Table 1. The net buildable area of each lot would be reduced to reflect required setbacks of 25 feet for the front yard, 25 feet for the rear yard setback and 10 feet for street side and interior side yard setbacks. The maximum allowable height of the residences stated in the SBMC is 25 feet as would be measured from the proposed pad elevations established in the grading plan.

Table 1
Proposed Tentative Subdivision Lot Data

Lot #	Lot Size (SF / Acres)	Maximum Allowable Residential Square Footage	Pad Elevation (above mea sea level)
1	14,047/0.32	4,408	197.0
2	14,027/0.32	4,405	196.0
3	14,027/0.32	4,405	194.5
4	14,027/0.32	4,405	192.0
5	14,002/0.32	4,400	189.5
6	25,137/0.57	5,332	185.0
7	25,405/0.58	5,345	183.5
8	34,999/0.80	5,825	184.0

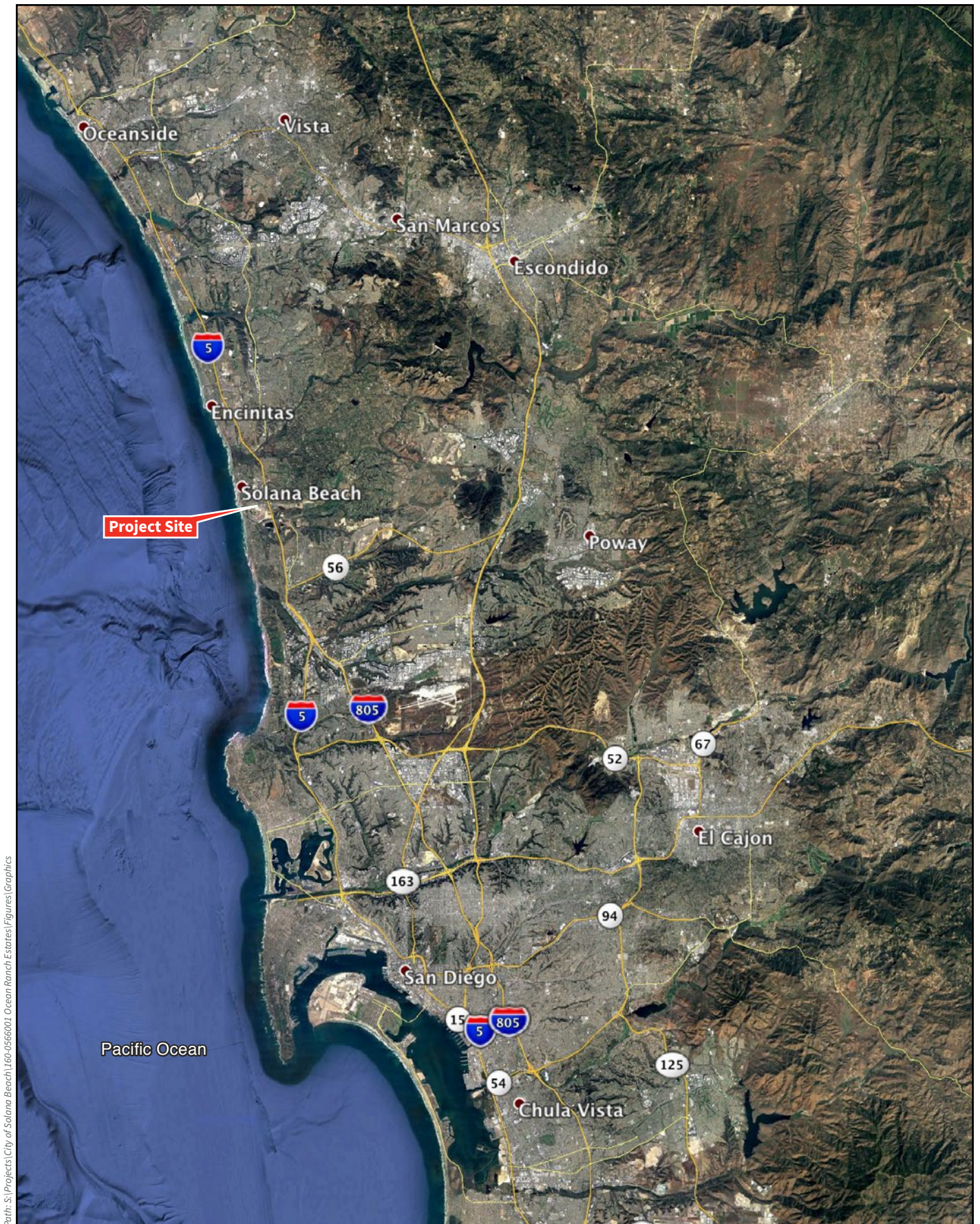
¹ The project applicant would also be required to pay an affordable housing impact fee for a fractional unit per Section 17.70.030A.

Phase 1 of the proposed project involves subdividing the existing parcel into eight lots and demolition of all existing structures on site. Phase 1 of the proposed project includes grubbing and clearing the site, site preparation, and grading to create building pads for eight future single-family homes. Phase 1 of the proposed project also includes construction of Bell Ranch Road, curbs and gutters, sidewalks, and wet and dry utilities. The project would include a Hydromodification Management Plan (HMP) Biofiltration basin located on Lot 8 and a 10-foot drainage easement bisecting Lots 7 and 8 containing an 18-inch storm drain. To adequately convey runoff from the HMP Biofiltration basin eastward down the steep slope, there would be two drainage basins to mimic the existing condition. Basin 1 would consist of the southwestern and northwestern portions of the site and would include offsite runoff from the adjacent areas to the north and west. AAn 18-inch storm drain pipe would be installed to convey runoff from the HMP Biofiltration basin to the existing drainage easement on parcels 298-440-37 and -38 that discharges onto Fresca Street via a modified curb outlet. In addition, a secondary 8-inch polyvinyl chloride (PVC) pipe would be installed to collect and convey runoff from the downstream properties to Fresca Street. This secondary pipe system would allow the two systems to function independently to provide optimum conveyance. An easement from one of the downstream properties has been obtained from the downslope property owner Laurel Graziano, as of January 7, 2019, in order to connect the proposed storm drain system to the existing storm drain system (See Figure 4, Drainage to Fresca Street) (SD County Recorder 2019).

Basin 2 would consist of portions of Lot 5 and Lot 6 and the small area of undeveloped steep slope in the southeastern portion of the site. Runoff from these areas would flow to the back of each lot to a proposed storm drain that would discharge to the existing ditch at the bottom of the slope near the southeastern corner of the site and continue as it does in the existing condition. The existing stone features located within the steep slope would be outside the project's area of disturbance and would be preserved.

In Phase 2, individual HMP Biofiltration basins would be developed to provide stormwater pollutant control and detention for the 50- and 100- year storm events for each lot. Each future home proposed on the finished lots that exceed 16 feet would be required by the City of Solana Beach to be entitled via a structure development permit (SDP). Additionally, a development review permit may be required for each home if the proposed grading were to exceed 50 cubic yards. Each home would also require a grading permit. As a part of the SDP process, each home would be deemed a Priority Development Project (PDP) and subject to stormwater pollutant control and hydromodification management design requirements as set forth by the MS4 Permit and the City of Solana Beach Best Management Practices (BMPs) Design Manual.

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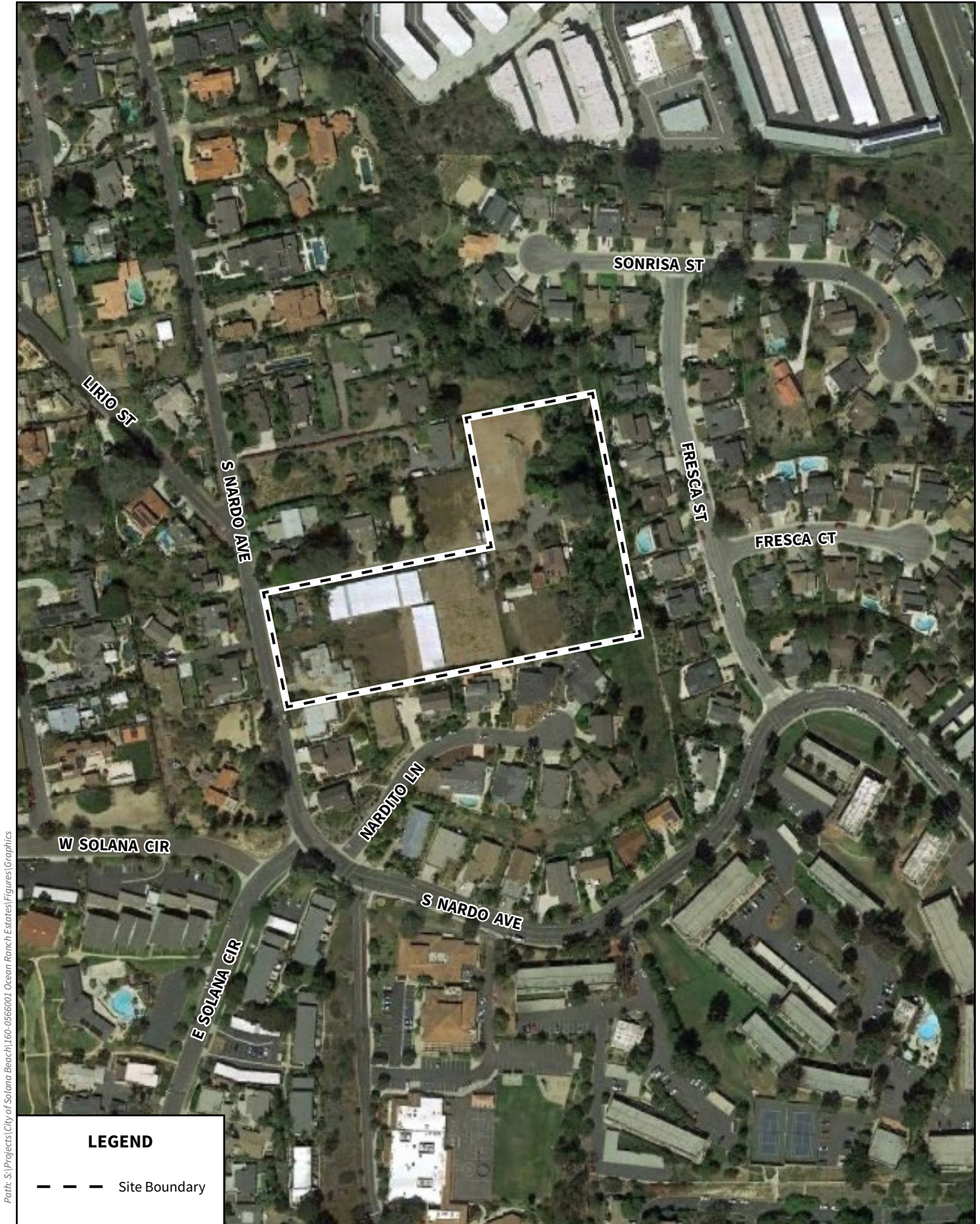


Harris & Associates



Figure 1
Regional Location

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Harris & Associates

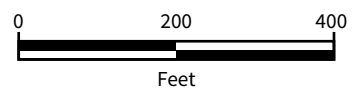
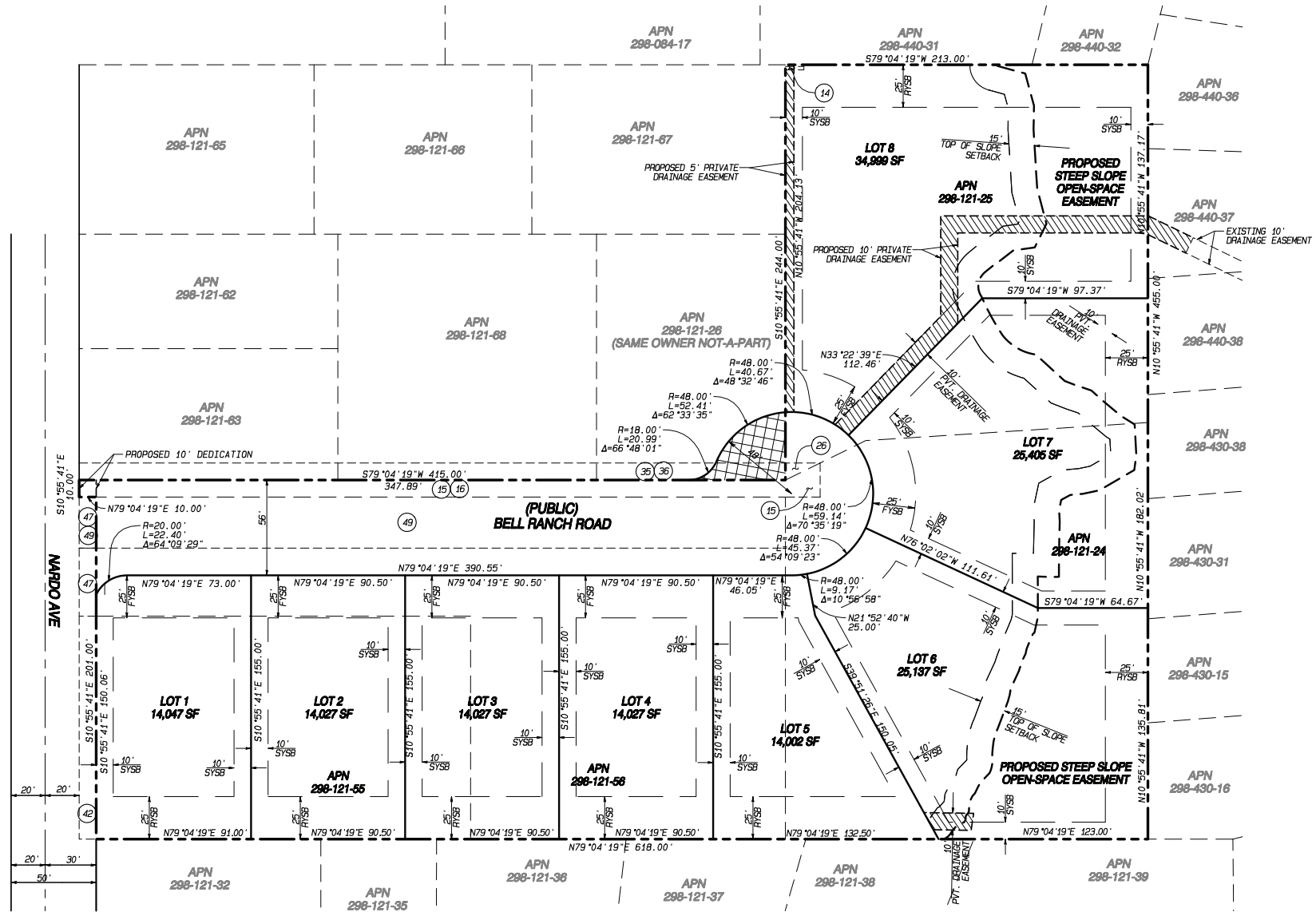


Figure 2
Project Site

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Source: Pasco Laret Suiter & Associates 2017c



Harris & Associates

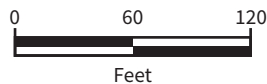
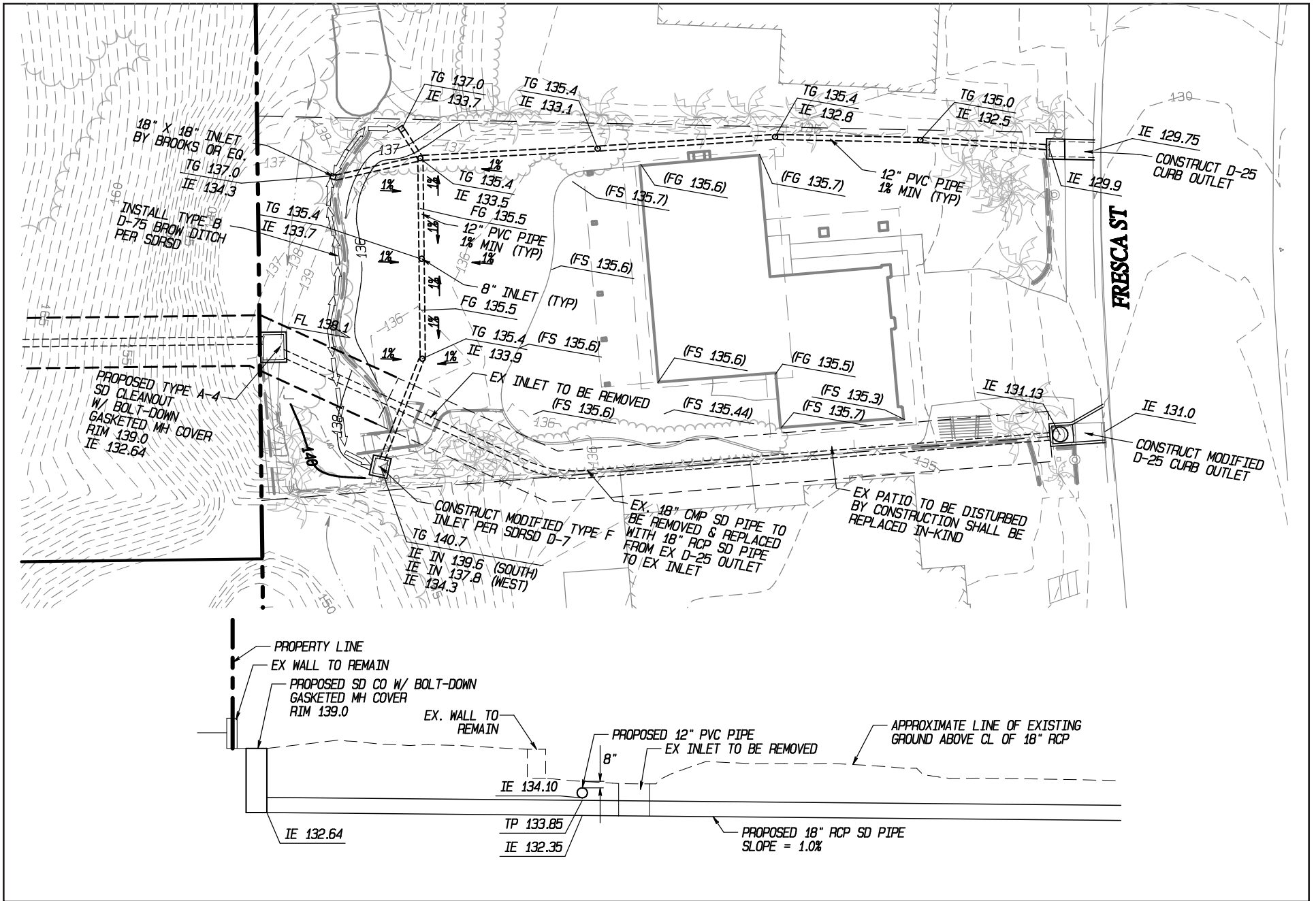


Figure 3
Site Layout

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Source: Pasco Laret Suiter & Associates 2018



Harris & Associates

Figure 4
Drainage to Fresca Street

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The project site has been previously disturbed and graded. Approximately 2.93 acres of the site contain slopes that are less than 25% grade. There is 0.12 acre of the site that contains slopes that are between 25% and 40% and 0.40 acre that contains slopes greater than 40%, for a total of 0.61 acre with slopes greater than 25%. This steep area is located on the eastern side of the project site and would be outside the project's proposed area of disturbance. The project would dedicate this area as a steep slope open space easement and would comply fully with the City's Hillside Overlay Zone (HOZ). All proposed stormwater improvements would be performed by underground drilling and would not modify the existing slopes in the HOZ.

The proposed project would convert the existing unnamed access road off South Nardo Avenue into a 56-foot wide public road with cul-de-sac, called Bell Ranch Road, to access the proposed residences. Bell Ranch Road would be 0.65 acre and would have up to 23 on-street parking spaces. These parking spaces would be street-side parking parallel to the curb that would run along the proposed Bell Ranch Road. These spaces would provide additional parking opportunities for residents and guests and comply with the City's off-street and on-street parking regulations. Two off-street parking spaces for each house would be required at the time of development in accordance with SBMC 17.52. There would be no parking in the cul-de-sac, per fire department regulations. No car would be parked on Bell Ranch Road in excess of 72 hours, no boat trailer would be parked more than 2 hours, and no recreational vehicle would be parked more than 8 hours in a 24-hour period without a recreational vehicle permit, as stated in the SBMC 10.28. Phase 1 of the proposed project would also include a street dedication along South Nardo Avenue, totaling 0.002 acres. The purpose of this dedication is to bring the right-of-way to its ultimate width and allow for the construction of a curb, a gutter, and 5 feet of separated sidewalk. Bell Ranch Road and the street dedication on South Nardo Avenue reduce the net total project site acreage from 4.2 acres to 3.5 acres.

South Nardo Avenue runs north-south and connects to Lomas Santa Fe Drive. There is minimal sidewalk access on South Nardo Avenue and surrounding streets due to the existing rural nature of the neighborhood. As a condition of project approval, a 5-foot-wide contiguous sidewalk would be constructed along the eastern side of South Nardo Avenue from the southern border of the proposed project to Nardito Lane, connecting with the other sidewalks within the community. A standard concrete sidewalk along the eastbound side and through the cul-de-sac of the newly formed Bell Ranch Road, including a pedestrian ramp, would be installed to enhance pedestrian safety and community connectivity.

Project construction of both Phase 1 and Phase 2 is anticipated to commence in June 2019 and would take up to approximately 16 months. Construction would occur between the hours of 7 a.m. and 4 p.m. Monday through Friday and there would be up to 20 construction workers on site each day. Construction would include demolition, grading, and paving. Approximately 15,210 sf of asphalt, 500 sf of concrete, and 10,290 sf of buildings would be demolished. Paving Bell Ranch Road would consist of approximately 18,025 sf of new pavement and re-paving Nardo Avenue would consist of approximately 890 sf of new pavement and 14,000 sf of asphalt concrete grind and overlay. The project would require closing one lane on Nardo Avenue with a 10-foot dedication. Phase 1 of the project would involve one grading phase of 4,800 cubic yards (cy) of cut and 4,800 cy of fill, which would be balanced on site. Phase 2 of the project would also involve one grading phase with total cut and fill of 19,000 cy, including all remedial grading, which would be balanced on site. Additionally under Phase 2, construction of eight single-family residential homes would be built. Construction would be shielded by a green-screen. Construction of Phases 1 and 2 would not divide or conflict with the surrounding established low-density residential community. Any road improvements made would not encroach onto existing properties but merely assume the full width of the existing right-of-way.

Existing Setting

The project site is located in the southwestern portion of the City of Solana Beach at 512 - 538 S. Nardo Avenue. With the exception of the eastern portion of the site, the project area is relatively level, ranging in elevation from about 136 to 196 feet above mean sea level, gradually descending from the western property boundary to the southeastern corner. The eastern portion of the project site is located within the City's Hillside Overlay Zone Area.

The City is bounded on the west by the Pacific Ocean, on the north by San Elijo Lagoon and the City of Encinitas, and on the south by the Cities of Del Mar and San Diego. To the east are unincorporated areas of San Diego County, which include the communities of Rancho Santa Fe and Fairbanks Ranch.

Solana Beach has a population of approximately 13,865 people, with existing land uses consisting predominantly of residential uses. Solana Beach is nearly built-out, and has limited vacant, developable land remaining. A substantial amount of the construction occurring within the City is the remodeling and/or recycling/repurposing of existing buildings. Commercial and retail uses make up approximately five percent of the City's land uses, and are concentrated primarily along the two main north-south roadway corridors (Highway 101 and Interstate 5 [I-5]) and two main east-west corridors (Lomas Santa Fe Drive through the central portion of the City and Via de la Valle at its southern boundary). A rail line traverses the western portion of the city, paralleling Highway 101, and stretching between San Diego and Los Angeles. The main business district is located near Highway 101, with newer commercial developments occurring closer to I-5. Lomas Santa Fe Executive Golf Course and surrounding residential development occupy much of the City east of I-5.

There are pockets of native and/or naturalized vegetation remaining in canyons along the San Elijo Lagoon according to a Citywide Biological Resources Report the City prepared in 2009. The largest areas of native vegetation communities occur in the northern portion of the City in and adjacent to the San Elijo Lagoon Ecological Reserve, as well as canyon slopes within the golf course and adjacent to San Andres Drive. Field surveys were conducted in 2008 to map vegetation and conduct general botanical and zoological surveys, including documenting sensitive plant and animal species observed or detected. Additional field work was conducted in 2009 to further refine mapping of chaparral communities, largely in and adjacent to the San Elijo Lagoon Ecological Reserve. Mapping was conducted primarily on foot, although a combination of aerial interpretation and Multiple Habitat Conservation Program (MHCP) mapping were relied upon in areas where access was not possible. These areas consisted mostly of scattered slopes surrounded on all sides by private residences or businesses. The City supports several small, isolated pockets of undeveloped land, typically along canyon slopes that are surrounded by single-family residences. The main public beach access is at Fletcher Cove, located approximately mid-way along the City's coastline. The entire coastline is developed, with single and multi-family residences occurring along a nearly continuous seaside bluff, which is interspersed by four public beach access points provided at Tide Park Beach, Fletcher Cove, Seascape Sur and Del Mar Shores.

Existing Use of the Site and Surrounding Land Uses

The existing site is comprised of four parcels containing five residences including one unoccupied residence, four sheds, two small flower fields totaling approximately two acres, and a cold storage trailer. The single-family residence at 538 South Nardo Avenue is currently vacant. The single-family residence at 524 South Nardo Avenue is occupied and the multi-family residence at 516 South Nardo Avenue has three occupied units. The eastern edge of the project site consists of an easterly-descending approximately 45-foot high natural steep slope with eucalyptus woodland. The hillside has heavy tree and groundcover and supports stone stairways, walls, man-made water features, and a concrete-lined pond.

The project site is surrounded by existing residential development on all sides consisting of single-family homes located within the Low Density Residential General Plan land use designation and LRc zoning designation to the north, south, and west. The residential development to the east is located within the Low/Medium Density Residential General Plan land use designation and Low-Medium Residential (LMRd) zoning designation. The minimum lot size for the Low Residential zone is 14,000 square feet, and the proposed subdivisions range from 14,002 to 34,999 square feet. The proposed project site is in character with the surrounding residential uses to the north, east, south and west but is currently less developed than surrounding parcels.

Required Discretionary Approvals

The required City of Solana Beach discretionary approvals for the proposed project are described below:

- **Engineering Permit:** Per Chapter 11.20 of the SBMC, the applicant will obtain an Engineering Permit prior to the construction of any improvements within the public right-of-way, including demolition and construction of surface improvements.
- **Improvement Permit.** The applicant will obtain an Improvement Permit for the public improvements along South Nardo Avenue and proposed Bell Ranch Road.
- **Grading Permit.** A grading permit will be obtained in accordance with Chapter 15.40 of the SBMC.
- **Tentative Major Subdivision Map:** Per Chapter 16.04. of the SBMC, a Tentative Subdivision Map (TSM) is required for the subdivision and preparation of the eight proposed lots.
- **Development Review Permit:** Per Chapter 17.68.040 of the SBMC, a Development Review Permit (DRP) is required because Phase 1 of the proposed project includes an aggregate grading quantity of more than 100 cubic yards.

Although not proposed at this time, the future construction of eight homes in Phase 2 of the proposed project may require the following additional discretionary approvals by the City of Solana Beach:

- **Development Review Permit:** If the proposed Phase 2 development of eight new residences meets the criteria in Chapter 17.68.040 of the SBMC, a Development Review Permit (DRP) would be required.
- **Structure Development Permit:** Per Chapter 17.63 of the SBMC, an SDP would be required if Phase 2 of the proposed project includes construction of residences that exceed 16 feet in height.

The proposed project also would be required to obtain a Coastal Development Permit from the California Coastal Commission and a Stormwater Pollution Prevention Plan (SWPPP) from the Regional Water Quality Control Board.

Environmental Factors Potentially Affected

Based upon the evaluation presented in the following IS, it is concluded that, with implementation of the recommended mitigation measures, the proposed project would not result in significant adverse environmental impacts.

Environmental Determination

On the basis of the initial evaluation of the attached Initial Study:

- ☐ I find the Proposed Project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the 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 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.



Corey Andrews, Principal Planner

2.6.2019

Date

The signature below signifies that the applicant has read and accepts the mitigation measures detailed in this final IS/MND.



Nicholas P. Nicholas, Applicant

2/6/19

Date

Evaluation of Environmental Impacts

The following IS checklist provides analysis of the proposed project's potential to result in significant adverse environmental impacts. Section 15063(c) of the Guidelines indicates that the purpose of an IS is to:

1. Provide the Lead Agency (“City of Solana Beach”) with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration;
2. Enable an applicant or Lead Agency to modify a Project, mitigating adverse impacts before an EIR is prepared, thereby enabling the Project to qualify for a Negative Declaration;
3. Assist the preparation of an EIR, if one is required, by:
 - a. Focusing the EIR on the effects determined to be significant;
 - b. Identifying the effects determined not to be significant;
 - c. Explaining the reasons why potentially significant effects would not be significant; and,
 - d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the Project’s environmental effects.
4. Facilitate environmental assessment early in the design of a Project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a Project will not have a significant effect on the environment.
6. Eliminate unnecessary EIRs.
7. Determine whether a previously prepared EIR could be used with the Project.

Impact Terminology

The following terminology is used to describe the level of significance of impacts:

- A finding of *no impact* is appropriate if the analysis concludes that the Project would not affect the particular topic area in any way.
- An impact is considered *less than significant* if the analysis concludes that it would not cause substantial adverse change to the environment and requires no mitigation.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that it would not cause substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the applicant.
- An impact is considered *potentially significant* if the analysis concludes that it could have a substantial adverse effect on the environment.

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Chapter 3

INITIAL STUDY

ENVIRONMENTAL CHECKLIST

I. Aesthetics <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a–b. No Impact. Visual resources can be valued both objectively and subjectively based on their uniqueness, prominence, quality, relationship to community identity, and economic contributions, such as to land values and tourism. Visual resources are important from an aesthetic perspective when, based on the characteristics listed above, they are identified as containing significant scenic value. Within this understanding, a scenic vista can be defined as the view of an area that is visually or aesthetically unique, such as a view towards the ocean or valley or a mountain range. The City regulates development in areas of high scenic value to preserve and enhance the scenic resources present within, and adjacent to, such areas and to assure the exclusion of incompatible uses and structures. It promotes the preservation and enhancement of scenic resources within the City that provide important social, recreation, and economic benefits for both residents and visitors alike.

The 4.2-acre site contains an existing, occupied two-story residence containing three units, an occupied one-story residence, and one unoccupied one-story residence. The site perimeter is surrounded by mature vegetation (including trees and shrubs) which effectively preclude views through or across the site from the adjacent public roadways, South Nardo Avenue, Nardito Lane, and Fresca Street. The project proposes to retain the mature vegetation on the eastern edge of the site with a steep slope easement. The steep slope easement would also serve to protect the portion of the project site that is located within the City's Hillside Overlay Zone (Municipal Code 17.48.020). The proposed project site is not located within a Scenic Area Overlay Zone, nor is it in or adjacent to a Citywide View Corridor (Solana Beach 2014a) (LCP/LUP Exhibits 6-1 and 6-2). The project site is not located within or adjacent to a view corridor or scenic roadway (Solana Beach 2010). For these reasons, implementation of the project would not impact a valuable scenic vista.

Furthermore, the development of the future Phase 2 residences are anticipated to be subject to the City's SDP view assessment process if they are proposed to be taller than 16 feet in height. It is anticipated that the homes could be up to 25 feet in height as would be measured from the proposed pad elevations. The purpose and intent of the view assessment process is to provide a public notification process to encourage the resolution of view impairment issues by those property owners directly affected.

The proposed project would not substantially damage scenic resources or historic buildings within a state scenic highway. The existing 4.2-acre project site is located in the center of the city, in an area that is not located within or along a designated state scenic highway nor within or along an identified scenic vista. Consequently, project implementation would not substantially damage scenic resources, and significant impacts would not occur.

c. Less than Significant Impact. The proposed project would not substantially degrade the existing visual character or quality of the proposed project site or surroundings. The project site has been used historically for residential and agricultural (flower fields and nursery) uses. The visual character of the site and surrounding area is urbanized on all sides, consisting of existing residential land uses. As described in Chapter 2, the proposed project involves grading the site and subdividing the property into eight lots planned for future construction of eight new single-family residences. The applicant is not seeking approval for the construction of the eight new residences at this time. The new homes would be constructed by the applicant as part of a future Phase 2 which would be subject to subsequent review and approval by the City. However, Phase 1 and the future Phase 2 have been fully evaluated for potential impacts associated with aesthetics. Although the proposed project would modify the existing visual character of the site through the creation of the residential lots and eight future homes, the visual and aesthetic changes are anticipated to be in keeping with the rural residential character of the neighborhood, which consists of custom single-family residential developments surrounding the project site.

The City Council adopted a View Assessment Ordinance (SBMC Chapter 17.63) that provides a process for view assessment to achieve the best balance between the owner's desire to develop his/her property and the neighbor's desire to protect his/her view. When the eight future homes are proposed to be developed onsite, the applications would be subject to this City review process if they exceed 16 feet from the proposed pad elevations. Accordingly, because the proposed project would be in keeping with the residential character of the neighborhood, project implementation would result in less than significant impacts.

d. Less than Significant Impact. As a condition of project approval, the proposed project would provide two new LED street lights onsite, which would create an additional source of nighttime light. However, there are existing street lights to the west of the site on South Nardo Avenue, to the south of the site on Nardito Lane, and to the east of the site on Sonrisa Street and Fresca Street. Therefore, the new lights would not significantly adversely affect nighttime views in the area. Future architectural plans would be reviewed by the Community Development Department prior to each lot owner obtaining building permits, including whether the exterior building materials or exterior lights would produce substantial glare. Conformance with the SBMC, permit plan checks, and approvals by City staff would ensure that substantial lighting and glare impacts from site development and future construction would not be created under Phase 2. Therefore, impacts would be less than significant with implementation of the proposed project.

Aesthetics Mitigation Measures

None required.

II. Agriculture and Forestry Resources <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a–d. No Impact. The site is currently developed with five residences including one unoccupied residence, two active small-scale flower agricultural fields, and three former agricultural fields totaling approximately two acres. The site is surrounded by single-family homes on all sides. The site is zoned Low Residential (LRc), which is intended for residential development in areas characterized by detached single-family homes on older subdivided lots. Limited small-scale agriculture is permitted in this zoning designation with a conditional use permit. Project implementation, therefore, would not convert any Prime, Unique, or Important Farmland to nonagricultural use, and it would not conflict with existing agricultural zoning or Williamson Act contracts. Therefore, significant impacts to agricultural resources would not occur.

e. Less than Significant Impact. An approximately two-acre portion of the project site is presently used, and has been used, for growing different varieties of flowers. However, the project site is not identified as Prime Farmland, Unique Farmland or Farmland of Statewide Importance on the most recent maps of the California Department of Conservation's Farmland Mapping and Monitoring Program (2012). The proposed project site is not under a Williamson Act contract (California Department of Conservation 2016a). The site is not located in an area designated or zoned as forest land or timberland. The existing land uses are not forested lands. Although there is a heavily-vegetated area on the eastern portion of the project site, it is outside of the proposed area of disturbance. Therefore, no impact to forested lands or timber resources is expected with implementation of the proposed project and the project would not conflict with timberland zoning. Impacts would be less than significant.

Agriculture and Forest Resources Mitigation Measures

None required.

III. Air Quality <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Violate any air quality standard or contribute substantially to an existing or Projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is summarized and based on the project specific modeling using the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2). Model input and output are included in this IS/MND as Appendix A.

Discussion

a. No Impact. Projects that are consistent with existing General Plan documents, which are used to develop air emissions budgets for the purpose of air quality planning and attainment demonstrations, would be consistent with the San Diego Air Basin's (SDAB) air quality plans, including the San Diego Regional Air Quality Strategy (RAQS) and the State Implementation Plan (SIP). Both of these air quality plans contain strategies for the region to attain and maintain the ambient air quality standards. Provided a project proposes the same or less development as accounted for in a General Plan document, and provided the project is in compliance with applicable Rules and Regulations adopted by the San Diego Air Pollution Control District (SDAPCD) through their air quality planning process, the project would not conflict with or obstruct implementation of the RAQS or SIP.

The applicant seeks approval of a Development Review Permit and a Major Subdivision (Tentative Subdivision Map) to subdivide a 4.2-acre parcel to allow for the construction of eight single-family residences. The Solana Beach General Plan land use designation is low density residential and the zoning designation is LRc. The proposed development density is consistent with the allowable 3 DU/AC density and 14,000 sf minimum parcel size. The proposed future Phase 2 residential development of eight homes would be consistent with both the underlying land use and zoning designations. Therefore, the proposed project would be required to comply with applicable Rules and Regulations adopted by the SDAPCD, would not conflict with or obstruct implementation of the RAQS or SIP, and would not result in a significant impact.

b. Less than Significant Impact. Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort.

Ozone. O₃ is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases (ROGs), and NO_x react in the presence of ultraviolet sunlight. O₃ is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O₃, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O₃ formation and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide. Most NO₂, like O₃, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to O₃ formation. High concentrations of NO₂ can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO₂ are coal and oil used in power plants and industries; as such, the highest levels of SO₂ are generally found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels. SO₂ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{2.5} and PM₁₀ represent fractions of particulate matter. Fine particulate matter, or PM_{2.5}, is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOC. Inhalable or coarse particulate matter, or PM₁₀, is about 1/7 the thickness of a human hair. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction,

landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as Pb (lead), sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

The project site is located within the San Diego Air Basin (basin or SDAB) and is subject to the SDAPCD guidelines and regulations. The basin is one of 15 air basins that geographically divide the State of California. The SDAB is currently designated nonattainment for O₃ and particulate matter, PM₁₀ and PM_{2.5}, under the California Ambient Air Quality Standards (CAAQS). It is designated attainment for the CAAQS for CO, NO₂, SO₂, lead, and sulfates. These standards are set by the Environmental Protection Agency (EPA) or California Air Resources Board (CARB) for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

The criteria pollutants of primary concern that are considered in this analysis are O₃, NO₂, CO, SO₂, PM₁₀, and PM_{2.5}. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O₃. The portion of the SDAB where the project site is located is designated by the EPA as an attainment area for the 1-hour National Ambient Air Quality Standards (NAAQS) for O₃ and as a marginal nonattainment area for the 8-hour NAAQS for O₃. The basin is designated in attainment for all other criteria pollutants under the NAAQS with the exception of PM₁₀, which was determined to be unclassifiable.

CONSTRUCTION IMPACTS

Phase 1 of the proposed project includes grubbing and clearing the site, site preparation, and grading to create building pads for eight future single-family homes. Phase 1 of the proposed project also includes construction of Bell Ranch Road, curbs and gutters, sidewalks, and wet and dry utilities. To address reasonably foreseeable impacts to air quality relating to the Phase 2 future construction of eight homes on the new lots, emissions associated with building construction and architectural coatings application were included in this analysis. Although the applicant is currently only seeking approval of a proposed land subdivision and preparation of eight new building pads (Phase 1), the air quality analysis prepared for the proposed project includes the future construction, occupancy, and operation of eight new homes onsite (Phase 2). Therefore, the following air quality analysis accounts for the potential air quality effects of both Phase 1 and Phase 2 site development activities. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition - 5 days
- Site Preparation - 5 days
- Grading - 1 month
- Trenching (utility installation) - 1 month
- Building Construction - 12 months

- Application of Architectural Coatings - 1 month
- Paving - 2 weeks

The maximum number of site preparation and construction machines on site on any one day would be 9 pieces of equipment. The equipment would be continually moving over the site during site preparation and construction activities, and would not be located in any single location for an extended period of time.

Emissions from site preparation and construction of the proposed project were estimated through the use of the CalEEMod (ENVIRON et al. 2016). SDAPCD Rule 55 requires standard fugitive dust control measures to be implemented as project design features. Typical measures are listed below:

- a. During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.
- b. During construction, water truck or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning and after work is completed for the day and whenever winds exceed 15 miles per hour.
- c. Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation.
- d. Reduce speeds on unpaved roads to less than 15 miles per hour.
- e. Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- f. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.
- g. Should minor import/export of soil materials be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped and maintain a minimum 2 feet of freeboard.
- h. At a minimum, at each vehicle egress from the project site to a paved public road, install a pad consisting of washed gravel (minimum-size: 1 inch) maintained in a clean condition.

Emission levels associated with site preparation and construction of the proposed project are presented in Table AQ-1.

Table AQ-1
Estimated Construction Emissions by Construction Phase (pounds/day)

Construction Phase	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	4	43	25	<1	5	3
Site Preparation	4	46	24	<1	12	7
Grading	3	28	18	<1	5	3
Trenching	3	25	22	<1	2	1
Building Construction	2	22	21	<1	2	1
Architectural Coating	113	2	4	<1	1	<1
Paving	1	12	14	<1	2	1
Maximum Daily Emissions	113	46	25	<1	12	7
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.2. See Appendix A for model output.

As shown in Table AQ-1, emissions associated with both Phase 1 and Phase 2 of the proposed project are below the maximum daily emissions thresholds established by the SDAPCD for all criteria pollutants. Thus, the project would result in a less than significant impact on the ambient air quality.

Operational Impacts

Phase 2 of the proposed project includes the construction of the eight homes that are anticipated to be developed onsite in the future. Following the completion of construction activities, the new homes would generate VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from mobile and stationary sources, including vehicular traffic and area sources (water heating and landscaping). With the exception of vehicular operations, emissions associated with the existing operational structures were not subtracted from those resulting from the proposed future residential uses, but rather operational energy and area emissions estimates for Phase 2 of the proposed project were calculated as though the project site was vacant.

VEHICULAR TRAFFIC

The future residential uses would impact air quality through the vehicular traffic generated by the new homes. According to the Traffic Impact Analysis prepared by Fehr & Peers (2019), which is included as Appendix G, the future residential uses would result in a net increase of 60 trips per day over the traffic trips generated by existing uses on the project site once all eight of the future homes are constructed. Project-related traffic was assumed to include a mixture of vehicles in accordance with the default model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2020, the first full year of project operation, were used to estimate emissions associated with full buildout of the proposed project.

ENERGY

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from the future homes' energy use, which includes natural gas combustion. Each residence is estimated to use 180 therms of natural gas per year.

AREA SOURCES

CalEEMod was also used to estimate emissions from the future residential uses' area sources, which include landscaping, consumer products, hearths, and architectural coatings for building maintenance (Table AQ-2).

Table AQ-2
Estimated Daily Maximum Operational Emissions

Emission Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources	13	<1	16	<1	2	2
Energy Use	<1	<1	<1	<1	<1	<1
Vehicular Emissions	<1	1	1	<1	<1	<1
Total Max Daily Emissions	13	1	17	<1	2	2
Significance Criteria	137	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.2. See Appendix A for model output.

As shown in Table AQ-2, the maximum daily operational emissions from the proposed project, including future residential uses, would not exceed any of the SDAPCD significance thresholds for VOC, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. Therefore, operational emissions would be less than significant.

c. Less than Significant Impact. In analyzing potential cumulative impacts from the proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the basin is designated as nonattainment for the CAAQS and NAAQS. If the proposed project does not exceed thresholds and is determined to have less than significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact). The SDAB has been designated as a federal nonattainment area for O₃ and a state nonattainment area for O₃, PM₁₀, and PM_{2.5}. PM₁₀ and PM_{2.5} emissions associated with construction generally result in near-field impacts. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. As discussed above in Table AQ-1 and Table AQ-2, the project's emissions of all criteria pollutants would be below the significance levels.

Construction would be short-term and temporary in nature. Once construction is completed, construction-related emissions would cease. A cumulative impact related to construction impacts would only occur if the project's construction emissions would occur simultaneously with a nearby construction project with the potential for emissions to combine and exceed thresholds. The proposed project is located in a primarily developed residential neighborhood. As shown in Table AQ-1, project emissions would be well below significance levels. Similar single-family residential development, if it were to occur in the surrounding neighborhood during project construction, would be expected to result in similar levels of emissions. Solana Highlands, an approved project identified by the *Traffic Study* (Fehr & Peers 2019) immediately south of the proposed project, is the largest near-term project within the immediate vicinity with construction slated to begin in mid-2020 at the earliest. Therefore, this project's construction would not overlap with the proposed project. Even combined emissions would be unlikely to exceed thresholds. Therefore, a cumulative impact would not occur during construction.

According to the County of San Diego significance threshold, a project's operation would result in a significant cumulatively considerable contribution to an air quality impact if the project does not conform to the RAQS, if the project has a significant direct impact to air quality, or would create a CO hotspot. Operational emissions generated by the proposed project would not exceed the significance thresholds for VOC, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}, and would not cause a significant impact, as the proposed project's operational emissions would not come close to the allowed thresholds. These thresholds also account for a specific project's contribution to cumulative impacts to air quality, and the proposed project would fall below the level allowed by those SDAPCD significance thresholds. Therefore, the proposed project would result in less than significant impacts to air quality relative to operational emissions.

The SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively relative to potential long-term cumulative operational emissions and consistency with local air quality plans. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As noted above under topic a. the proposed project would be consistent with the existing underlying zoning and general plan land use designation for the site, and would not result in significant regional growth that is not accounted for within the RAQS. Additionally, the proposed project is consistent with the existing use for the site; thus, at a regional level, it would be consistent with the underlying growth forecasts in the SIP and RAQS.

Lastly, as discussed under topic d. no CO hot spots would result from project-related traffic. As a result, the proposed project would not result in a cumulatively considerable contribution to any criteria pollutant emissions and cumulative impacts would be less than significant.

d. Less than Significant Impact. Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." According to Caltrans guidance (Caltrans 2010), CO "hot spots" have the possibility of forming at intersections with a level of service (LOS) of E or F. According to the traffic analysis prepared for the project, the proposed project would not generate substantial traffic that would result in degradation in LOS at nearby intersections (Fehr & Peers 2019). It is therefore anticipated that no CO "hot spots" would result from project-related traffic.

Minor emissions of toxic air contaminants (TACs) would result from construction equipment during construction and motor vehicles during both construction and operations. The project is a residential development and is not a major source of TACs. The amounts of TACs that would be generated from construction equipment and motor vehicles is negligible and would not result in a significant impact to sensitive receptors.

e. Less than Significant Impact. Land uses associated with odor complaints generally include agricultural and industrial uses such as wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills and dairies. Residential uses typically do not generate offensive odors, other than odors from vehicles and/or equipment exhaust emissions during construction of the proposed project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during site preparation activities and the future construction of eight new homes would be considered less than significant.

Air Quality Mitigation Measures

None required.

IV. Biological Resources <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the results of the *Biological Assessment Letter Report for the Proposed Residential Subdivision Located on 512-538 S. Nardo Ave.* (Biological Report) prepared by Blue Consulting Group, March 31, 2015. This report is included in the IS/MND as Appendix B.

Discussion

a & b. No Impact. No native habitat or vegetation communities are located on the project site. The site consists of developed land, active agricultural land, and disturbed habitat. The developed land is comprised of existing structures, paved driveways and parking areas, abandoned previously graded areas and planters dominated by non-native/exotic vegetation and ornamental landscaping. The active, irrigated agricultural fields do not contain native vegetation or provide essential habitat connectivity and, therefore, have reduced biological value. The disturbed habitat on the project site does not contain native vegetation. No sensitive plants or wildlife were observed during a site investigation. Although several sensitive species are known to occur in the City and vicinity of the project, due to the active use and the developed and ruderal nature of the project site, these species are not considered as potentially occurring on site because of the lack of supportive native vegetation communities. The project site does not support Environmentally Sensitive Habitat Areas (ESHA) as defined by the City or naturally occurring native vegetation.

The City is located within the boundaries of the North County Multiple Habitat Conservation Program (MHCP) area, adopted March 28, 2003. While a participant in the MHCP, the City of Solana Beach is not required to prepare a subarea plan, which is required of the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos and Vista. The City is designated almost entirely as Developed/Disturbed Land under the MHCP. The proposed project site is located in a developed area with a designated Low Residential land use and LRC zoning designation. The proposed project would have no impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Implementation of the proposed project would not involve any direct or indirect impacts to riparian habitat or sensitive communities.

c & d. No Impact. Based on the Biological Report prepared by Blue Consulting Group, the project site consists entirely of developed land, active agricultural land, and disturbed urban lands. The project site contains no riparian habitat or other natural habitat. The eastern portion of the project site is identified as Eucalyptus Woodland, which is not considered a sensitive habitat (Solana Beach 2014b). Further, this vegetation community would be outside the project's footprint and would be within the project's proposed steep slope open space easement. The site does not support ESHA or naturally occurring rare, threatened, and / or endangered plants, animals, or sensitive habitats and no potential wetlands and/or other Waters of the United States or state were observed.

The proposed project site has been fully disturbed and currently supports residences, sheds, greenhouses, and agricultural uses. According to the Biological Report, there are no known wetlands on-site. Therefore, the proposed project is not expected to have an adverse effect on any federally protected wetlands as defined by Section 404 of the Clean Water Act.

According to the Biological Report (Blue Consulting 2015), the project site does not contain any wildlife corridors or provide any habitat linkages. Implementation of the proposed project would not result in direct or indirect significant impacts to any riparian habitat or federally protected wetlands. Native resident or migratory wildlife corridors do not exist on or adjacent to the project site, and the property does not contain any biological resources that are protected by local policies.

e. Less than Significant with Mitigation Incorporated. Compliance with the California Fish and Wildlife Code (§3503), under which it is unlawful to "take, possess, or needlessly destroy" avian nests or eggs, would be required. Due to the presence of mature trees on-site, implementation of the proposed project could result in temporary impacts to active bird nests if site development activities occur during the bird breeding season (February 1 through September 15). Any activities that occur during the nesting/breeding season of birds such as raptors (e.g., Cooper's hawk and red-tailed hawk), and/or birds protected by the federal Migratory Bird Treaty Act could result in a potentially significant impact. However, with the implementation of Mitigation Measure BR-1, these potentially significant impacts would be reduced to less than significant.

MITIGATION MEASURES

BR-1 If site preparation or construction activity occurs during the avian breeding season (typically February 1 through September 15), the applicant shall retain a qualified biologist to conduct a biological survey for nesting bird species within the proposed impact area and a 300-foot buffer within 72 hours prior to commencement of any such activity. This survey is intended to determine whether any active nests are located on the project site and is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk and red-tailed hawk) and/or birds protected by the federal Migratory Bird Treaty Act. If any active nests are detected, the area would be flagged and mapped on the construction plans along with a minimum of a 25-foot buffer and up to a maximum of 300 feet for raptors, as determined by the project biologist, and avoided until the nesting cycle is complete. The results of the survey shall be provided in a summary report to the Community Development Director.

f. No Impact. The City of Solana Beach is located within the boundaries of the North County MHCP. The MHCP, adopted on March 28, 2003, is the subregional plan for the northwest portion of San Diego County; it encompasses 111,908 acres and provides conservation for 77 species in a 20,593-acre reserve. The City is designated almost entirely as Developed/Disturbed Land and as such is exempt from the requirements to prepare a MHCP sub-area plan. The proposed project site is located in a developed area on land with an LRc zoning designation which supports low density residential development. Adjacent land use designations include residential to the north, south, east and west.

Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources, nor would it conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no environmental impacts would occur.

Biological Resources Mitigation Measures

Mitigation Measure BR-1 is required. With implementation of this measure, potential impacts to biological resources would be less than significant.

V. Cultural Resources <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is summarized and based on the findings contained within the *Cultural Resources Study for the Ocean Ranch Estates Project (Cultural Report)* (Brian F. Smith and Associates [BFSA] 2015), an additional memo titled *Comments for the Initial Study Document for the Ocean Ranch Estates Project (Cultural Resources Memo)* (BFSA 2017), and the *Response to Comments for the Mitigated Negative Declaration, Ocean Ranch Estates Project, City of Solana Beach (BFSA Response Letter)* (Brian F. Smith and Associates [BFSA] 2018) prepared for the proposed project. These reports are included in this IS/MND as Appendices C1, C2, and C3.

Discussion

a. Less than Significant Impact. According to the Cultural Report, there are four older residences and four historic stone features (recorded as P-37-034886) located on the project site. The residences were constructed between 1934 and 1964 and the stone features were likely constructed during the early 1930s. Because the City does not have its own specific significance criteria for historic resource, CEQA eligibility criteria were used to evaluate each of the residences and stone features. Criteria for listing on the California Register of Historic Resources (CRHR) were used to measure the potential significance of the resources.

According to the Cultural Report, the original architectural characteristics of the existing residences are not exemplary. While the structure at 516 South Nardo Avenue has characteristics of Pueblo Revival, Spanish Eclectic, and Modern Contemporary architecture, none of these characteristics are original to the structure, and these various additions have adversely impacted the integrity of the residence. The other three buildings at 512, 524, and 538 South Nardo Avenue could not be associated with any specific architectural style and have been added onto or modified so significantly that the original structures have been masked and all original architectural integrity has been diminished. No significant persons or events could be associated with the structures and the removal of the buildings will not pose a negative impact on the history or the overall character of the surrounding neighborhood. The residences located within the project site are not historically or architecturally significant, as defined by CEQA significance criteria.

The stone features located near 512 South Nardo Avenue (P-37-034886), may be considered significant under CRHR Criteria 3 and 4.² The stone features are a distinctive example of artistic stonework, the quality of which is rare in San Diego County. Most of the stonework improvements to the property were likely constructed in the early 1930s. The arbor and stairways were constructed from local stones and were placed on the landscape using the natural contours of the canyon. These features, along with the stone barbeque and patio, were likely intended for gathering together groups of people. The retaining walls and the barbeque have been adversely impacted by the construction of the enclosure around the patio area, and these features do not exhibit the same quality stone workmanship as the arbor and terraces. Because all of the stone features possess high artistic value, a high quality of workmanship, share a similar method of construction, and possess an individuality not regularly seen in the Solana Beach or San Diego County area (see Plates 4.2-8 and 4.2-9 in Appendix C1), the stone features are considered potentially significant under Criterion 3, which is concerned with artistic value and distinctive characteristics of a region or time period.

The stone features are not important as historical monuments, and any research potential is not linked to the preservation of the features, as further study would not reveal additional information about the history of the La Colonia community. Preservation of the barbecue feature is not recommended, and its removal would not constitute an impact (BFSA 2018). Therefore, the stone features are not considered potentially significant under Criterion 4, which is concerned with whether a resource has the potential to yield historical information.

The stone features, primarily the arbor and terrace, which retain the highest levels of integrity, are located within the Hillside Overlay Zone and would be outside the project's footprint and within the steep slope open space easement. These features would be outside the project's area of disturbance and the proposed project would not alter them in any way. Therefore, potential impacts to historic resources would be less than significant.

b. Less than Significant with Mitigation Incorporated. According to the *Cultural Report* (BFSA 2015) prepared for the project, no archaeological resources have been identified within the project site. A records search was conducted at the SCIC for the project site and a 1-mile radius. Thirteen archaeological resources have been recorded within the search radius, none of them in the immediate vicinity of the project. Most notable of these sites are SFI-7979 and SDI-10,940/W-34, both of which are characterized as prehistoric habitation sites. Site SDI-7979 is recorded as a moderately dense habitation site that includes a wide range of artifacts such as ground stone tools, hammerstones, choppers, and vertebrate and invertebrate faunal remains and a moderately developed midden. Site SDI-10,940/W-34 includes a wide range of cultural materials such as ground stone equipment, projectile points, knives, debitage, vertebrate and invertebrate faunal remains, hearths, a deep and extensive midden deposit, and human burials. The site is known for the recovery of the famous "Del Mar Man," an approximately 5,500-year-old human specimen discovered in 1929.

No archaeological resources have been identified at the project site. Based on this, the project is expected to have no impacts to archaeological resources. However, there is always potential to encounter previously unknown and unrecorded archaeological resources during grading. Given this, the following mitigation measure is recommended to ensure that potential impacts to previously unknown archaeological resources are reduced to a less than significant level.

² Criteria for listing on the California Register of Historic Resources include: CRHR Criterion 3: The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values. CRHR Criterion 4: The resource has yielded, or may be likely to yield, information important in prehistory or history.

MITIGATION MEASURE

CR-1 Monitor Ground Disturbance. Prior to issuance of a grading permit and commencement of any ground disturbing activities for the project, the applicant shall provide written evidence to the City Engineer that the applicant has retained a City-approved archaeologist with experience with historical archaeological sites and who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in 36 CFR 61, and a Native American monitor, who shall perform the following activities:

- The archaeologist and the Native American monitor shall attend a pre-construction meeting with the grading contractor and construction workers to explain the requirements of the monitoring program.
- The archaeologist and the Native American monitor shall be present to monitor ground-disturbing activities, including brushing/grubbing, grading, and trenching. If cultural material is encountered, the archaeologist and the Native American monitor shall have the authority to temporarily halt or redirect grading and other ground-disturbing activity while the cultural material is documented and assessed.
- If cultural material is encountered, the archaeologist shall treat recovered items in accordance with current professional standards by properly provenancing, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center.
- Within sixty days after completion of the ground-disturbing activity, the archaeologist shall prepare and submit a final report to the City for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.

c. Less than Significant with Mitigation Incorporated. The probability of discovering paleontological resources depends on the geologic formation being excavated and the depth and volume of the excavation. Sedimentary rocks, such as those found in coastal areas, usually contain fossils. Granite rocks, such as those found in inland areas, usually would not contain fossils. According to the Geotechnical Report prepared for the proposed project (Geotechnical Exploration 2012), the site is underlain by natural and cultivated topsoils and slopewash, Quaternary age old paralic deposits (marine, estuarine) and Tertiary-age Torrey Sandstone. According to the City's General Plan Program EIR (2014), sandstones such as those beneath the site have a moderate sensitivity for paleontological resources. General Plan Policy OS-1.7 requires monitoring for paleontological resources for development projects during grading in native soils if grading quantities exceed 1,000 cubic yards and 10 feet in depth in geologic formations with a known "high" sensitivity for paleontological resources, or grading quantities exceed 2,000 cubic yards and 10 feet in depth in geologic formations with a known "moderate" sensitivity for paleontological resources. Therefore, site disturbing activities have the potential to affect paleontological resources. This would be a potentially significant impact and mitigation is required.

MITIGATION MEASURE

CR-2 Prior to the issuance of a grading permit and commencement of any ground disturbing activities for the project, the project applicant shall provide written evidence to the City Engineer that the applicant has retained a City-approved paleontologist to perform the requirements set forth in Mitigation Measure CR-1 above, including to conduct a pre-construction meeting to explain monitoring requirements to construction personnel, to observe project site grading and excavation activities, to salvage and catalog fossils as necessary, and to prepare and submit a post-construction monitoring report the City Engineer/Public Works Director.

d. No Impact. According to the Cultural Report and records search conducted for the project (BFSA 2015), the project site does not lie near any cemeteries. However, with the implementation of the archaeological monitoring requirements in Mitigation Measure CR-1, actions related to the inadvertent discovery of human remains would be undertaken pursuant to California Health and Safety Code Section 7050.5 and Public Resources Code 5097.98. As a result, no impacts are anticipated with project implementation.

Cultural Resources Mitigation Measures

Mitigation Measures CR-1 and CR-2 are required. With implementation of these measures, potential impacts to cultural resources would be less than significant.

VI. Geology and Soils <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Expose people or structures to 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2. Strong seismic groundshaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is summarized and based on the findings contained within the *Report of Preliminary Geotechnical Investigation (Geotechnical Report)* (Geotechnical Exploration, Inc. 2012) prepared for the proposed project.³ This report is included in the IS/MND as Appendix D.

³ At the time the *Geotechnical Report* was prepared, the project involved subdividing the site into 14 lots rather than eight. Therefore, the *Geotechnical Report* over-estimates the potential impacts generated by the project. Thus, the analysis herein is conservative, and the actual potential impacts would be less.

Discussion

a1. No Impact. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to mitigate the hazard of surface faulting by preventing the construction of buildings used for human occupancy over an area with known faults. Unlike damage from ground shaking, which can occur at great distances from the fault, impacts from fault rupture are limited to the immediate area of the fault zone where the fault breaks along the ground surface. As discussed in the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), no faults are mapped on the project site. The closest active fault is the Rose Canyon Fault, located approximately 3.4 miles southwest and west of the project site. Therefore, impacts from fault rupture would not be expected to occur within the project area, and no impacts would arise from implementing the project.

a2–a4. Less than Significant Impact. The project site, like most of southern California, is subject to strong ground shaking from seismic events. Consequently, when the project site is occupied it could expose people and/or structures to potential impacts associated with seismic ground shaking. The ground motion characteristics of any future earthquakes in the region would depend on the characteristics of the generating fault, the distance to the epicenter, the magnitude of the earthquake, and the site-specific geologic conditions. Major faults in the region could be a source of a strong seismic-related movement at the project site. According to the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), the Rose Canyon Fault is the closest fault zone to the project site and is located approximately 3.4 miles to the southwest and west. The future Phase 2 residences buildings would be constructed in compliance with the seismic safety standards set forth in the California Building Code (CBC), as amended. Compliance with the CBC would include the incorporation of: 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. In addition, the City's Building Division would review any future building plans through building plan checks, issuance of a building permit, and inspection of the residences during construction, which would ensure that all required CBC seismic safety measures are incorporated into all of the homes. Compliance with the CBC and the Building Division's review process, permit application, and inspection would result in less than significant impacts, and no mitigation measures are required.

The proposed project would not expose people and structures to potential seismic-related ground failure, including liquefaction. Liquefaction is a phenomenon in which a saturated cohesionless soil causes a temporary transformation of the soil to a fluid mass, resulting in a loss of support. According to the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), the risk of liquefaction on the project site is very low because of the dense nature of the natural ground material and the lack of a shallow, static groundwater surface under the project site. The project site does not have a potential for soil strength loss to occur due to a seismic event. Furthermore, compliance with the CBC would include the incorporation of seismic safety features to minimize any potential for significant effects as a result of seismic-related ground failure, resulting in less than significant impacts.

The proposed project would not expose people or structures to landslide hazards. According to the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), there are no known or suspected ancient landslides located on the project site. Therefore, landslides or other forms of adverse geologic conditions are not present on the site and impacts related to landslides would be less than significant.

b–d. Less than Significant Impact. According to the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), the site is characterized as covered by natural and cultivated topsoils and slopewash. These earth materials are in turn underlain by Old Paralic Deposits and Torrey Sandstone. The Old Paralic Deposits and Torrey Sandstone have low and very low expansion potential and very good strength bearing characteristics. In their current condition, the upper 1 to 2 feet of the formational terrace materials would not provide a stable soil base for potential residential structures and improvements. The *Geotechnical Report* recommends that those materials be removed and recompacted as part of site preparation prior to the addition of any new fill or structural improvements. The recompaction requirements and other recommendations that are required to be followed in the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012) and the required implementation of standard erosion-control measures, including preventing saturation of slopes and preventing runoff waters from entering footing excavations, and stormwater construction BMPs, are considered conditions of approval for the project in order for the applicant to construct. Therefore, less than significant impacts are anticipated regarding soil erosion or loss of topsoil during project construction.

Slope stability analyses were performed on the easterly descending slope as a part of the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012). The computer program used calculated the factors of safety against deep failure of the hillside. Through rigorous testing and analyses, the *Geotechnical Report* confirmed that the site could be developed with no significant impact to the eastern slope. The project proposes to retain the mature vegetation on the eastern edge of the site with a steep slope easement. This steep slope easement would also serve to protect the portion of the project site that is located within the City's Hillside Overlay Zone (Municipal Code 17.48.020). Since the slope is set to remain intact throughout development and it consists of extensive groundcover to further protect from erosion, the eastern slope is expected to remain stable; therefore, impacts regarding soil erosion would be less than significant.

Construction of the project would not increase the potential for on-site or offsite landslides, lateral spreading, expansion, subsidence, liquefaction, or collapse to occur. The underlying geology of the project site consists of Old Paralic Deposits which were encountered at a depth between one and 20 feet below existing ground surface (Geotechnical Exploration, Inc. 2012). Given this condition and the fact that groundwater was not found onsite and is expected to be at least 45 feet below the ground surface, earthquake-induced liquefaction, lateral spreading, subsidence, and dynamic settlement are not anticipated to be a factor in site development.

According to the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012), laboratory tests performed on the disturbed and relatively undisturbed soil samples indicated that the onsite silty sand topsoil and formational terrace materials have a low expansion potential (expansion index less than 50). Accordingly, project implementation would result in no significant impacts in regards to expansive soils. Given the compaction requirements and other recommendations in the *Geotechnical Report* (Geotechnical Exploration, Inc. 2012) that the City requires in submittals for the grading permit, less than significant impacts would occur due to expansive soils.

e. No Impact. Although no residences are proposed at this time, the eight additional future homes that could be developed onsite would tie into existing sewers, avoiding the need to use septic tanks (and would include abandoning any existing/inactive septic system) or alternative wastewater disposal systems. Therefore, no impacts would occur.

Geology and Soils Mitigation Measures

None required.

VII. Greenhouse Gas Emissions <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is summarized and based on project-specific modeling using the CalEEMod (Version 2016.3.2). Model input and output are included in the IS/MND as Appendix A.

Discussion

a–b. Less than Significant Impact.

BACKGROUND

In response to Executive Order (EO) S-3-05 (June 2005), which acknowledged California’s vulnerability to climate change, the California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB 32) was signed into effect on September 27, 2006. In passing the bill, the California Legislature found that “*Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California...*” (California Health and Safety Code, Division 25.5, Part 1).

Global warming is the observed increase in the average temperature of the Earth’s surface and atmosphere caused by increased greenhouse gas (GHG) emissions, which can contribute to changes in global climate patterns resulting in global climate change. GHG emissions are the result of both natural and anthropogenic activities, and the primary sources of these emissions is caused by the consumption of fossil fuels for power generation and transportation, forest fires, decomposition of organic waste, and industrial processes. Principal GHG’s that enter the atmosphere as a result of human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (i.e., hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). Fluorinated gases generally occur in lesser quantities for shorter periods of time.

The three primary GHGs discussed are described below (Solana Beach 2014b):

1. CO₂ is released into the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., cement production) and deforestation. Carbon dioxide is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
2. CH₄ is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from agricultural practices, such as the raising of livestock, and by the decomposition of organic waste in landfills.
3. N₂O is emitted during agricultural and industrial activities, as well as during the burning of fossil fuels and solid waste.

Each GHG has a different potential for trapping heat in the atmosphere, called global warming potential (GWP). GWP for a gas is a measure of the total energy that a gas absorbs over a particular period of time (usually 100 years), compared to CO₂. CO₂ is the primary GHG emitted through human activities and is typically used as a baseline in the analysis and reporting of GHGs. GHG emissions are typically reported in metric tons (MT) of carbon dioxide equivalent (CO₂e) units, or in millions of metric tons (MMT). When dealing with an array of emissions, the gases are converted to their carbon dioxide equivalents for comparison purposes. The global warming potential for CH₄ and N₂O is 21 and 310, respectively.

REGULATORY FRAMEWORK

AB 32 – Among a number of bills supporting EO S-3-05, AB 32 required that, by January 1, 2008, the California Air Resources Board (CARB) determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. The CARB adopted its *AB 32 Scoping Plan* in December 2008, which provided estimates of the 1990 GHG emissions level and identified sectors for the reduction of GHG emissions. The CARB estimated that the 1990 GHG emissions level was 427 MMT net CO₂e. The CARB estimates that a reduction of 173 MMT net CO₂e emissions below business-as-usual (BAU) would be required by 2020 to meet the 1990 levels. This amounts to roughly a 28.35 percent reduction from projected business-as-usual levels in 2020. In 2011, the CARB developed a *Supplement to the AB 32 Scoping Plan (Scoping Plan Supplement)*. The *Supplement* updated the emissions inventory based on current projections for BAU emissions to 506.8 MT of CO₂e. The updated projection included adopted measures (Pavley 1 Fuel Efficiency Standards, 20 percent Renewable Portfolio Standard (RPS) requirement, etc.), and estimated that an additional 16 percent reduction below the estimated BAU levels would be necessary to return to 1990 levels by 2020. In 2014, the CARB published its *First Update to the Climate Change Scoping Plan*. This update indicates that the State is on target to meet the goal of reducing GHG emissions to 1990 level by 2020. The *First Update* tracks progress in achieving the goals of AB 32, and lays out a new set of actions that would move the State further along the path to achieving the 2050 goal of reducing emissions to 80 percent below 1990 levels (CARB 2016). In 2017, CARB posted a second update. The 2017 Climate Change Scoping Plan Update was finalized in November 2017 and adopted in December 2017. This most recent scoping plan lays out the framework for achieving the 2030 reductions as established in Executive Order B-30-15 and SB 32. It identifies GHG reductions by emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels by 2030.

SB 32 – On September 8, 2016, SB 32 was signed into law, which extended statewide GHG emission reduction measures beyond 2020. SB 32 mandated a 40 percent reduction in GHG levels below 1990 levels by 2030. GHG emissions from the proposed project are expected to continually decrease over time to comply with measures in the CAP, once adopted, and future statewide initiatives. For example, a large share of the future emissions reduction goals in SB 32 are expected to be accomplished by statewide initiatives such as the renewables portfolio standard for utilities; the Pavley vehicle emissions standards; energy efficiency standards for buildings, appliances, and industrial equipment; incentives for electric vehicles; and the low-carbon fuel standard for imported fuel. For this reason, as well as the fact that the estimated project emissions are well below the current local CEQA screening threshold levels, the proposed project is expected to comply with the new statewide targets beyond 2020.

THRESHOLD OF SIGNIFICANCE AND METHODOLOGY

The City's first Climate Action Plan (CAP) was adopted in 2017 in conjunction with the City's General Plan Update to meet the goals of AB 32 and Senate Bill (SB) 32 (Solana Beach 2018). The CAP includes emission reduction targets of 15% below baseline conditions (2010) by 2020 and 50% below baseline conditions by 2035. The CAP also includes an aggressive goal of achieving 100% renewable energy by 2035 (Solana Beach 2017). To achieve these objectives, the CAP identifies a summary of baseline GHG emissions and the potential growth of these emissions over time, the expected climate change effects on the City, GHG emissions reduction targets and goals to reduce the community's contribution to global warming, and identification and evaluation of strategies and specific measures to comply with statewide GHG reduction targets and goals, along with measures to help the community adapt to climate change impacts. The General Plan Update was completed in 2014, and the CAP was formally adopted on July 12, 2017. In April 2016, the

City prepared an updated draft GHG emissions inventory. The development of eight single-family units as part of Phase 2 of the proposed project would generate minimal GHG emissions, would be consistent with the adopted General Plan, and would not conflict with the goals, policies, and emission reduction targets set forth in the City's CAP.

Several lead agencies in California have adopted a screening threshold as recommended by the CAPCOA (California Air Pollution Control Officers Association) Report, *CEQA and Climate Change - Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (January 2008), which proposes a screening level threshold of 900 metric tons of CO₂e per year to evaluate whether a project must conduct further analysis. Recently, the County of San Diego has recommended applying the CAPCOA screening-level significance threshold of 900 metric tons/year of CO₂e emissions for construction and operation of development projects (County of San Diego 2016).

Although the applicant is currently only seeking approval of a land subdivision and approval of proposed grading plan to create eight new building pads (Phase 1), the Greenhouse Gas analysis prepared for the proposed project anticipates both the Phase 1 and the future Phase 2 which would include construction, occupancy, and operation of the new homes onsite. Therefore, the following analysis accounts for the potential GHG effects of both Phase 1 and Phase 2 site development activities.

GHG emissions associated with the proposed project were estimated for six categories of emissions: (1) construction; (2) energy use, including electricity and natural gas usage; (3) water consumption; (4) solid waste management; (5) area sources; and (6) transportation.

CONSTRUCTION GHG EMISSION IMPACTS

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. GHG emissions associated with temporary construction activity were quantified using the CalEEMod. CalEEMod contains emission factors from the OFFROAD2007 model for heavy construction equipment and from the EMFAC2011 model for on-road vehicles. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles is included in Appendix A. Table GHG-1 shows the estimated GHG construction emissions associated with the proposed project.

Table GHG-1
Estimated Construction Phase GHG Emissions

Construction Phase	Annual Emissions (MT CO ₂ e /year)
Demolition	15
Site Preparation	10
Grading	32
Trenching	38
Building Construction	354
Paving	10
Architectural Coating	8
Total	467

Source: CalEEMod Version 2016.3.2. See Appendix A for model output.

As shown in Table GHG-1, total construction emissions from the proposed project would not exceed the 900 MT CO₂e per year screening level. Impacts would be less than significant during construction.

OPERATIONAL GHG EMISSION IMPACTS

Although the applicant is currently only seeking approval of a land subdivision and approval of proposed grading to create eight new building pads (Phase 1), the GHG analysis prepared for the proposed project anticipates both the Phase 1 and the future Phase 2 which would include construction, occupancy and operation of the new homes onsite. Therefore, the following GHG analysis accounts for the potential GHG emissions associated with both Phase 1 and Phase 2 site development activities.

The proposed project includes an anticipated future Phase 2 development of eight single-family residences on an approximately 4.2-acre site. Operational emissions would include direct emissions from mobile source emissions and indirect emissions from electricity use and other sources. Vehicular emissions are calculated using the estimated net ADT of 60 trips for the project provided in the traffic analysis (Fehr & Peers 2019). Although the specific design of the future homes is unknown, the applicant estimates that future homes will result in a demand of 360 kWh of electricity, 180 therms of natural gas, and 146,000 gallons of water per year per home. Solid waste generation is estimated to be 2.05 tons per home per year. According to the applicant, the project would be planned and designed for sustainable site development, energy efficiency, and water and material conservation including the installation of energy and water efficient indoor and outdoor infrastructure to reduce GHG emissions. A sidewalk is proposed to be added within the site and along South Nardo to encourage walking over vehicle travel. To be conservative, this analysis assumes default CalEEMod energy and natural gas demand for single-family residences. The project-specific estimated water use and solid waste generation are conservative compared to CalEEMod default assumptions. The predicted operational emissions are presented in Table GHG-2.

Table GHG-2
Estimated Annual Operational GHG Emissions

Emission Source	Annual Emissions (MT CO ₂ e/year)
Area Sources	12
Energy	35
Mobile Sources	114
Solid Waste	9
Water Supply and Wastewater	7
Total	177

Source: CalEEMod Version 2016.3.2. See Appendix A for model output.

As shown in Table GHG-2, estimated annual project-generated GHG emissions would be approximately 177 MT CO₂e per year as a result of project operations. Emissions are below the CAPCOA screening threshold of 900 metric tons annually; therefore, impacts would be less than significant. The proposed project would not result in a cumulatively considerable contribution to a global climate change impact.

Greenhouse Gas Emissions Mitigation Measures

None required.

VIII. Hazards and Hazardous Materials <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Be located on a site that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	For a Project located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a Project within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildlands fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is summarized and based on the findings contained within the *Phase I and Phase II Environmental Site Assessment for 512, 516, 524, and 538 South Nardo Avenue (Phase I ESA and Phase II ESA)* (SCS Engineers 2012) prepared for the proposed project, as well as the *Comment Response Letter (SCS Comment Response Letter)* written by SCS Engineers in May 2018 (SCS Engineers 2018). These reports are included in the IS/MND as Appendices E1 and E2.

Discussion

a. Less than Significant with Mitigation Incorporated. The project proposes to subdivide a 4.2-acre site into an eight-lot residential subdivision. Although the applicant is not seeking approval to construct the eight additional homes at this time, it is anticipated that the new homes would be built as part of a future Phase 2 site development effort that would be subject to review and approval by the City. However, potential impacts associated with hazards and hazardous materials have been analyzed for both Phase 1 and the future Phase 2 of the proposed project.

To understand potential construction-related health hazards, a Phase I and Phase II Environmental Site Assessment (ESA) for the project site was conducted in 2012 (SCS Engineers 2012). Details of the Phase I and Phase II ESA objectives and scope are provided in Appendix E1. SCS Engineers also performed additional soil sampling at the project site from 2016 to 2017, results of which are discussed below

According to the *Phase 1 ESA*, there are no obvious indications of hazardous waste at the project site. Likewise, there are no obvious indications that a release of hazardous materials/wastes or petroleum products has occurred at the site. A former pesticide storage cabinet was observed on the site located on a stone platform within a stone building with a concrete slab. Based on the location of the former pesticide storage area, the storage area has a low likelihood of resulting in a recognized environmental condition (REC) given the lack of observed staining or indication of spills in the soil (SCS Engineers 2018). A review of a County of San Diego Department of Environmental Health (DEH) database of facilities storing hazardous materials, generating hazardous wastes, and discharging unauthorized releases provided no information in connection with the site; the DEH, when contacted, indicated that there were no files associated with the site. Solana Beach Fire Department (SBFD) records contained no information regarding hazardous materials or underground storage tank records for the site.

According to the *Phase 1 ESA*, there is a low likelihood that a REC exists at the project site, with two exceptions: a possible water well in the southeast area of Lot 8 and historic and current agricultural uses on the project site. According to an interview with a trustee for the property, the well may have been installed as an “imitation well” and has never been used for production purposes. However, during an interview, a site tenant recalls seeing water obtained from the well in the past. The possible environmental concerns associated with water wells include well seal failures and the related introduction of chemicals in the groundwater from surface sources and/or runoff. If the possible well is an historic well that is in contact with groundwater, Mitigation Measure HAZ-1 requires that it be properly destroyed in accordance with DEH guidelines.

Agricultural uses on the project site and in the project vicinity date back to before 1928. Because of the historic and current agricultural uses on the project site and project vicinity, there is a moderate likelihood that residual concentrations of organochloride pesticides are present in the shallow surface soil. As such, a *Phase II ESA* including soil sampling was conducted to measure concentrations of pesticides in the shallow soils onsite. According to the *Phase II ESA*, with the exception of arsenic, all metal and pesticide concentrations detected at the site were significantly below California Human Health Screening Levels (CHHSLs). Although the arsenic levels exceeded the CHHSL thresholds, they were within naturally-occurring background concentrations. Because arsenic is commonly present in California in concentrations that exceed risk criteria under naturally occurring conditions and the arsenic concentrations in the shallow soil at the project site were within naturally occurring background concentrations, the soil sample results did not appear to be indicative of a release of arsenic. SCS Engineers (2018) performed additional soil samplings in 2016 and 2017 for organochlorine pesticides, and the data were generally consistent with previous findings, since no organochlorine pesticides have been applied to the site since 2012. Due to the consistency of these samplings, SCS Engineers' professional opinion is that data collected from the project site are representative of current conditions.

Given the presence of residual concentrations of organochlorine pesticides and metals, the soil is likely to be a regulated waste. Because residual concentrations of organochlorine pesticides and metals were detected in the soils on the site, precautions would be taken during grading to control dust and minimize the likelihood of soil leaving the site. Specifically, water would be used for dust suppression and a Stormwater Pollution Prevention Plan (SWPPP) (required by the City for any grading project over one acre in size) would be prepared and implemented. However, because the proposed project would not export soil from the site, no mitigation measures are required to ensure the soil is properly characterized for offsite disposal.

Given the age of some of the structures onsite, demolition operations onsite have the potential to contain Asbestos Containing Materials (ACM) and Lead Based Paint (LBP). Asbestos can cause a variety of health issues; therefore, it is strictly regulated by both USEPA, CalEPA and CalOSHA. Although asbestos is usually safe when it is undisturbed and the ACMs are in good condition, once disturbed (such as during remodeling or demolition) the fibers can become airborne. According to the County of San Diego, any activities that involve asbestos-containing materials must conform to San Diego Air Pollution Control District (SDAPCD) Rules 361.140 - 361.156. To ensure that proper procedures are followed to control the emissions of asbestos into the atmosphere, the SDAPCD must be notified in writing at least 10 days in advance of any demolition. The Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as specified under Rule 40, CFR 61, Subpart M; (enforced locally by the San Diego Air Pollution Control District, under authority, per Regulation XI, Subpart M - Rule 361.145) requires the owner of an establishment, set for demolition or renovation, or the owner or operator of any equipment used to demolish or renovate any structure, to submit an Asbestos Demolition or Renovation Operational Plan (Notice of Intention) at least 10 working days before any asbestos stripping or removal work begins (such as, site preparation that would break up, dislodge or similarly disturb asbestos containing material.) A Notice of Intention is required for all demolitions, regardless of whether there is the presence of asbestos containing material, or not. Friable asbestos wastes are regulated as hazardous waste (CCR, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24) and must be transported by a licensed hazardous waste hauler and disposed of in an appropriate landfill. If ACM's or LBP's are encountered during demolition of any structures onsite, this would be a potentially significant impact and mitigation is required as described below in Mitigation Measure HAZ-2.

Typically, residential uses do not generate, store, dispose of, or transport quantities of hazardous substances. Operation of the project, which includes the Phase 2 construction of eight new residences, would not expose on-site users or the surrounding community to any health hazards from hazardous materials, and no impacts would occur from project operation.

MITIGATION MEASURES

HAZ-1 If it is determined that the potential well observed on the project site is an historic well that is in contact with groundwater, the applicant shall ensure, prior to the issuance of a grading permit, that the well is properly destroyed in accordance with DEH guidelines Chapter 4, Wells, in the San Diego County Code of Regulatory Ordinance. The applicant shall obtain a written permit from the Director of Environmental Health who has deemed the well a nuisance by polluting or contaminating ground water or serves as a safety hazard. A licensed contractor shall perform the destruction of the well and the Director shall oversee that it is completed.

HAZ-2 Prior to the issuance of a grading permit, the applicant shall conduct a comprehensive, pre-demolition survey in accordance with the sampling protocol of the Asbestos Hazard Emergency Response Act and Lead Based Paint (LBP) survey prior to any activities with the potential to disturb building materials to determine whether ACM or LBP are present. In the event ACM or LBP are detected, proper removal and disposal of the materials identified shall occur prior to any activities with the potential to disturb the ACM or LBP. To ensure that proper procedures are followed to control the emissions of asbestos into the atmosphere, the SDAPCD must be notified in writing at least 10 days in advance of any demolition by completing a Notice of Intention form. Any demolition plan shall ensure that any/all ACM and/or LBP encountered on-site during construction activities are removed and properly disposed of in accordance with regulations and procedures established by the San Diego County Department of Environmental Health and must be transported by a licensed hazardous waste hauler and disposed of in an appropriate landfill. The SD DEH, Occupational Health Program, or designee shall monitor the applicant's implementation of the demolition plans.

b. Less than Significant Impact. Construction equipment that would be used to build the proposed project has the potential to release relatively small amounts of oils, greases, solvents, and other finishing materials through accidental spills. Spill or upset of these materials could have the potential to significantly impact surrounding land uses; however, federal, state, and local controls have been enacted to reduce the effects of such potential hazardous materials spills. The Solana Beach Fire Department (SBFD) enforces City, state, and federal hazardous materials regulations for the City which include the Uniform Fire Code (UFC), the Resource Conservation and Recovery Act (RCRA), Chemical Accident Prevention Provisions listed under Part 68 of the Code of Federal Regulations, the State accidental release prevention programs approved under Section 112(r), the California Accidental Release Prevention (CalARP) and the Emergency Planning Community Right-to-Know Act (EPCRA).

City regulations include spill mitigation and containment and securing of hazardous materials containers to prevent spills. In addition, the State Fire Marshal enforces oil and gas pipeline safety regulations, and the federal government enforces hazardous materials transport pursuant to its interstate commerce regulation authority. Two programs contained in California Health and Safety Code Chapter 6.95 are directly applicable to the CEQA issue of risk due to hazardous substance release. In San Diego County, these two programs are referred to as the Hazardous Materials Business Plan program and the CalARP program. The County of San Diego DEH Hazardous Materials Division (HMD) is responsible for the implementation of the HMBP program and the CalARP program in San Diego County. The HMBP and CalARP Program provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, an HMBP or RMP is required pursuant to the regulation. Congress requires the USEPA Region 9 to make RMP information available to the public through USEPA's Envirofacts Warehouse at <http://www.epa.gov/enviro>.

Compliance with all of these requirements is mandatory as standard permitting conditions, and would minimize the potential for the accidental release or upset of hazardous materials, thus ensuring public safety. Therefore, compliance with the above referenced requirements would result in less than significant impacts with respect to the creation of significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c. Less than Significant Impact. The closest existing public school is Earl Warren Middle School (a public school with students in grades 7-8), which is located less than one mile northeast of the project site at 155 Stevens Avenue in Solana Beach. St. James Academy, a private, Catholic, K-8 elementary school, is located 0.2 mile south of the project site at 623 South Nardo Avenue. As stated under VIII, b., neither construction nor operation of the proposed project would result in a release of any significant amounts of hazardous substances that could cause a public health hazard offsite at these local schools.

d. No Impact. The Cortese List database identifies facilities designated by State Water Resources Control Board (SWRCB), the Integrated Waste Board, and the Department of Toxic Substances Control. The project site was not listed on a search of the Cortese List database (www.envirostor.dtsc.ca.gov), and there were no active or open cases found in the database search of properties within a one-half mile range of the project site. Other databases were searched through SWRCB's GeoTracker web site, such as LUST (Leaking Underground Storage Tanks) and no active or open cases were found on the GeoTracker site. There would be no impact related to a hazardous materials site that would create a significant hazard to the public or the environment.

e-f. No Impact. The nearest operational public airport or private airstrip, McClellan-Palomar Airport, is located more than 12 miles to the northeast of the project site. This facility is far enough away from the subject site such that implementation of the proposed project would not result in a safety risk for people working in the project area, or to air traffic from these airports. Therefore, no impacts related to airports or airstrips are anticipated to occur.

g. No Impact. The proposed project would not impair or physically impact any adopted emergency response plan or evacuation plan. The proposed project would require the temporary closure of one lane of South Nardo Avenue, but would not require the full closure of any public or private streets or roadways, and would not impede access of emergency vehicles to the project site or any surrounding areas. Further, the project would provide all required emergency access in accordance with the requirements of the Solana Beach Fire Department (SBFD). Therefore, no impacts to emergency response are anticipated to occur.

h. No Impact. The project site is not located within a Fire Hazard Severity Zone as designated on the City's Fire Hazard Severity Zones Map. Therefore, implementation of the proposed project and the future potential construction of eight homes onsite as part of a future Phase 2 would not result in a significant risk of loss, injury or death to people or structures from wildland fires where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Hazards and Hazardous Materials Mitigation Measures

Mitigation Measures HAZ-1 and HAZ-2 are required. With implementation of these measures, potential impacts related to hazards and hazardous materials would be less than significant.

IX. Hydrology and Water Quality <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f.	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j.	Contribute to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is summarized and based on the findings contained in the following reports: (1) the *Preliminary Hydrology Study for Ocean Ranch Estates – 512, 516, 524 & 538 South Nardo Avenue (Hydrology Report)* (Pasco Laret Suiter & Associates, Inc. (PLSA) 2017a); (2) the *Priority Development Project Water Quality Technical Report for Ocean Ranch Estates (PDP WQTR)* (Pasco Laret Suiter & Associates, Inc. (PLSA) 2017b); (3) a report prepared by a third-party engineering firm, Coffey Engineering, Inc., hired by surrounding neighbors, titled *Hydrology Study & Prelim GP for The Graziano Residence – Findings* (Coffey Engineering 2018); and (4) a response letter by Pasco Laret Suiter & Associates titled *Responses to Ocean Ranch Estates Subdivision – Findings (TM 17-17-15 & Initial Study/Mitigated Negative Declaration)* (PLSA 2018) prepared for the proposed project. These reports are included in the IS/MND as Appendices F1, F2, F3, and F4.

Discussion

a, c–f. Less than Significant Impact. The applicant seeks approval of a Development Review Permit (DRP) and a Major Subdivision (Tentative Subdivision Map) to subdivide an existing 4.2-acre site into eight lots to support the future development of eight homes onsite. Although no homes or associated hardscape are proposed as part of Phase 1, storm drain infrastructure necessary to collect and convey future runoff to appropriate points of discharge has been designed as part of Phase 1. Potential impacts associated with hydrology and water quality have been analyzed for both Phase 1 and a future Phase 2.

The primary pollutants of concern that could be generated by the development of the proposed project include sediments, nutrients, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides. Potential hydrologic conditions of concerns are impacts to the hydrologic regime resulting from development. This typically includes increased runoff volume and velocity; reduced infiltration; increased flow frequency, duration, and peaks; faster time to reach peak flow; and water quality degradation. The following discussion addresses these concerns.

DRAINAGE PATTERN

In the existing condition, onsite stormwater drainage is defined by two basins. Basin 1 consists of the majority of the project site, the southwestern and northeastern portion, and includes offsite runoff from the adjacent area to the north and west. Offsite runoff flows easterly overland onto the project site. Onsite runoff from Basin 1 flows overland northeasterly across the site, confluences with offsite flow, and drains to an existing concrete drainage channel located near the top of the steep eastern slope. From there, flow discharges from the drainage channel to the steep slope and continues to an existing brow ditch,⁴ which conveys the flows to an 18-inch corrugated metal pipe storm drain pipe that discharges at 627 Fresca Street via a modified curb outlet. Runoff continues north along Fresca Street and is ultimately discharged into the existing storm drain system located at the end of the cul-de-sac at 776 Sonrisa Street. Basin 2 consists of the remaining southeastern portion of the site from which runoff flows overland easterly and down the steep slope to an existing ditch at the bottom of the slope near the southeastern corner of the site, which discharges via a concrete spillway onto S. Nardo Avenue. Runoff ultimately discharges to the existing storm drain system located north of the intersection of S. Nardo Avenue and Stevens Street. Stormwater runoff from the subject property ultimately enters Stevens Creek where it is conveyed to the Pacific Ocean via the San Dieguito River Lagoon.

⁴ A brow-ditch is a type of drainage interceptor ditch that is typically placed above cut slopes.

The proposed project would not substantially alter the existing drainage pattern and would use the same discharge points as in the existing condition: a curb outlet onto Fresca Street and a concrete spillway onto South Nardo Avenue. With the proposed project, there would be two drainage basins to mimic the existing condition. Basin 1 would consist of the majority of the project site and the southwestern and northeastern portion and would include offsite runoff from the adjacent area to the north and west. Onsite runoff from the graded pads, except small portions of Lot 5 and Lot 6, would surface flow to the street. Runoff from the pads and the street would flow easterly to a new curb inlet at the end of the cul-de-sac. All onsite flows would continue northeast in the proposed storm drain to the proposed HMP Biofiltration basin located in Lot 8. The HMP Biofiltration facility would consist of a basin with an approximately 2,800-square-foot basin bottom, 18 inches of engineered soil, and 15 inches of gravel. Runoff would be biofiltered through the engineered soil and gravel layers and then collected in a series of small PVC drainpipes and directed to a catch basin where runoff would be mitigated via a 1-inch HMP orifice to comply with HMP requirements. In larger storm events, runoff not filtered through the engineered soil and gravel layers would be conveyed via an overflow outlet structure consisting of a grate located on top of the catch basin. Runoff conveyed via the outlet structure would bypass the small HMP orifice and be conveyed directly to a proposed outlet pipe. The HMP biofiltration basin would provide hydromodification management flow control, stormwater pollutant control, and mitigation for the 50-year and 100-year 6-hour storm events. This proposed bioretention treatment area would treat potential pollutants from the proposed project and would be privately maintained by future property owners within the subdivision.

After treatment and detention, flow from the HMP Biofiltration basin would discharge to a proposed 18-inch reinforced concrete pipe storm drain, which would replace the existing 18-inch corrugated metal pipe and flow to Fresca Street via a modified curb outlet with an 8-foot opening, which would replace the existing curb outlet as it does in the existing condition. In addition, a secondary 8-inch PVC pipe would be installed to collect and convey runoff from the downstream properties to Fresca Street. This secondary pipe system would allow the two systems to function independently to provide optimum conveyance. Offsite runoff from the adjacent area to the north and west of the project site would be collected in a proposed drainage ditch and conveyed to a separate proposed storm drain, which would bypass the HMP biofiltration basin and continue as described above. A 10-foot-wide easement approximately 300 sf from one of the downstream properties (APN 298-440-37) has been granted by the downslope property owner, Laurel Graziano, as of January 7, 2019 to connect the proposed storm drain system to the existing storm drain system (SD County Recorder 2019).

Basin 2 would consist of portions of Lot 5 and Lot 6 and the small area of undeveloped steep slope in the southeastern portion of the site. Runoff from Lot 5 and Lot 6 would flow toward the back of each lot to a proposed storm drain, which would discharge to the existing ditch at the bottom of the slope near the southeastern corner of the site and would continue as it does in the existing condition (see Figure 4, Drainage to Fresca Street).

Phase 2 of the proposed project is a future phase that would consist of the development of a future home on each of the eight lots. Each future home proposed on the finished lots that exceeds 16 feet would be required by the City of Solana Beach to be entitled via an SDP. Each home would also require a grading permit. As a part of the SDP process, each home would be deemed a PDP and subject to stormwater pollutant control and hydromodification management design requirements as set forth by the MS4 Permit and the City of Solana Beach BMP Design Manual. Additionally, the Engineering Department would require hydrologic calculations to determine the detention required for each individual lot to mitigate the runoff from the proposed future home back to the pre-project condition so there would be no negative downstream impacts. An example of a Phase 2 future home project and calculations for individually managing the future home, including the driveway, patio, and stormwater basin, is included as an exhibit in the *Hydrology Report* (PLSA 2017a).

According to the *Hydrology Report*, as a result of the Phase 1 redevelopment of the proposed project and the detention provided by the proposed HMP Biofiltration basin, the 50-year and 100-year 6-hour storm event peak discharge rates to Fresca Street would be decreased to below existing condition levels. In addition to mitigating the 50-year and 100-year storm events, the HMP Biofiltration basin would also treat onsite runoff for pollutant control and would provide hydromodification management flow control to satisfy the requirements of the MS4 Permit. Based on extensive hydrograph analysis performed, the HMP Biofiltration basin has been designed to adequately treat onsite stormwater pollutants contained in the volume of runoff from a 24-hour, 85th percentile storm event without flooding (PLSA 2017a, 2018). The future Phase 2 of the project, the development of each lot, would require each lot to individually manage lot stormwater runoff for pollutant control, hydromodification management, and the 50-year and 100-year 6-hour storm event peak discharge. The stormwater discharge from the project would be adequately conveyed through the proposed 18-inch PVC/reinforced concrete pipe storm drainpipe and the existing brow ditch.

Coffey Engineering, Inc., a third-party engineering firm hired by the residences surrounding the project site, analyzed the proposed drainage plan and found that the plans correctly model and convey the expected stormflow safely and adequately (Coffey Engineering 2018). Their findings letter can be found in Appendix F3. Through the use of a biofiltration basin and associated conveyance network, the system would adequately detain, attenuate, and convey stormwater through the neighboring property to Fresca Street. This system would provide additional protection from the residences by bypassing stormflows that used to flow into their backyards. This drainage system and all related BMPs would be implemented as conditions of approval for the proposed project prior to issuance of a grading permit. Therefore, the proposed project would not substantially alter the existing drainage and runoff of the site in a manner that would result in substantial erosion or siltation or substantial flooding onsite or offsite. It would also have a less than significant impact on the amount of runoff that would enter the existing and planned stormwater drainage system.

WATER QUALITY

To address potential water quality impacts due to project development, BMPs would be implemented during construction and post-construction.

Types of Post-Construction BMPs

LID site design BMPs are intended to minimize impervious surfaces and promote infiltration and evaporation of runoff before it can leave the location of origination by mimicking the natural hydrologic function of the site. Integrated management practices (IMPs) facilities are used in conjunction with LID BMPs as they provide small-scale treatment, retention, and/or detention that are integrated into site layout, landscaping and drainage design. Source control BMPs are intended to minimize, to the maximum extent practicable, the introduction of pollutants and conditions of concern that may result in significant impacts generated from site runoff to offsite drain systems. Treatment control BMPs are intended to treat stormwater runoff before it discharges offsite. According to the City's Storm Water regulations, specific localized treatment control BMPs are more effective at reducing or minimizing pollutants of concern than other types of BMPs. The implementation of all City recommended construction and post-construction BMPs would reduce, to the maximum extent feasible, all expected pollutants of concern and other anticipated pollutants.

Construction Activities

Short-term erosion impacts during the construction phase of the project would be prevented through implementation of an erosion control plan. A grading and erosion control plan is required in accordance with the City's Excavation and Grading Ordinance (SBMC 15.40) and the State General Permit to Discharge Storm Water Associated with Construction Activities and must be submitted for plan check and approval by the City Engineer prior to final approval of the project. The project would also be required to comply with the City's Construction and Demolition Debris Recycling Ordinance (SBMC 6.36).

The preliminary erosion control plan (PLSA 2017c) includes the following construction BMPs:

- silt fence along property lines and along top slope
- gravel bag storm drain inlet protection
- gravel bag check dams
- temporary stabilized construction entrance/exit

In addition, a Notice of Intent filed with the RWQCB (Region 9) and preparation of a Stormwater Pollution Prevention Plan (SWPPP) would be required before project construction commences. A SWPPP is required for all construction projects that are larger than one acre in size. A SWPPP contains a site map, which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that will be used to protect stormwater runoff and the placement of the BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Post-Construction Activities

The City's Storm Water Management and Discharge Control Ordinance (*SBMC Chapter 13.10*) requires that all new development and redevelopment activities comply with the stormwater pollution prevention requirements. Prior to permit submittal, the project applicant must complete the "Standard Urban Storm Water Mitigation Plan Checklist." The checklist will determine if the project requires Standard BMPs or Priority BMPs. Projects requiring Priority BMPs fall into one of six categories as of the 2013 National Pollutant Discharge Elimination System permit update by the City of Solana Beach. The proposed project falls into one of these categories and is classified as a PDP as confirmed by Pasco Laret Suiter & Associates (PLSA 2018). Therefore, the proposed project would implement Priority BMPs, including minimizing impervious areas and employing runoff collection, for both phases to satisfy this requirement.

Furthermore, the project proposes a LID, a stormwater HMP Biofiltration basin, which would provide on-site treatment of potentially polluted runoff from the majority of the proposed project. Therefore, development of the proposed project would have a less than significant impact on water quality standards or waste discharge requirements, and would not provide a substantial additional source of polluted runoff.

b. Less than Significant Impact. According to the *Geotechnical Report*, groundwater at the site is expected to be at least 45 feet or more below the existing and planned building pads (Geotechnical Exploration, Inc. 2012). This change would not substantially interfere with groundwater recharge such that the level of the local groundwater table would be impacted, and could, in fact, improve groundwater recharge. Furthermore, as described in Section XVIII, Utilities and Service Systems, the project would rely on surface water supplies from Santa Fe Irrigation District, not on local groundwater resources. As described in Section VIII, Hazards and Hazardous Materials, the possible abandoned well on the site would be destroyed as a condition of project approval. Consequently, no significant impacts to groundwater resources are anticipated with development of the project.

g-i. No Impact. The project site is not identified as an area within a 500- or 100-year flood plain (Solana Beach 2015). Development of the project site would not affect any area mapped as a flood hazard zone by the Federal Emergency Management Agency, or within a flood control basin or a potential inundation area. Therefore, it would not place houses or structures within a floodplain. In addition, the site is not downstream from a levee or dam. Consequently, significant impacts would not occur.

j. Less than Significant Impact. The site is not close enough to the ocean or other water bodies to be affected by a tsunami or seiche. The risk of tsunami affecting the site is considered to be very low as the site is situated at an elevation of more than 180 feet above mean sea level and not near an exposed beach (Geotechnical Exploration, Inc. 2012). Additionally, with the grading and foundation preparation recommendations from the *Geotechnical Report*, the site would not have the potential to produce mudflows. Consequently, impacts would be less than significant.

Hydrology and Water Quality Mitigation Measures

None required.

X. Land Use and Planning <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a. No Impact. The proposed project site is surrounded on all sides by existing single-family houses. The proposed lots would range in size from a minimum of 14,002 square feet to a maximum of 34,999 square feet. Each lot would have a front yard setback of 25 feet, rear yard setback of 25 feet, and side yard setbacks of 10 feet. Maximum allowable building heights would be 25 feet. The subdivision of the site into a total of eight lots and the future development of up to eight homes under a future Phase 2 would not divide or conflict with the surrounding, established low density residential community. Therefore, the project would have no impact.

b. Less than Significant Impact. The project site has an existing General Plan land use and zoning designation of Low Density Residential and Low Residential (LRC), respectively (Solana Beach 2015). No General Plan amendment or zoning code changes are required to support either Phase 1 or Phase 2 of the proposed project. All lands within the City are located within the Coastal Zone and therefore any proposed development projects are required to meet the regulations of the Coastal Act. The City's Local Coastal Program Land Use Plan (LCP/LUP) sets policies and regulations that provide for protection, provision, and enhancement of public access and recreation opportunities in the City consistent with goals, objectives, and policies of the California Coastal Act. The City's LCP/LUP incorporates the City's Zoning Ordinance and maps as well as the Coastal Act requirements (Solana Beach 2014a). The project, as proposed, is consistent with the requirements of the City's General Plan and LCP/LUP; therefore, it would have a less than significant impact.

c. Less than Significant Impact. The proposed project would comply with the City's applicable land use plan, policies, and regulations. The City is located within the boundaries of the North County MHCP. The MHCP, adopted on March 28, 2003, is the subregional plan for the northwest portion of San Diego County; it encompasses 111,908 acres and provides conservation for 77 species in a 20,593-acre reserve. The City is designated as almost completely Developed/Disturbed Land and does not need to prepare a subarea plan (SANDAG 2003). Adjacent land use designations to the proposed project site include residential lands. Therefore, the proposed project would have a less than significant impact with respect to the applicable habitat conservation plan or natural community conservation plan.

Land Use and Planning Mitigation Measures

None required.

XI. Mineral Resources <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Based on California Department of Conservation maps there are no oil, gas, or geothermal resources in the City or the surrounding area; and, there are no exploratory core holes or complete/abandoned oil wells on or near the site (California Department of Conservation 2016b). According to the California Mineral Land Classification Maps, lands in the City are unsuitable as a source for construction materials (California Department of Conservation 1996).

Discussion

a. No Impact. The proposed project site is located within the developed area of the City and is not located in an area known to have significant mineral resources, and the proposed project would not significantly affect the availability of mineral resources in the region. No mineral resource extraction is being conducted in the vicinity of the proposed project, nor is the project site proposed, designated, or zoned for mineral resource mining activities. Therefore, no impact would occur.

b. No Impact. The proposed project site and surrounding areas are not subject to mineral resource recovery operations. The proposed project would not affect locally important mining operations. The proposed project site is not located within or adjacent to an area identified as having significant aggregate or mineral resources, as defined by the California Department of Conservation under the Surface Mining and Reclamation Act. Oil and gas fields or coal mines are not found in the area, and there are no oil wells on the site. Also, there are no mining activities on or near the site. Therefore, no impact to regionally valuable mineral resources would occur.

Mineral Resources Mitigation Measures

None required.

XII.Noise <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a & d. Less than Significant with Mitigation. Potential noise impacts associated with the project are primarily related to proposed construction activities. The project site is located in the central portion of the City of Solana Beach. The proposed project is located in a residential setting and is surrounded by single-family houses to the north, south, east and west. Major circulation corridors surrounding the project within a one-mile radius include Stevens Avenue (0.2 mile east of the site), Via De La Valle (0.4 mile south), Lomas Santa Fe (0.5 mile north), and Highway 101 (0.3 mile west). Interstate 5 (I-5) is 0.5 mile to the east.

NOISE THRESHOLDS AND STANDARDS

Noise sensitive receptors (land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise) typically include residential dwellings, hotels, motels, hospitals, nursing homes, educational facilities and libraries.

A decibel (dB) is a unit used to express the intensity of a sound wave. The human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum; the dBA descriptor (or A-weighted sound level) is used because it factors sounds more heavily within the range of maximum human sensitivity

to sound frequencies. Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of sounds from distant sources that create a relatively steady background noise in which no particular source is identifiable. For this type of noise, a single descriptor called the L_{eq} (or equivalent sound level) is used. For most acoustical studies, the monitoring interval is generally taken as one-hour, and is abbreviated L_{eq-h} . The CNEL, or Community Noise Equivalent Level, is another common descriptor of ambient community noise. CNEL is a 24-hour L_{eq} , except this measurement applies weights to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times (relaxation and sleep). A +5 dBA weighting is applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a +10 dBA weighting is applied to all sound occurring between 10:00 p.m. and 7:00 a.m. The minimum change in sound level that the human ear can detect is approximately 3 dBA. This increment is commonly accepted under CEQA as representing an impact threshold. This limit is also accepted by the City as the significance threshold to determine a proposed project's impact on the affected (existing) environment.

The Solana Beach General Plan Noise Element establishes noise criteria for various land uses (Solana Beach 2010). The maximum allowable exterior noise level at outdoor usable areas for new residential development is a CNEL of 65 dBA. For residential development, the City typically applies the noise criteria at the backyards of single-family homes and at private patios, exterior balconies, and exterior common use areas of multi-family developments.

The City's Municipal Code Noise Ordinance (Chapter 7.34, Noise Abatement and Control) is a quantitative noise ordinance to control excessive noise generated in the City from stationary (i.e., non-transportation) sources. The noise ordinance limits are in terms of a 1-hour average sound level. The allowable noise limits depend upon the land use zone, time of day, and duration of the noise. The applicable noise limits for residential development are shown in Table N-1.

Table N-1
Applicable City of Solana Beach Noise Ordinance Limits

Land Use	Time	Limit; 1-Hour Average
ER1, ER2, LR, LMR, MR (Residential)	7:00am to 10:00pm	50
	10:00pm to 7:00am	45

Source: Solana Beach 2016.

The City also regulates noise associated with construction activities (Section 7.34.100, Construction Hours and Noise Levels Limited). Construction is permitted between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between the hours of 8:00 a.m. and 7:00 p.m. on Saturday, with the exception of legal holidays. Construction noise levels are not permitted to exceed 75 decibels for more than eight hours [L_{eq} (8)] during any 24-hour period at or within residential land uses.

CONSTRUCTION NOISE

Construction noise would primarily result from the use of motorized construction equipment. Other short-term impacts from construction noise could result from construction traffic, including materials delivery anticipated during the future Phase 2 (development of the eight homes). Noise impacts would be most noticeable in the residential neighborhood surrounding the project site. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Standard construction equipment such as backhoes, dozers, cranes, and graders would be used (refer to Table N-2 for more information).

The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is listed in Table N-2. The noise values represent maximum noise generation, or full-power operation of the equipment. As one increases the distance between equipment or separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. Also, typical operating cycles may involve 2 minutes of full power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activities is generally lower because maximum noise generation may only occur up to 50 percent of the time.

**Table N-2
Construction Equipment Noise Emission Levels**

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	81
Grader	85
Impact wrench	85
Jackhammer	88
Loader	85
Paver	89
Pneumatic tool	85
Pump	76
Roller	74
Saw	76
Truck	88

Source: FTA 2006.

Although the applicant is currently only seeking approval of a land subdivision and approval of proposed grading to create eight new building pads (Phase 1), this noise analysis anticipates the future Phase 2 which would include construction, occupancy, and operation of the new homes onsite. Therefore, the following noise analysis accounts for the potential effects of both Phase 1 and Phase 2 site development activities.

According to information provided by the applicant, project construction would take approximately 16 months (including both Phase 1 and Phase 2). The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition – 5 days
- Site Preparation – 5 days
- Grading – 1 month
- Trenching (utility installation) – 1 month
- Building Construction – 12 months
- Application of Architectural Coatings – 1 month
- Paving – 2 weeks

Noise levels from conventional construction activities for housing, roadway, and pipeline projects range from 79 to 88 dBA L_{eq} at a distance of 50 feet (EPA 1971). The typically quieter phases of construction for similar projects are associated with constructing foundations and erecting buildings (81 dBA L_{eq} at a distance of 50 feet), and the typically louder phases, producing 88 dBA L_{eq} at 50 feet, are those associated with excavation and finishing activities. Noise levels from construction activities generally decrease at a rate of 6 dB per doubling of distance away from the activity (or conversely increase at the same rate as distance is diminished). The closest offsite sensitive receptors to the project are residential land immediately adjacent to the southern boundary of the project site, and within approximately 25 to 50 feet of the project's north, west, and east boundaries.

Construction noise represents a short-term impact on ambient noise levels. Actual noise level exposure generated by project construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, location of operation on the project site, the types of equipment operating simultaneously, total operating hours for each piece of equipment, the condition of the equipment, and the prevailing wind direction. The highest noise levels associated with construction typically occur with earth moving equipment, which includes excavating machinery (e.g., backhoes, compactors, scrapers, graders, etc.). The maximum noise levels for various types of construction equipment that would be required for the project are provided in Table N-2. Based on Table N-2, the maximum noise levels from most of the project construction equipment at 50 feet would be in the mid to high 80 dBA range. However, the average sound level of the construction activity would depend upon the amount of time that the equipment would operate and the intensity of the construction activity.

The most effective method of limiting disturbances from construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours when residences are likely to be least sensitive to construction noise. As described above, noise levels from project construction would be expected to range from 79 to 88 dBA L_{eq} at 50 feet from the construction area. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Noise levels of 79 to 88 dBA L_{eq} are substantially higher than the typical ambient daytime noise levels in the residential project area. Although the existing adjacent residences would be exposed to construction noise levels that would be heard above ambient conditions, the exposure would be short-term. Grading activities are proposed to be limited to between 7:00 AM and 4:00 PM Monday through Friday, and 8:00 AM to 4:00 PM on Saturday, which is more restrictive than City requirements. Due to breaks in the construction day and variation in the type and number of construction equipment operating at once, average construction noise levels would not be expected to regularly exceed 75 dB over an 8-hour period. However, periodic noise levels could exceed the City's noise threshold during any of the project's short-term on-site or offsite construction operations, and would result in a potentially significant impact. However, with implementation of noise mitigation measure N-1, noise levels would be reduced to less than significant levels.

MITIGATION MEASURE

N-1 Prior to issuance of any construction permits, the applicant shall ensure the following, to the satisfaction of the City of Solana Beach City Engineer:

- Construction noise reduction methods, such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools rather than diesel equipment, shall be used.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive noise receivers.
- During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise-sensitive receptors.

With the implementation of Mitigation Measure N-1, construction related noise impacts would be reduced to less than significant levels.

c. Less than Significant Impact.

OPERATIONAL NOISE

As explained above, the maximum allowable exterior noise level at outdoor usable areas for new residential development is a CNEL of 65 dBA (Solana Beach 2010). For residential development, the City typically applies the noise criteria at the backyards of single-family homes and at private patios, exterior balconies, and exterior common use areas of multi-family developments. While other kinds of noise associated with future occupancy cannot be quantified at this time, such occupancy would be subject to the City of Solana Beach noise ordinance (SBMC Chapter 7.34), and violations would be subject to appropriate enforcement action.

Traffic

Development of the proposed project would result in the removal of three occupied residential units. The net Phase 2 residential traffic is anticipated to be 60 average daily trips (ADT) (Fehr & Peers 2019). Operation of the proposed project would increase the ADT on South Nardo Avenue from 2,360 trips to 2,396 trips (Fehr & Peers 2019). Based on standard noise modeling equations adapted from the FHWA noise prediction model, noise levels on South Nardo Avenue would not exceed 65 dBA CNEL with or without project traffic. The proposed project would result in a less than 1 dBA increase in traffic noise levels. Beyond South Nardo Avenue, project traffic would disperse and the project's incremental increase in traffic would be further reduced. Therefore, project implementation would not result in a significant impact due to traffic-related noise.

Mechanical Equipment

Noise from future Phase 2 could include operation of stationary mechanical equipment typical of single-family residential units, such as heating, ventilation, and air conditioning (HVAC) equipment, pool pumps, or exhaust fans, would have to comply with the City's Municipal Code noise limits at residential land uses. HVAC equipment noise would vary depending on the locations, brands, and models of equipment selected. Typical large HVAC equipment can result in noise levels of approximately 60 dBA L_{eq} at 100 feet (PDH Center 2012). Noise from pool pumps, fans, or other stationary noise sources would vary depending upon the noise emission level, proximity to boundary lines, and enclosures.

While the present application includes a request only for Phase 1 (subdivision, site clearing and grading to create eight new building pads), no homes are currently proposed to be constructed by the applicant. When plans for the individual homes are submitted to the City for building plan approval, mechanical equipment associated with the project will be required to comply with the property line noise level limits contained within the City's Municipal Code, including at adjoining single-family property boundaries within the proposed project site. Noise from mechanical equipment associated with the project would be evaluated as part of the building plan submittal to ensure compliance with the City's noise limits as set forth in the City's Municipal Code Chapter 17.20.040 and 7.34.040. The applicant must comply with these local provisions as well as state and federal regulations regarding operational noise in order to be issued a building permit. Therefore, operational noise impacts would be considered less than significant.

b. Less than Significant Impact. The heavier pieces of construction equipment used at the site could include loaders, backhoes, dozers, cranes, and forklifts. Pile drivers, blasting equipment, vibrating compactors, or the like are not anticipated to be needed or used for this project. Based on published vibration data, the anticipated construction equipment would generate a peak particle velocity of approximately 0.09 inch/second or less at a distance of 25 feet (FTA 2006). Information from the California Department of Transportation (Caltrans) indicates that continuous vibrations with a peak particle velocity of approximately 0.7 inch/second begin to disturb people (Caltrans 2013). The criteria for potential damage to structures of non-engineered timber or masonry structures is 0.2 inch/second (FTA 2006). Therefore, construction activities are not anticipated to result in vibration levels that typically disturb people or have the potential for structural damage, and the vibration impact would be less than significant.

Vehicle traffic over a maintained road and operation of residences are not generally considered a significant source of groundborne vibration. Therefore, operational sources of groundborne vibration are considered a less than significant impact for this project and no mitigation is required.

e. No Impact. The project site would not be located within an area covered by an airport land use plan or within two miles of a public or public use airport. Development on the site would not expose people working or visiting in the project area to excessive airport noise levels and no impact would occur.

f. No Impact. There are no private airstrips located near the project site and therefore future residents of the project site would not be exposed to excessive aircraft noise levels. The project would not increase onsite exposure to aircraft noise. Thus, no impact would occur.

Noise Mitigation Measures

Construction-related noise impacts have the potential to be significant. With implementation of Mitigation Measure N-1 all potential noise impacts would be less than significant.

XIII. Population and Housing <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a–c. Less than Significant Impact. The applicant seeks approval of a DRP and TSM to subdivide a 4.2-acre site into an eight lot residential development. The existing City of Solana Beach General Plan land use and zoning designations are Low Density Residential and Low Residential (LRc), respectively. Low Residential, LRc, zoning allows for three dwelling units per acre; the project would fall within that constraint. The parcels currently contain five residences (three structures), one of which is vacant, but no new homes are proposed to be built by the applicant at this time. It is anticipated that eight new homes would be built in the future under Phase 2 of site development activities subject to the review and approval by the City. However, potential impacts associated with population and housing have been evaluated for both Phase 1 and future Phase 2. Therefore, implementation of the proposed project could add up to nine new residents to the City under Phase 2 of the project.⁵

The site is surrounded by existing single-family development on all sides. The project would create a new, public road and extend utilities to each of the eight lots; however, the site is currently serviced by a driveway and all utilities. The proposed project is consistent with the underlying General Plan land use and zoning classifications upon which regional population growth estimates developed by SANDAG are based. Therefore, the project would not lead to substantial, direct population growth beyond what is already anticipated in the area, nor would it indirectly induce substantial population growth by extending roads or infrastructure into an undeveloped area.

⁵ The net number of new residents was estimated by multiplying the net number of residences (8 new residences – 4 existing occupied residences = 4 net occupied residences) by the household size described in the General Plan (2.28 people per residence). Therefore, $4 \times 2.28 = 9.12$, which was rounded to 9.

Implementation of the proposed project would demolish five existing residences, one of which is currently vacant. However, a future Phase 2 of the project would construct eight new residences and purchase one offsite townhome or apartment that would be rented at the low-income affordability level. The project would not displace a substantial number of existing housing units or people. In 2010, Solana Beach had a housing stock of 6,540 units and was projected to gain approximately 137 housing units between 2008 and 2020. Between 2020 and 2050, Solana Beach is anticipated to gain approximately 419 housing units, an increase of 6.3 percent (Solana Beach 2015). Persons displaced by the proposed project would likely find alternative housing elsewhere in the City or surrounding area. Consequently, project implementation would have a less than significant direct or indirect effect on population growth or the need for replacement housing.

Population and Housing Mitigation Measures

None required.

XIV. Public Services		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the Project:					
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
	1. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	4. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	5. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Upon buildout, the proposed project would result in the construction of eight new homes in the City of Solana Beach. Five existing residences (four occupied, one unoccupied residence) would be demolished under Phase 1 of the proposed project, resulting in a net of four occupied residences being added to the City. According to population information provided by the SANDAG 2050 *Regional Growth Forecast*, the four net new occupied homes are estimated to increase the population of the City by approximately nine persons (2.28 persons per household) if each of the homes is occupied by people not currently living in the City of Solana Beach. This slight potential increase in population would not necessitate the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services described below.

a1–a3. Less than Significant Impact. Fire protection services in the City are provided by the Solana Beach Fire Department. The Solana Beach Fire Department is staffed with a Chief, Deputy Chief, an Administrative Assistant, Fire Captains, Engineers, Firefighter Paramedics, Firefighters, and Paramedics. The Solana Beach Fire Department is located at 500 Lomas Santa Fe Drive, approximately 0.5-mile north of the proposed project site. The applicant seeks approval of an application for a DRP and a TSM to subdivide a 4.2-acre site into an eight lot residential development. The existing parcel currently contains four occupied and one vacant residences, which would all be demolished as part of the proposed project. The eventual construction of eight new homes on the proposed lots anticipated to occur as part of a future Phase 2 would be subject to review and approval by the City and would be done in accordance with all applicable fire codes set forth by the State Fire Marshal, the Solana Beach Fire Department, and the City's building code. However, potential impacts associated with public services have been analyzed for both Phase 1 and future Phase 2. Implementation of the proposed project could result in a slight incremental increase in the demand for emergency services; however, the size (eight homes) and location of the project (developed area of the city) would not place an undue hardship on the Fire Department because it is presently servicing the area including the site and the existing developments that surround the site. Furthermore, new projects are required to pay associated development fees, as required by Municipal

Code Sections 3.20 and 17.72. Fees under Section 3.20 are specifically required in order to provide adequate fire protection services within the city.

The project site is not located within a Fire Hazard Severity Zone. In addition, the Fire Department would review the building and precise grading plans associated with Phase 2 when they are submitted to the City, and the applicant must comply with these Fire Codes in order for a building permit to be issued. These recommendations would be included in the Conditions of Approval for the future homes in order to reduce any impacts at that time. Prior to final project approval, the City Fire Marshall would verify that the eight future new homes (Phase 2) have been designed to conform to code. Implementation of the proposed project would not exceed the capacity of the Solana Beach Fire Department to serve the site with existing fire protection services and resources, resulting in the need for the construction of new or altered government facilities. Therefore, the proposed project would result in less than significant impacts.

The City contracts with the San Diego County Sheriff Department for law enforcement and other related services. The nearest patrol station is the North Coastal Sheriff Station, located at 175 North El Camino Real approximately five miles north of the project site in Encinitas. Increased demand for police protection is not expected because the Sheriff Department is presently servicing the area including the project site. Implementation of the proposed project is consistent with the underlying General Plan land use and zoning designations. New projects implemented in accordance and consistent with the General Plan are required to pay associated development fees, as required by Municipal Code Section 17.72. According to the General Plan EIR (Solana Beach 2014b), projects that are consistent with the General Plan would not result in a significant impact on the Sheriff's Department services or facilities. Therefore, the proposed project is not anticipated to exceed the capacity of the Sheriff's Department to provide police protective services to the project site, resulting in the need for the construction of new or altered facilities, and impacts would be less than significant.

The Solana Beach School District and the San Dieguito Union High School District provide educational services to the area and have a combined total of 18 schools, including six elementary schools, four middle schools, four high schools, one school of choice, one alternative education school, one independent study school, and one adult education program school.

Eight future homes that would be built as a result of a future Phase 2 would not result in a substantial increase in the population, as described above. However, it is anticipated that there would be a nominal incremental population increase if the homes are ultimately occupied by people from outside the City or county. Therefore, the proposed project could place an incremental demand on schools or school operations that would require additional school facilities. However, with payment of the Residential Development School Fee as a condition of building permit approval, which is authorized by Section 17620 of the Education Code, impacts to school facilities would be less than significant.

a4–a5. Less than Significant Impact. Implementation of the proposed project is not anticipated to result in a significant increase in the demand for parks as the eight new homes to be constructed in Phase 2 of the proposed project would result in an increase in the City's population of only nine residents. The City of Solana Beach assesses a Park Development Fee of \$600 per vacant lot being developed (Solana Beach 2011). Therefore, the proposed project would be assessed a total of \$4,800 in park fees to offset the potential increase in demands associated with additional park use resulting from the future construction of the eight new homes under a future Phase 2.

Due to the relatively small size of the proposed project, impacts on parks or other recreational facilities such as libraries, senior centers, or other public facilities are anticipated to be less than significant. The San Diego County Library System provides library services to the City through the Solana Beach Branch, located at 157 Stevens Avenue at Earl Warren Middle School.

Public services are institutionalized responses to basic human needs. These needs include health, safety, welfare, and education. Public service needs are based on an area's population. Because the proposed project is consistent with the underlying General Plan land use and zoning designations, which are the basis of local and regional future population growth estimates, impacts to other public services are anticipated to be less than significant with project implementation.

Public Services Mitigation Measures

None required.

XV. Recreation <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a–b. Less than Significant Impact. The proposed project would not significantly affect any property currently zoned for recreational or open space use. The project consists of approval of an application for a DRP and TSM to subdivide a 4.2-acre site into an eight lot residential development (Phase 1) and the construction of eight new homes in the future (Phase 2). Both Phase 1 and future Phase 2 have been fully evaluated for potential impacts associated with recreational resources. A small demand on existing recreational resources including parks may be anticipated with any residential development within the city. However, this impact is anticipated to be minimal because the eight additional homes would only increase the City's population by approximately nine people. This would not be expected to lead to a substantial physical deterioration of existing parks or other recreational facilities. As explained in Section XIV, park fees would offset the potential increase in demands associated with additional park use resulting from the future construction of the eight new homes under Phase 2. As a result, impacts to parks and other recreational resources would be less than significant.

The project does not propose the development of any parks or recreational facilities. As stated above, a small demand on existing recreational resources would be anticipated with any residential development within the city. This impact is anticipated to be minimal because the proposed project is consistent with the underlying General Plan land use and zoning designations, which are the basis of local and regional future population growth estimates, and the project would pay the required Park Development Fees. Therefore, implementation of the proposed project is not anticipated to require the expansion of existing recreational facilities or the construction of new recreational facilities that might adversely affect the environment. As a result, less than significant impacts would occur with project implementation.

Recreation Mitigation Measures

None required.

XVI. Transportation/Traffic Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Conflict with an applicable congestion management program including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for the designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is summarized and based on the findings contained within the *Ocean Ranch Estates Focused Traffic Study (Traffic Study)* (Fehr & Peers 2019) prepared for the proposed project. This report is included in the IS/MND as Appendix G.

Discussion

a & b. Less than Significant Impact. The proposed project would subdivide 4.2 acres into eight lots. Although the applicant is currently seeking approval of a land subdivision and approval of proposed grading to create eight new building pads, associated access road, and underground utilities (Phase 1), this analysis anticipates that a future Phase 2 would include construction, occupancy and operation of the eight new homes onsite. Therefore, the following analysis accounts for the potential effects of both Phase 1 and Phase 2 site development activities.

There are currently four occupied residences onsite (one single-family house and one multifamily house with three units) (there is also one vacant residence), and two active agricultural fields. The project study area includes four intersections and one roadway segment. The traffic analyses for the project were conducted in accordance with regional guidelines used by the City of Solana Beach. The following scenarios are evaluated:

- Existing
- Existing + Project
- Near Term Cumulative
- Near Term Cumulative + Project

As described in the *Traffic Study* the study area includes the following intersections and roadway segments adjacent to the project site that could be impacted by the proposed project:

Intersections

1. South Nardo Avenue / Lirio Street
2. South Nardo Avenue / East Solana Circle
3. South Nardo Avenue / Nardito Lane
4. South Nardo Avenue / project driveway (proposed Bell Ranch Road)

Segments

1. South Nardo Avenue, north of East Solana Circle

Traffic counts were conducted during a field visit on an average weekday in March 2015 while local schools were in session at study intersections during the AM and PM peak hours and for a 24-hour period along the roadway segment. The existing traffic volumes and lane configurations observed during the field visit were used to calculate the existing conditions level of service (LOS)⁶ for all of the study area locations. Field observations were also conducted on an average weekday in March 2015 to verify existing lane configurations, traffic controls, and operating conditions. The field visit revealed generally minimal delays during the AM and PM peak periods at the study intersections, which is consistent with the analysis results that all intersections operate acceptably.

Near-term cumulative conditions were forecast using a total ambient growth rate of 1% per year for a period of five years (total growth of 5% applied to the existing conditions traffic volumes). The growth rate accounts for general changes to traffic patterns that occur over time between the time the existing conditions volumes were collected (2015) and the anticipated project opening year (2020). The ambient growth rate also accounts for traffic associated with other planned regional projects outside the study area that could have some impact on the local neighborhood trips through and around the city. Trips associated with the Solana Highlands residential project⁷ were included in the near-term analysis in addition to the ambient growth rate. No other cumulative projects were identified in the *Traffic Study*.

⁶ LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A (the least congested operating condition) to LOS F (when traffic volumes exceed capacity resulting in stop-and-go conditions). LOS at intersections is analyzed in terms of delay time while LOS on roadways is analyzed in terms of the ratio of the traffic volume to the roadway capacity.

⁷ The environmental review for the Solana Highlands Revitalization Project began in November 2014. The project was approved in December 2018.

According to the SANTEC/ITE Traffic Impact Study Guidelines, a project is considered to have a significant impact on the operation of an intersection or roadway segment when one of the following occurs:

- The addition of project traffic results in an LOS dropping from LOS D or better to LOS E or F.
- If an intersection is operating at LOS E or F under base conditions and the project adds more than an additional two seconds of average vehicle delay, the project is determined to have a significant impact.
- If a roadway segment is operating at LOS E or F under base conditions and the project results in a change in volume-to-capacity (V/C) ratio of 0.020 or more, the project is determined to have a significant impact.

Further details on the methodology and thresholds used in the *Traffic Study* can be found in Appendix G.

Once the homes are built under a future Phase 2, the site is conservatively estimated to generate 60 net new vehicle trips to the surrounding roadways with 4 trips (2 inbound/2 outbound) during AM peak hour and 6 trips (4 inbound/2 outbound) during PM peak hour based on SANDAG regional trip generation rates. The distribution of project-generated trips was based upon existing travel patterns and the location of complementary land uses within and outside of the Solana Beach area, as well as access points to the adjacent roadway network. These proposed project trips were added to the existing and near term cumulative conditions to arrive at the existing plus project and the near term cumulative plus project conditions, respectively.

Table TR-1 summarizes the peak hour intersection operations under each scenario with the addition of future Phase 2 traffic associated with the new homes. All study area intersections would operate at LOS A or B during the AM and PM peak hours. Table TR-2 reveals a 0.016 change in V/C ratio, which is less than the impact threshold of 0.02; therefore, there is no significant project impact on this roadway segment.

Table TR-1
Intersection Operations

Intersection	Existing		Existing + Project		Near-Term Cumulative (w/o Project)		Near-Term Cumulative + Project		SI?
	Avg. Delay ¹ (AM/PM)	LOS (AM/PM)	Avg. Delay ¹ (AM/PM)	LOS (AM/PM)	Avg. Delay ¹ (AM/PM)	LOS (AM/PM)	Avg. Delay ¹ (AM/PM)	LOS(AM/PM)	
S. Nardo Ave. / Lirio St. ²	7.8/7.5	A/A	7.8/7.5	A/A	7.9/7.6	A/A	8.0/7.6	A/A	No
S. Nardo Ave. / E. Solana Circle	10.2/9.5	B/A	10.2/9.6	B/A	10.4/9.6	B/A	10.4/9.7	B/A	No
S. Nardo Ave. / Nardito Ln.	10.0/0.0	B/A	10.1/0.0	B/A	10.0/0.0	B/A	10.1/0.0	B/A	No
S. Nardo Ave. / Project Driveway ³	n/a		9.1/8.9	A/A	n/a		9.2/8.9	A/A	n/a

Source: Fehr & Peers 2015; Existing Plus Project and Near-Term Cumulative Plus Project revised 2019.

Notes:

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for all-way stop controlled intersections

2. All-way stop controlled intersection

3. Driveway intersections were only analyzed under "Plus Project" scenarios

LOS=Level of Service

n/a= Not Applicable

SI? = Significant Impact?

**Table TR-2
Roadway Segment Operations**

Roadway Segment	Class & Capacity ¹	Existing			Existing + Project				Near-Term Cumulative			Near-Term Cumulative + Project				SI?
		ADT	V/C	LOS	ADT	V/C	LOS	Δ^2 V/C	ADT	V/C	LOS	ADT	V/C	LOS	Δ^2 V/C	
S. Nardo Ave. north of E. Solana Circle	Sub-Collector 2,200	2,262	1.03	>C ³	2,298	1.04	>C ³	0.01 6	2,430	1.10	>C ³	2,464	1.12	>C ³	0.01 6	No

Source: Fehr & Peers 2015. Revised 2019.

Notes:

1. Capacity based on SANTEC/ITE Traffic Impact Study Guidelines

2. Δ denotes a project-induced increase in the volume to capacity ratio.

3. > indicates worse than LOS C (e.g., LOS D, E or F).

ADT=Average Daily Traffic Volume

V/C=Volume to Capacity ratio

SI? – Significant Impact?

Numbers may appear inaccurate due to rounding.

The traffic impacts of the proposed project do not exceed the established LOS significance thresholds. The proposed project also does not conflict with any of the goals or policies of the City's recently updated Circulation Element of the General Plan Update, as the project does not result in any adverse effects on the circulation goals of the City. It would not obstruct the City's efforts to enhance and promote multi-modal transportation or complete streets programs within the city. The project would comply with the various goals and policies of the Circulation Element related to alternative modes of transportation through the construction of sidewalks throughout the proposed project and on adjacent roads. The City is currently developing a Transportation Impact Fee (TIF) program to fund the construction of various multi-modal transportation facilities identified in the City's Comprehensive Active Transportation Strategy (Solana Beach 2015) and in conformance with the Circulation Element of the General Plan Update. The project would be conditioned to pay all TIF fees, as adopted by the City Council associated with the proposed development, to fund Citywide circulation enhancements once established. Therefore, impacts would be less than significant and no traffic related mitigation measures are required.

c. No Impact. As described in Section VIII, Hazards and Hazardous Materials, and Section XII, Noise, the nearest airport or airstrip, McClellan-Palomar, is located 12 miles to the northeast. The proposed project would not affect nearby air traffic patterns or create substantial safety risks. Therefore, impacts related to this issue would not occur.

d. Less than Significant Impact. As described in the *Traffic Study*, the proposed project's access point, Bell Ranch Road, would be located at an existing project driveway. The driveway would be converted to a standard intersection and T into South Nardo Avenue with stop control on the side street approach. There are three existing curb cuts along South Nardo Avenue that currently provide access to the existing residential units on the property. The project proposes to consolidate these three driveways into the Bell Ranch Road driveway which would terminate in a cul-de-sac. With the proposed project, all eight residences would be accessed from Bell Ranch Road. The Lirio Street / South Nardo Avenue intersection is 120 feet to the north and is currently all-way stop controlled. The East Solana Circle / South Nardo Avenue intersection is 470 feet to the south and is stop controlled on the side street (East Solana Circle). The East Solana Circle / South Nardo Avenue intersection is located on a curve while South Nardo Avenue slopes down on the southbound approach.

Several local residents have expressed concern regarding excessive speed and sharp curves on roads within the project vicinity. To the extent these conditions exist, they reflect the existing conditions in the project area and are not considered impacts associated with this proposed project. The *Traffic Study* also confirmed that the proposed project will not exacerbate the existing conditions. As part of the *Traffic Study*, a speed survey was conducted just north of East Solana Circle. Results showed the 85th percentile speed to be approximately 30 miles per hour, which means the sight distance at the proposed driveway location is adequate for the conditions of the roadway. The line of sight assessment conducted in the *Traffic Study* found that the existing, 245-foot line of sight at the proposed Bell Ranch Road driveway is adequate for the speed conditions of the roadway. However, the study noted that obstructions within the driveway's line of sight that are higher than three feet would need to be removed, which includes the utility pole currently stationed at the southern corner of the proposed Bell Ranch Road and South Nardo Avenue. The *Traffic Study* concluded that measured traffic speeds and intersection operating conditions indicate that no operational hazards currently exist or are forecast to exist with the proposed project. Nonetheless, as a condition of project approval, a sidewalk would be constructed from the southerly terminus of the future Bell Ranch Road to connect with the existing sidewalk on Nardito Lane to strengthen public safety and lessen neighborhood concerns. Therefore, impacts of the proposed project related to design feature hazards would be less than significant.

e. No Impact. As discussed in Section VIII, Hazards and Hazardous Materials, the proposed project would not affect emergency access to the site or adjacent areas. Therefore, significant impacts related to emergency access would not occur.

f. Less than Significant Impact. The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. As explained in Section XVI.a above, the project would be required to pay all TIF fees to fund Citywide circulation enhancements as a condition of project approval. The proposed project would not otherwise decrease the performance or safety of alternative transportation facilities. The nearest marked bicycle facilities are the Class II bike lanes located along Lomas Santa Fe Drive and Via De La Valle, which connect the coast to inland communities. The Solana Beach train station is approximately 0.5 mile northwest of the project site and there are bus lines to the west, north and east of the project (BREEZE bus routes 101 and 308 and FLEX shuttle route 374). South Nardo Avenue provides sidewalks on the west side of the street, south of East Solana Circle and there is a school crossing across the south leg of the Nardito Lane / South Nardo Avenue intersection. However, there are no sidewalks on either side of South Nardo Avenue north of East Solana Circle, adjacent to the project site. Instead, a narrow shoulder is available for pedestrians and on-street parking. The *Traffic Study* recommended that a sidewalk or pedestrian walkway be constructed on the east side of South Nardo Avenue between the future Bell Ranch Road and East Solana Circle. As a condition of project approval, a 5-foot wide standard contiguous sidewalk would be constructed behind the existing curb along the east side of South Nardo Avenue from the southerly boundary of the proposed project site to Nardito Lane. The new sidewalk would connect the existing marked school crosswalk, as well as the project site, with other sidewalks within the community. As further conditions of project approval, the project would construct a 5-foot wide standard concrete sidewalk along the eastbound side and through the cul-de-sac of Bell Ranch Road, including a pedestrian ramp at the southeast corner. These features have been added to overall enhance pedestrian safety along this stretch of road and lessen observational concerns associated with speeding vehicles in the existing condition. Therefore, overall impacts of the project on alternative transportation and facility safety would be less than significant.

Traffic Mitigation Measures

None required.

XVII. Tribal Cultural Resources <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant 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:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The discussion below is summarized and based on the findings contained within the *Cultural Resources Study for the Ocean Ranch Estates Project (Cultural Report)* (Brian F. Smith and Associates [BFSA] 2015) prepared for the proposed project. The report is included in this IS/MND as Appendix C.

Discussion

a1–a2. Less than Significant with Mitigation. According to the *Cultural Report* (BFSA 2015) prepared for the project, no archaeological resources, including those with cultural value to a California Native American tribe, have been identified within the project site. A record search was conducted at the SCIC for the project site and a 1-mile radius. Thirteen archaeological resources have been recorded within the search radius, none of them in the immediate vicinity of the project. Most notable of these sites are SFI-7979 and SDI-10,940/W-34, both of which are characterized as prehistoric habitation sites. Site SDI-7979 is recorded as a moderately dense habitation site that includes a wide range of artifacts such as ground stone tools, hammerstones, choppers, and vertebrate and invertebrate faunal remains and a moderately developed midden. Site SDI-10,940/W-34 includes a wide range of cultural materials such as ground stone equipment, projectile points, knives, debitage, vertebrate and invertebrate faunal remains, hearths, a deep and extensive midden deposit, and human burials. The site is known for the recovery of the famous “Del Mar Man,” an approximately 5,500-year-old human specimen discovered in 1929.

Further, a Sacred Lands File search was requested from the NAHC, which failed to indicate the presence of Native American cultural resources in the immediate project area. In accordance with the recommendation of the NAHC, all twenty of the Native American consultants listed in the NAHC response letter were contacted to solicit their input on the project. Two of the twenty Native American consultants responded to request that a Native American monitor be present during ground disturbing activities. The project is expected to have no impacts to tribal cultural resources. However, there is always potential to encounter previously unknown and unrecorded tribal cultural resources during grading. Given this, and given the request for Native American monitors to be present, mitigation measure CR-1, as described in Section V, Cultural Resources, will ensure that a Native American monitor is present during ground disturbing activities and that potential impacts to previously unknown tribal cultural resources are reduced to a less than significant level.

Tribal Cultural Resources Mitigation Measures

Mitigation Measure CR-1 is required. With implementation of this measure, potential impacts to tribal cultural resources would be less than significant.

XVIII. Utilities and Service Systems <i>Would the Project:</i>		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Have sufficient water supplies available to serve the Project from existing entitlements and resources, or would new or expanded entitlements be needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f.	Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a. Less than Significant Impact. The proposed project site is within the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB Region 9). Drainage from the central and south portions of Solana Beach generally flows in a southern direction to the San Dieguito River. The north and northwest portions of the City drain into the San Elijo Lagoon. Stormwater is regulated by the RWQCB through the municipal stormwater permit. The City of Solana Beach Jurisdictional Urban Runoff Management Plan (JURMP) sets out minimum BMPs and other objective specifications for specific types and categories of project and facilities. Where minimum BMPs and objective specifications are specified, they are mandatory. Where no minimum BMPs have been specified in the City of Solana Beach JURMP for a type and category of facility or activity, only the requirements set out in Chapter 13.10 of the Municipal Code are applicable.

All dischargers who are required to install, implement, and maintain BMPs shall ensure that their selection of BMPs is consistent with the applicable specifications, if any, contained in the City of Solana Beach JURMP and City of Solana Beach Standard Urban Storm Water Mitigation Plan (SUSMP), which is an attachment to the adopted and approved JURMP required by the San Diego RWQCB, for the category and priority of activity or facility owned or operated by that discharger. All BMPs installed, implemented, or maintained to meet the requirements of Chapter 13.10 of the Municipal Code must conform to the applicable specifications, if any, set out in the City of Solana Beach JURMP. Implementation of the proposed project would include pre-construction BMP's, site design BMP's and post-construction BMP's. According to the *Hydrology Report* prepared for the project, project implementation would not have an adverse effect on stormwater flows.

In compliance with the Federal Clean Water Act requirements, the City maintains the sanitary sewer system. The City of Encinitas, under contract with the City of Solana Beach, provides routine cleaning of the public sewer mains. Sewage from the City of Solana Beach, including the proposed project site, is treated at the San Elijo Water Reclamation Facility in Cardiff for treatment and disposal. The Water Reclamation Facility is operated by the San Elijo Joint Powers Association (JPA), which consists of the City of Solana Beach and the City of Encinitas. The treatment facility supplies reclaimed water for landscape irrigation and industrial applications. The JPA maintains sewer lines within both jurisdictions to collect wastewater and delivers it for treatment to the San Elijo Water Reclamation Facility.

The City of Solana Beach owns and is responsible for approximately 283,000 linear feet of wastewater conveyance pipeline and four active pump stations. The City's sewer system is composed of three major individual drainage basins containing gravity pipelines ranging in size from 4 to 24 inches in diameter. The City's four permanent wastewater pump stations are maintained by the JPA. The City's sewage is pumped to the San Elijo Water Reclamation Facility in Cardiff for treatment and disposal. The treatment facility supplies reclaimed water for landscape irrigation and industrial applications.

Average wastewater flow for the City is approximately 1.22 million gallons per day (mgd) resulting in a computed wastewater generation rate of approximately 175 gallons per equivalent dwelling unit (EDU) per day. For planning and facility sizing purposes, the City uses a conservative estimate of 200 gallons per day (gpd) per EDU to account for increased summertime flows due to activities at the Del Mar fairgrounds/racetrack (Solana Beach 2014b). The City's Sanitary Sewer Master Plan, published in 2000, developed future flow projections to determine the upgrades necessary to adequately serve the City's wastewater collection and conveyance needs under complete build-out conditions. These flows were based on redevelopment of all residential and commercial properties of more than one acre. It was projected that wastewater production within the City's service area would ultimately increase by approximately 10 percent to 1.61 mgd. As of 2014, the City had not reached the wastewater production analyzed in the Sewer Master Plan (Solana Beach 2014b). The proposed project is consistent with the underlying General Plan land use and zoning designations, which are the basis for wastewater treatment planning efforts. Given the relatively small size of the proposed project and its consistency with the General Plan, project implementation would likely not cause the City's wastewater production to exceed the level analyzed in the Sewer Master Plan. Therefore, implementation of the project would have a less than significant effect on the RWQCB wastewater treatment requirements.

b. Less than Significant Impact. The five existing residences, including one unoccupied residence, at the proposed project site are currently serviced with all utilities including water and sewer. The proposed project does not include any extraordinary uses or operations that would create substantial additional demand on the ability of the City of Solana Beach or the San Elijo Water Reclamation Facility to provide service.

The Santa Fe Irrigation District (SFID) provides water to Solana Beach and maintains the existing infrastructure. Although some population and demand increases are anticipated by the SFID between 2015 and 2040, it expects the increases to be relatively minor and consistent with the growth anticipated under the General Plan (SFID 2016). According to the SFID 2015 Urban Water Management Plan, actual water demand in the SFID's service area has decreased due to a comprehensive water conservation program. Potable water use in 2015 was approximately 1,000 acre-feet per year lower than 2010. The proposed project is consistent with the underlying General Plan land use and zoning designations, which are the basis of water supply planning locally and regionally.

The 2000 Sanitary Sewer Master Plan delineates the major components of long-term capital improvement projects (CIP) for improvement of existing wastewater collection and pumping facilities to meet growth within the city. The Sewer Master Plan estimated that wastewater production within the City's service area would ultimately increase by 10 percent. Future flow projections were developed to determine the recommended upgrades to the existing collection system to adequately serve the City's system under completely built-out conditions under the General Plan (Solana Beach 2014b).

The plan uses EDUs to calculate expected future flow rates. For planning and facility sizing purposes, the City uses a conservative estimate of 200 gallons of wastewater per day (gpd) per EDU. The plan estimated that the City's EDUs would grow 9 percent from 2000 to 2009. It should be noted that the population actually decreased by 1 percent over this same period (Solana Beach 2014b). The proposed project is consistent with the underlying General Plan land use and zoning designations, which are the basis for wastewater treatment planning efforts. The City's existing sewer main has adequate capacity to serve the addition of eight new (four net new) residences in Phase 2 of the proposed project; the City's available capacity in the regional water treatment plant is approximately 0.39 mgd and the proposed project at full buildout of Phase 2 would generate an estimated 0.001 mgd.¹⁰ Therefore, the City's facilities and the San Elijo Water Reclamation Facility would be expected to have adequate capacity to serve the proposed project. The proposed project's eight new homes (Phase 2) would not require or result in the construction of new water or wastewater facilities, nor would the proposed project result in the expansion of existing water or wastewater treatment facilities. Therefore, impacts would be considered less than significant.

c. Less than Significant Impact. The proposed project includes the development of stormwater drainage facilities and a stormwater bioretention/detention facility onsite. Potential impacts associated with construction of the onsite stormwater drainage system are included within the discussions of the proposed project's site preparation and construction activities throughout this IS/MND. As described in Section IX, Hydrology and Water Quality, the proposed project would not require the expansion of existing, offsite stormwater drainage facilities; therefore, impacts would be considered less than significant.

d. Less than Significant Impact. Solana Beach is part of SFID, which also includes the communities of Rancho Santa Fe and Fairbanks Ranch. The district service area contains approximately 10,200 acres, of which 2,850 acres are in Solana Beach, 6,490 acres are in Rancho Santa Fe, and 920 acres are in Fairbanks Ranch. As of 2014, the population of the district was approximately 19,603, of which two-thirds is in Solana Beach. The district provides potable water service for domestic, commercial, outdoor irrigation, and agricultural demands (Solana Beach 2014b).

Demographic and land use projections based on SANDAG's 2050 *Regional Growth Forecast*, Series 13 model were used by SFID to develop future water usage estimates. SFID provides water to Solana Beach and maintains the existing infrastructure. Although population and demand increases are anticipated by the district by 2040, it expects the increases to be relatively minor and consistent with the growth anticipated under the General Plan. The proposed project is consistent with the underlying General Plan land use and zoning designations which are the basis of water supply planning locally and regionally. Therefore, because the additional eight residences that are proposed as part of Phase 2 have been accounted for in SFID's and the San Diego County Water Authority 2015 Urban Water Management Plans, the proposed project would

¹⁰ 200 gallons per day per EDU x 5 net new EDUs = 1,000 gallons per day.

have sufficient water supplies available from existing entitlements and resources and no new or expanded entitlements would be needed. Therefore, the proposed project would not have a significant net increase in water use or need for new facilities that would cause significant environmental effects. Therefore, less than significant impacts would occur.

e. Less than Significant Impact. The proposed project would not generate significantly greater amounts of wastewater than the current site generates as five existing residences, including one unoccupied residence would be demolished during Phase 1 and only eight new residences would be constructed in Phase 2. The proposed project's wastewater treatment would continue to be provided by the City of Solana Beach and San Elijo Water Reclamation Facility. The proposed project would not be expected to adversely affect the capacity of the wastewater treatment provider. Therefore, impacts would be less than significant.

f. Less than Significant Impact. Solid waste disposal in the city, including the proposed project site, is managed by EDCO Waste and Recycling Services. The proposed project would generate demolition debris during Phase 1 associated with demolition of the existing structures onsite and construction debris during Phase 2 associated with the future construction of eight new residences. In addition, future occupants of the new homes would generate municipal solid waste. The project applicant would be required to comply with the City's Construction and Demolition Debris Recycling Ordinance.

To meet state diversion requirements, Chapter 6.36 of the Municipal Code outlines construction and demolition debris diversion requirements for development projects. The regulations are intended to address all construction, renovation, and remodel projects within the City with a total project value equal to or greater than \$100,000, as calculated for purposes of receiving a City building permit. All demolition projects shall be considered "covered projects" and shall comply with Chapter 6.36 of the Municipal Code.

Project applicants are required to submit a Waste Management Plan (WMP) on a City-approved form and pay a WMP review fee, if any, before a building or demolition permit may be issued (Municipal Code Chapter 6.36). The WMP shall be submitted for review with the first plan check of an individual project. The completed WMP shall indicate all of the following:

- Estimated weight of construction and demolition debris, by materials type, to be generated;
- Maximum weight of such materials that can feasibly be diverted via reuse or recycling;
- Vendor or facility that the applicant proposes to use to collect or receive that material;
- Estimated weight of construction and demolition materials that will be landfilled; and
- Total square footage of the project.

Solid waste collected in Solana Beach is transported to either the Otay Landfill or the Sycamore Landfill. The Otay Landfill is permitted to receive 5,830 tons per day. The Sycamore Landfill expansion was recently approved to meet the region's long-term (year 2050) solid waste needs. With the expansion, the landfill will be operational until approximately 2050 with a capacity of 11,450 tons per day. According to CalRecycle (2015), residences generate from 7 to 12 pounds of municipal solid waste per day. Therefore, the incremental increase in solid waste disposal needs associated with the four net new homes under a future Phase 2 of the proposed project would be up to 48 pounds per day. This would not represent a considerable contribution to existing landfill capacity, as the additional solid waste generation would be negligible compared to the overall regional solid waste disposal capacity. Therefore, the demolition and construction debris and municipal solid waste generated by future occupants of the proposed project would not adversely affect the capacity of solid waste processing facilities and landfills serving the project site which include the recently expanded Palomar Waste Transfer Station in Carlsbad, and Sycamore Canyon and Miramar Landfills in San Diego. Therefore, less than significant impacts would occur.

g. Less than Significant Impact. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste by adhering to Section 6.20.135 of the City of Solana Beach Municipal Code, which requires all industrial recyclables to be segregated from construction waste and recycled appropriately. Standard solid waste practices would be expected to continue to be implemented at the site. These include measures such as Assembly Bill (AB) 939, the California Integrated Solid Waste Management Act, and AB 2020, the California Beverage Container Recycling and Litter Reduction Act. Therefore, less than significant impacts would occur.

Utilities and Service Systems Mitigation Measures

None required.

XIX. Mandatory Findings of Significance		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a.	Does the Project have the potential to 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a. Less than Significant with Mitigation. With the incorporation of mitigation measures, the proposed Phase 1 and future Phase 2 of the project would not have the potential to degrade the quality of the environment, reduce the habitat of any sensitive plant or animal 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 California history or prehistory. It was determined that implementation of the proposed project would result in potentially significant impacts to migratory birds if trees on-site are removed or disturbed during the nesting season. However, with implementation of Mitigation Measure BR-1 described in Section IV of this IS/MND, development of the proposed project would result in less than significant impacts to Biological Resources.

As described in Section V of this IS/MND, no significant cultural resources are anticipated to occur on-site and no artifacts were observed. However, there is always a possibility that archaeological resources are present that could not be seen, which could result in significant impacts during ground-disturbing activities. Based on this condition, the implementation of mitigation measures CR-1 and CR-2 would reduce potentially significant impacts to unknown archaeological and paleontological resources to less than significant levels.

b. Less than Significant Impact. Implementation of the proposed Phase 1 and future Phase 2 of the project would not result in individually limited, but cumulatively considerable significant impacts. All resource topics associated with the project have been analyzed in accordance with State CEQA Guidelines and found to pose no impact, less than significant impact, or less than significant with mitigation. In addition, taken in sum with other projects in the area the scale of the proposed project is small and impacts to any environmental resource or issue areas would not be cumulatively considerable. Therefore, impacts would be less than significant.

c. Less than Significant Impact. The proposed Phase 1 and future Phase 2 of the project would not consist of any uses or activities that would negatively affect any persons in the vicinity. In addition, all resource topics associated with the project have been analyzed in accordance with CEQA and the State CEQA Guidelines and found to pose no impact, less than significant impact, or less than significant with mitigation. Consequently, the project would not result in any environmental effects that would cause substantial adverse effects on human beings directly or indirectly.

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Chapter 4

REFERENCES AND LIST OF PREPARERS

References

Section 15150 of the CEQA Guidelines permits an environmental document to incorporate by reference other documents that provide relevant data. The documents listed below are hereby incorporated by reference. The pertinent material is summarized throughout this Initial Study where that information is relevant to the analysis of potential impacts of the proposed project. The following references were used in the preparation of this Initial Study and are available for review during normal business hours at the City of Solana Beach Community Development Department located at 635 South Highway 101, Solana Beach, California 92075.

- Blue Consulting Group. 2015. *Case No. 17-14-39- Biological Assessment Letter Report for the Proposed Residential Subdivision Located on 512-538 S. Nardo Ave., Solana Beach, CA*. March 31.
- Brian F. Smith and Associates, Inc. (BFSA). 2015. *Cultural Resources Study for the Ocean Ranch Estates Project*. October 14.
- Brian F. Smith and Associates, Inc. (BFSA). 2017. *Comments for the Initial Study Document for the Ocean Ranch Estates Project, City of Solana Beach*. February 2.
- Brian F. Smith and Associates, Inc. (BFSA). 2018. *Response to Comments for the Mitigated Negative Declaration, Ocean Ranch Estates Project, City of Solana Beach*. April 10.
- California Department of Conservation Division of Land Resource Protection. 2012. *San Diego County Important Farmland 2012*. <http://www.conservation.ca.gov/dlrp/Pages/Index.aspx>. Website accessed August 16, 2016.
- California Department of Conservation Division of Land Resource Protection. 2016a. <http://www.conservation.ca.gov/dlrp/Pages/Index.aspx>. Website accessed August 16, 2016.
- California Department of Conservation Division of Oil, Gas and Geothermal Resources. 2016b. <http://www.conservation.ca.gov/dog/Pages/Index.aspx>. Website accessed August 16, 2016.
- California Department of Conservation Division of Mines and Geology. 1996. *Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region*. <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. Website accessed August 16, 2016.
- California Department of Forestry & Fire Protection Fire Resource Assessment Program. 2006. *Land Cover*.
- California Department of Transportation. 2010. *Transportation Project-Level Carbon Monoxide Protocol*, Revised December 1997. (Searchable PDF Version). October 13.
- California Department of Transportation (Caltrans). 2013. *Transportation and Construction Vibration Guidance Manual*. September.
- California Air Resources Board (CARB). 2011. *Climate Change Scoping Plan*.
- California Air Resources Board (CARB). 2016. *AB 32 Scoping Plan*. September 7. <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Website accessed October 7, 2016.
- CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.
- CalRecycle. 2015. www.calrecycle.ca.gov/LGCentral/goalmeasure/disposalrate/MostRecent/default.htm. Website accessed August 16, 2016.

- City of Solana Beach. 2007. *Draft Fire Hazard Severity Zones in LRA*. September 17. Available online, http://www.ci.solana-beach.ca.us/index.asp?SEC=4459C1D7-9FF7-4988-92FF-D6EC8A2F593E&Type=B_BASIC
- City of Solana Beach. 2010. *General Plan Update*. 2010 and as amended through November 2014. www.codepublishing.com/ca/SolanaBeach.html.
- City of Solana Beach. 2011. *FY 2011-12 Schedule of Fees*. http://www.ci.solana-beach.ca.us/index.asp?SEC=4459C1D7-9FF7-4988-92FF-D6EC8A2F593E&Type=B_BASIC. Website accessed August 19, 2016.
- City of Solana Beach. 2014a. *City of Solana Beach Local Coastal Program (LCP) Land Use Plan (LUP), as amended*. June 11.
- City of Solana Beach. 2014b. *Program Environmental Impact Report (EIR) for the Solana Beach General Plan Update*. August 19.
- City of Solana Beach. 2015. *Comprehensive Active Transportation Strategy*. June.
- City of Solana Beach. 2016. *Municipal Code*. As amended through July 2016. <http://www.codepublishing.com/CA/SolanaBeach/>
- City of Solana Beach. 2017. *City of Solana Beach Climate Action Plan*. July 12.
- City of Solana Beach. 2018. *Climate Action Commission*. http://www.ci.solana-beach.ca.us/index.asp?SEC=74301514-00E4-48EA-A34D-DB05BE0C24B1&Type=B_BASIC. Website accessed October 1, 2018.
- Coffey Engineering, Inc. 2018. *Hydrology Study & Prelim GP for The Graziano Residence – Findings*. April 24.
- County of San Diego. 2016. *2016 Climate Change Analysis Guidance*. Recommended Content and Format for Climate Change Analysis Reports in Support of CEQA Documents. July 29.
- Dozier, Deborah S. 2016. *Some Early Southern Californians*. https://www2.palomar.edu/users/ddozier/California/history/early_californians1.htm. Website accessed October 12, 2016.
- ENVIRON International Corporation, South Coast Air Quality Management District (SCAQMD) and other California Air Districts. 2016. CalEEMod, version 2016.3.2.
- Fehr & Peers. 2019. *Ocean Ranch Estates Focused Traffic Study South Nardo Avenue, Solana Beach, CA*. January 10.
- Federal Transit Administration (FTA), Office of Planning and Environment. 2006. *Transit Noise & Vibration Impact Assessment*. May 2006.
- Geotechnical Exploration, Inc. 2012. *Report of Preliminary Geotechnical Investigation – Ocean Ranch Estates Residential Development - 512, 516, 524 & 538 South Nardo Avenue*. October 15.
- Pasco Laret Suiter & Associates, Inc. 2017a. *Preliminary Hydrology Study for Ocean Ranch Estates – 512, 516, 524 & 538 South Nardo Avenue*. November.
- Pasco Laret Suiter & Associates, Inc. 2017b. *Priority Development Project Water Quality Technical Report (PDP WQTR) for Ocean Ranch Estates*. September.
- Pasco Laret Suiter & Associates, Inc. 2017c. *Preliminary Erosion Control Plan*. January 19.
- Pasco Laret Suiter & Associates, Inc. 2017d. *Tentative Map, Site Layout, Preliminary Grading & Utility Plan – Alternative A, Preliminary Grading & Utility Plan – Alternative B, Sections and Details, Slope Analysis, Preliminary Erosion Control Plan*. May 8.
- Pasco Laret Suiter & Associates, Inc. 2018. *Responses to Ocean Ranch Estates Subdivision – Findings (TM 17-17-15 & Initial Study/Mitigated Negative Declaration)*.

- PDH Center. 2012. Overview of Noise Control and HVAC Acoustics in Buildings.
- Santa Fe Irrigation District. 2016. *2016 Urban Water Management Plan*. June.
- San Elijo Joint Powers Authority. 2016. http://www.sejpa.org/index.php?parent_id=41&page_id=48. Website accessed August 16, 2016.
- SANDAG. 2003. *Multiple Habitat Conservation Program*. March.
<http://www.sandag.org/?projectid=97&fuseaction=projects.detail>
- San Diego County Department of Environmental Health. 2017. Chapter 4 Wells. July 1.
- San Diego County Recorder. 2019. Grant of Easement from Laurel Graziano to Nicholas P. Nicholas. January 7.
- SCS Engineers. 2012. *Phase I and Phase II Environmental Site Assessment – Assessor's Parcel Numbers (APNs) 298-121-24, -25, -26, -55, and -56; 512, 516, 524, and 538 South Nardo Avenue, Solana Beach, California*. July 6.
- SCS Engineers. 2018. *Response to Comment Letter from Lounsberry Ferguson Altona & Peak, LLP (Comment Response Letter)*. May 3.
- U.S. Environmental Protection Agency. 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. December 31.

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Chapter 5

LIST OF MITIGATION MEASURES

BR-1 If site preparation or construction activity occurs during the avian breeding season (typically February 1 through September 15), the applicant shall retain a qualified biologist to conduct a biological survey for nesting bird species within the proposed impact area and a 300-foot buffer within 72 hours prior to commencement of any such activity. This survey is intended to determine whether any active nests are located on the project site and is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk and red-tailed hawk) and/or birds protected by the federal Migratory Bird Treaty Act. If any active nests are detected, the area would be flagged and mapped on the construction plans along with a minimum of a 25-foot buffer and up to a maximum of 300 feet for raptors, as determined by the project biologist, and avoided until the nesting cycle is complete. The results of the survey shall be provided in a summary report to the Community Development Director.

CR-1 Monitor Ground Disturbance. Prior to issuance of a grading permit and commencement of any ground disturbing activities for the project, the applicant shall provide written evidence to the City Engineer that the applicant has retained a City-approved archaeologist with experience with historical archaeological sites and who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in 36 CFR 61, and a Native American monitor, who shall perform the following activities:

- The archaeologist and the Native American monitor shall attend a pre-construction meeting with the grading contractor to explain the requirements of the monitoring program.
- The archaeologist and the Native American monitor shall be present to monitor ground-disturbing activities, including brushing/grubbing, grading, and trenching. If cultural material is encountered, the archaeologist and the Native American monitor shall have the authority to temporarily halt or redirect grading and other ground-disturbing activity while the cultural material is documented and assessed.
- If cultural material is encountered, the archaeologist shall treat recovered items in accordance with current professional standards by properly provenancing, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center.

Within sixty days after completion of the ground-disturbing activity, the archaeologist shall prepare and submit a final report to the City for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.

CR-2 Prior to the issuance of a grading permit and commencement of any ground disturbing activities for the project, the project applicant shall provide written evidence to the City Engineer that the applicant has retained a City-approved paleontologist to perform the requirements set forth in Mitigation Measure CR-1 above, including to conduct a pre-construction meeting to explain monitoring requirements to construction personnel, to observe project site grading and excavation activities, to salvage and catalog fossils as necessary, and to prepare and submit a post-construction monitoring report the City Engineer/Public Works Director.

- HAZ-1** If it is determined that the potential well observed on the project site is an historic well that is in contact with groundwater, the applicant shall ensure, prior to the issuance of a grading permit, that the well is properly destroyed in accordance with DEH guidelines Chapter 4, Wells, in the San Diego County Code of Regulatory Ordinance. The applicant shall obtain a written permit from the Director of Environmental Health who has deemed the well a nuisance by polluting or contaminating ground water or serves as a safety hazard. A licensed contractor shall perform the destruction of the well and the Director shall oversee that it is completed.
- HAZ-2** Prior to the issuance of a grading permit, the applicant shall conduct a comprehensive, pre-demolition survey in accordance with the sampling protocol of the Asbestos Hazard Emergency Response Act and Lead Based Paint (LBP) survey prior to any activities with the potential to disturb building materials to determine whether ACM or LBP are present. In the event ACM or LBP are detected, proper removal and disposal of the materials identified shall occur prior to any activities with the potential to disturb the ACM or LBP. To ensure that proper procedures are followed to control the emissions of asbestos into the atmosphere, the SDAPCD must be notified in writing at least 10 days in advance of any demolition by completing a Notice of Intention form. Any demolition plan shall ensure that any/all ACM and/or LBP encountered on-site during construction activities are removed and properly disposed of in accordance with regulations and procedures established by the San Diego County Department of Environmental Health and must be transported by a licensed hazardous waste hauler and disposed of in an appropriate landfill. The SD DEH, Occupational Health Program, or designee shall monitor the applicant's implementation of the demolition plans.
- N-1** Prior to issuance of any construction permits, the applicant shall ensure the following, to the satisfaction of the City of Solana Beach City Engineer:
- Construction noise reduction methods, such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools rather than diesel equipment, shall be used.
 - During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive noise receivers.
 - During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise-sensitive receptors.

Appendix A

Air Quality and Greenhouse Gas Emissions Modeling

Appendix B
Biological Assessment Letter Report

Appendix C1
Cultural Resources Study

C2 Cultural Resources Memo

C3 BFSA Response Letter

Appendix D
Preliminary Geotechnical Investigation

Appendix E1

Phase I and Phase II Environmental Site Assessment

E2 SCS Comment Response Letter

Appendix F1
Preliminary Hydrology Study

F2 PDP WQTR

F3 Pasco Laret Suiter & Associates Response to Findings Letter

F4 Coffey Engineering Findings Letter for Drainage

Appendix G
Updated Focused Traffic Study

