City of Oxnard

Avalon Homes Project

Draft Environmental Impact Report

SCH# 2016051075

PZ# 16-300-03 (Tentative Tract 5888) and 16-400-02

rincon

December 2019

Environmental Scientists Planners Engineers

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EXECUTIVE SUMMARY

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the proposed Avalon Homes Subdivision Project (proposed project). This section summarizes the characteristics of the proposed project, alternatives to the proposed project, and the environmental impacts and mitigation measures associated with the proposed project.

Project Synopsis

Project Applicant

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Project Description

This EIR has been prepared to examine the potential environmental effects of the Avalon Homes Subdivision Project. The following is a summary of the full project description, which can be found in Section 2.0, *Project Description*.

The 38.33 acre property is composed primarily of Assessor's Parcel Numbers (APN) 196-001-022, -023, and -027. The site is located at the southeastern corner of the intersection of Harbor Boulevard and West Fifth Street, north of the existing Oxnard Dunes Subdivision. The proposed project has two major components: an open space or preserve area in the northern area of approximately 29.6 acres, just south of West Fifth Street; and proposed residences in the southern 8.75 acres of the project site extending from the northern terminus of Canal Street to Dunes Street to the northwest. The site is accessible from Dunes Street off of Harbor Boulevard to the west and Canal Street off of West Wooley Road to the south. Regional access is provided by Highway 101 and Highway 1 (Pacific Coast Highway).

Project Characteristics

The proposed project involves construction of a maximum of 65 residential dwelling units on 8.75 acres of a 38.33 acre property. The property would be subdivided into 17 residential lots and five open space lots. Tentative Tract Map 5888 would create 15 individual lots for

the 15 single family residences or 30 duplex residences and two lots for 35 single family residential clustered condominium units. The 35 condominium units would share driveways between groups of four to six units to minimize driveway access to the collector street. There would be five open spaces or common use parcels throughout the project site. Proposed Lots A and B (totaling 29.58 acres) are zoned for Resource Protection (R-P) and would remain undeveloped. Together with land already owned by the City of Oxnard, this component of the project would preserve the designated sensitive habitat within the "Northern Dunes Area" shown as Area 6 on Map 3 in the CLUP. The three remaining open space or common lots would include a drainage mitigation area, open space at the project gated entry and a private community recreation area.

The project includes a restoration plan for the Northern Dunes Area, which details the access and management proposed for this area. Section 4.4.2 below provides more information regarding this plan.

As shown on the Proposed Residential Development Site Plan (Figure 2-4) for the project, lots 1-15, for either single-family or duplex residential use, would range in size from 7,037 square feet (sf) to 8,410 sf, with residential units ranging in size from 3,000 sf to 4,500 sf. The two single family condominium lots, lot 16 (75,590 sf) and lot 17 (72,177 sf), would accommodate 35 cluster residences ranging in size from 1,500 sf to 2,800 sf.

The project would include one private road with gated entry off of Dunes Street to the west, and a second security gate at Canal Street to the south (refer to Figure 2-4). The project would connect to the terminus of Canal Street for egress and use by emergency vehicles only. The proposed private road would have a width of 36 feet with monolithic sidewalks and rolled curbs for aesthetic purposes. Street trees would be located within the lots and would be maintained by a future homeowners association. A rural transition is proposed along the northern portion of the private road at the border of Parcel A. Homes are only proposed at the south side of the road and a split rail fence would be built along the north side, adjacent to the open space.

The project would contain storm water management features such as permeable pavement in the parking lanes along the private road in conjunction with an underground detention and infiltration area near the discharge point at the Canal Street terminus. Additionally, a bioswale is proposed in the gate entry open space area in Parcel D, which would drain to Dune Street to the west.

The City's Property Development Standards for the R-2-C zone (Section 17-13 of the Oxnard Municipal Code) require front yard setbacks of 20 feet and rear yard setbacks of 25 feet. The project would require approval of a zoning variance to implement a proposed 10-foot minimum front yard setback for residential structures and 20-foot minimum rear yard setbacks. The proposed interior side yard and street side yard setbacks for the project would be consistent with the City's minimum required setback of five feet for these areas.

The authority to approve the proposed Coastal Development Permit for the project rests with the City of Oxnard, and the environmental effects of the coastal permit will be

considered in the EIR along with the proposed Tentative Tract Map. However, approval by the City is appealable to the California Coastal Commission.

Project Objectives

The project is intended to complete development of the Oxnard Dunes neighborhood consistent with the intentions of the City of Oxnard 2030 General Plan. The project objectives are as follows:

- Objective 1: Complete this portion of the Oxnard Dunes neighborhood with an attractive residential neighborhood pursuant to the requirements of the City of Oxnard 2030 General Plan; and provide the ability for efficiently providing municipal services.
- Objective 2: Comply with underlying R-2-C Zoning requirements with respect to unit setbacks, lot coverage, height, and density.
- Objective 3: Comply with Local Coastal Plan (LCP) policies. The site is within the urban-rural boundary, and the project is within the residential density requirements of the General Plan. The project provides a buffer to Agricultural lands to the east.
- Objective 4: Provide on-site habitat mitigation for any sensitive areas disturbed within the R-2-C area. It is envisioned that this area could serve as both a naturally enhanced access point to West Fifth Street, as well as a natural habitat area.
- Objective 5: Ensure that proposed development and land use conserve energy and natural resources.
- Objective 6: Provide for compatibility with existing residential uses in the area through effective and appropriate urban and architectural design.

Alternatives

As required by Section 15126(d) of the California Environmental Quality Act (CEQA) Guidelines, this EIR examines alternatives to the proposed project. Studied alternatives include the following four alternatives. Based on the alternatives analysis, Alternative 4 was determined to be the environmentally superior alternative.

- Alternative 1: No Project – No Development
- Alternative 2: Alternative Location – Development in RP Area Only
- Alternative 3: Alternative Design – Improved Buffer
- Alternative 4: Reduced Project
- Alternative 5: Alternative Design—All Single Family Detached Residential Condominiums

Alternative 1 (No Project – No Development) assumes that the proposed project would not be approved and that the project area would not be developed. Since the area proposed for development is designated as Residential-Existing (REX) in the Coastal Land Use Plan and General Plan, and is zoned for Coastal Low-Density Multi Family use (R-2-C), some form of development consistent with this designation and zoning would be expected in the future.

Alternative 2 (Alternative Location – Development in RP Area Only) would require amendment of the Coastal Land Use Plan to reconfigure the designations for Resource Protection and Residential uses in the vacant portions of the Oxnard Dunes neighborhood. The objective of this alternative would be to locate all development away from the existing homes in the Oxnard Dunes neighborhood, while retaining the same overall number of proposed lots for dwellings and ancillary uses. The RP designated area would also be reconfigured to preserve the coastal dunes area that is adjacent to the backyards of existing homes along Catamaran Street.

Alternative 3 (Alternative Design – Improved Buffer) would involve shifting the alignment of the new private street extension as far to the south as possible along the northern part of the development area, which would provide a larger buffer between the new roadway and the preserved willow thicket to the north. No residences would be constructed in this portion of the development area, and the private street would be located just outside of the backyards of the existing homes along Catamaran Street.

Alternative 4 (Reduced Project) assumes that the private street extension through the project from Canal Street on the south to connect at Dunes Street on the north would not be built. Instead, a cul-de-sac would be installed northward from the southerly stub-out of Canal Street and would extend into the property to provide access to the condominium lots and the community lot as proposed. The northerly portion of the proposed development would be eliminated and the land would be incorporated into the Resource Protection (RP) preserve area.

Alternative 5 (Alternative Design – All Single Family Detached Residential Condominiums) would result in two lots (Lots 1 and 2) that would accommodate 56 detached single-family residences with private backyard space under condominium or joint ownership. Six lots (Parcels A through F) would contain open space in the RP zone, and various common lots for the private street, drainage improvements and parking, and common areas. The major objective of this design is to eliminate the need for variances from the front and rear yard setbacks in the property development standards of the R-2-C zone. In addition, this alternative would provide a residential land use more consistent with the predominant development pattern of the adjacent neighborhood.

Alternative 1, the No Project – No Development alternative, would avoid all of the proposed project impacts. Among the other alternatives, Alternative 4, the Reduced Project alternative, would involve the smallest development footprint and number of new residential dwellings. For this reason, Alternative 4 is determined to be the environmentally superior alternative. Refer to Section 7, Alternatives, for the complete alternatives analysis.

Areas of Concern

Pursuant to *State CEQA Guidelines* Section 15123(b)(2), this EIR acknowledges the areas of controversy and issues to be resolved which are known to the City of Oxnard or were raised during the scoping process. A Notice of Preparation (NOP) was prepared and circulated for a 30-day public review period that began on May 27, 2016 and ended June 27, 2016. During that period, the City received a total of eight comment letters and written memos, nine e-

mails containing comments, and three additional items including transmittal letters and a request for additional time to comment. The NOP, Initial Study, and NOP comment letters are presented in Appendix A.

Primary environmental areas of concern raised by the commenting agencies and public include:

- Air Quality
- Biological Resources
- Greenhouse Gas Emissions/Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Traffic, Circulation, and Access
- Utilities and Service Systems

Issues Not Studied in Detail in the EIR

Topics for which potential environmental effects were determined to be less than significant in the Initial Study for the project include:

- Agriculture and Forest Resources
- Mineral Resources
- Population/Housing
- Public Services
- Recreation

Summary of Impacts and Mitigation Measures

Table ES-1 and Table ES-2 summarize the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (i.e., the level of impact after application of mitigation, if required). Impacts are categorized as follows:

- **Class I - Significant and Unavoidable**. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the *State CEQA Guidelines*.
- **Class II - Less than Significant with Mitigation Incorporated**. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under Section 15091 of the *State CEQA Guidelines*.
- **Class III - Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.

- **Class IV - No Impact**. The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

The project would not result in any Class I, significant and unavoidable, impacts.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
Biological Resources		
Impact BIO-1. Construction within the project area could directly or indirectly affect special-status plant species. This is a Class II, potential impact that can be mitigated to a less than significant level.	**BIO-1(a) Pre-construction Botanical Survey.** Prior to issuance of a grading permit for the project, spring and summer seasonal botanical surveys for special status plants, including but not limited to Ventura marsh milk-vetch, shall be conducted within the impact area by a qualified botanist satisfactory to the City. A summary of the survey findings shall be provided to the City for approval. If any special status species are observed, avoidance, minimization, and/or mitigation shall be performed to reduce effects. If the species cannot be fully avoided, then the Applicant shall draft a plan to offset impacts to the species as discussed in Mitigation Measure BIO-1(b). If state-listed endangered, threatened, or rare plants are detected in areas proposed for development, the Applicant shall contact the CDFW to secure incidental take authorization or develop an avoidance strategy. **BIO-1(b) Mitigation Plan.** In the event that Ventura marsh milk-vetch or any other special status plant populations cannot be fully avoided, restoration, management, maintenance, and monitoring plans shall be developed by a qualified biologist and/or resource specialist and shall be reviewed and approved by CDFW and the City of Oxnard prior to issuance of a grading permit. The mitigation therein shall be implemented within one (1) year following completion of project construction. The Applicant shall secure a bond for an amount equal to the cost of the mitigation effort prior to issuance of the grading permit. The bond shall be released by the City upon satisfaction of the approved performance criteria after the monitoring period has expired. The restoration, management, maintenance, and monitoring plans shall include one or more of the following methods, to be implemented either individually or in conjunction with each other: Onsite or Offsite Restoration (Salvage and Replanting). Restoration shall involve the collection of seed from within the development footprint or nearby areas, if necessary, and replanting the seed in a suitable area in a portion of the project site that is set aside for preservation. (Collection of seed from state-listed endangered, threatened, or rare	Less than significant

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
	plants shall not occur without appropriate authorization from CDFW). If infeasible, an offsite location as close to the impact area as possible, but within the local watershed, may be used. The Restoration Plan, prepared by a qualified plant ecologist satisfactory to the City, shall include, but not be limited to, the following to achieve a performance standard of a 2:1 replacement, or as dictated by a regulatory agency with permitting authority over the species: Location of the mitigation/restoration and map; Success criteria (e.g., acceptable survivorship, percent cover, or other appropriate metric); Identification of the party responsible for achieving the success criteria; Plant species, container sizes, and seeding rates; Planting schedule; Monitoring frequency, methods, and duration; Means to control exotic vegetation; Contingency planning (i.e., if the effort fails to reach the performance criteria, what remediation steps need to be taken); Irrigation methods and schedule; and, Identification of a protection instrument providing for conservation of the mitigation site in perpetuity. The Applicant shall maintain and monitor the plants for a minimum of five years. Offsite Preservation. Offsite preservation shall consist of locating a population of the impacted special status plant species containing at least two times the number of individuals impacted by the project, and preserving the population in perpetuity via placement of a permanent conservation easement or purchase of the land and dedication to the City or an approved conservation organization acceptable to the City. The preserved population shall be located on an area of sufficient size to create a preserve core and be located, as feasible, at least 350 feet away from existing or proposed development, paved roads, v-ditches and irrigated areas. Additionally, the preserved population shall exhibit connectivity to other protected open space or hillside areas. The Preservation Plan shall at least identify the specific location of the preservation site and size; number of individuals preserved; ownership of the land; parties involved; and the preservation methodology (i.e., permanent conservation easement or dedication to an approved conservation organization, etc.).	

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
Impact BIO-2. Construction during the bird nesting season could directly or indirectly affect nesting birds protected under the Migratory Bird Treaty Act and the CFGC 3503. This is a Class II, potential impact that can be mitigated to a less than significant level.	**BIO-2(a) Nesting Bird Survey.** If tree removal is to occur during the bird-breeding season (February 15 through September 15), at a minimum one (1) survey shall be conducted prior to tree removal by a qualified biologist (a person with a biology degree and/or established skills in bird recognition). The survey shall occur no more than one (1) week prior to tree removal. The work limits plus a 250-foot buffer, as feasible, shall be surveyed to accommodate potential active raptor nests, as well as other birds nesting nearby. A copy of the biologist contract for these services shall be submitted to the Planning Department for review and approval prior to issuance of grading permits. A report summarizing the findings of the survey and the recommended buffers shall be provided to the Planning Department prior to vegetation removal activities. **BIO-2(b) Establishment of Appropriate Buffers During Grading and Construction**. In the event that nesting birds are observed within 250 feet of the disturbance/construction area, species-specific exclusionary buffers shall be determined by the qualified biologist, and construction timing and location shall be adjusted accordingly until the nestlings have fledged and are no longer dependent upon the nest. The active nests and exclusionary buffers shall be monitored by a qualified biologist (at least initially) to determine if the active nests are being adversely affected by construction activities and to determine if a buffer would need to be increased to reduce such effects.	Less than significant.
Impact BIO-7. The project would develop active land uses (private street and residences) adjacent to willow thicket and near dune habitat, both of which are identified as Environmentally Sensitive Habitat Areas by the Coastal Land Use Plan, and the project would not provide a minimum 100-foot buffer from these areas. This is a Class II, potential impact that can be mitigated to a level less than significant.	BIO-7(a) Protection and Enhancement of RP designated area. Prior to recordation of the final map for the project, the applicant shall prepare a protection and enhancement plan for the area to be preserved within the RP land use designation (approximately 29.58 acres in Parcels A and B shown on the tentative map). The plan shall be prepared by a qualified biologist and/or resource specialist and shall be reviewed and approved by the City of Oxnard. The plan shall address and incorporate the following features, which may be modified through consultation with other agencies and the City prior to finalization: Timing and procedures for establishing a conservation easement or similar protection mechanism for the RP designated land to be preserved Incorporation of Ventura marsh milk vetch or any other sensitive plant species, if required as part of mitigation measure BIO-1 Revegetation or enlargement of the willow thicket	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
	area, if required as part of mitigation measure BIO-5. Removal and control of invasive species such as ice plant Modifications to and maintenance of perimeter fencing to prohibit or control public access Inclusion of limited public access, with prohibitions or controls addressing pets, no entry areas, and other aspects of potential public use Funding mechanism, which may include provision of performance bonds to the City to ensure installation of all improvements and completion of restoration and protection measures or alternative implementation guarantees BIO-7(b) Management of Residential Landscaping. The applicant shall accomplish the following measures, to the satisfaction of the Planning Division: 1) Preparation, review, and implementation of landscaping plans for the project shall include provisions for the control of invasive plant species to address the potential impacts of non-native plants colonizing adjacent native habitats. Covenants, Conditions and Restrictions shall be recorded specifying that landscaping for individual housing lots shall not include any exotic invasive plant species. The Covenants, Conditions and Restrictions shall be binding on each of the lots in the subdivision, shall run with the land affected by the subdivision, and shall be included or incorporated by reference in every deed transferring one or more of the lots in the subdivision. 2) The project applicant shall also provide, in connection with the sale of each housing unit, an information packet that explains the sensitivity of the natural habitats onsite and nearby and the need to minimize impacts on the identified sensitive species, designated resource protection areas, the limits on public access within or adjacent to such areas, the prohibition on landscaping that includes exotic invasive plant species, and the limits on exterior residential lighting. Interpretive signs shall also be placed in appropriate locations along the edges of resource protection areas explaining the sensitivity of certain species and natural habitats and the need to minimize impacts on these adjacent areas.	

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
Impact BIO-8. Removal of on-site willow thickets resulting from the project could adversely affect wetlands and riparian habitat. This would be a Class II, potential impact that can be mitigated to a less than significant level.	**BIO-8(a) Consultation with Regulatory Agencies.** Prior to issuance of any grading permits for the project, and prior to clearing of any vegetation from the site, the applicant shall provide the Oxnard Planning Division with proof of consultation with CDFW, the U.S. Army Corps of Engineers, and the Los Angeles RWQCB. This consultation might result in the applicant being required to provide these agencies with a completed delineation of jurisdictional aquatic resources within the project footprint, or to apply for permits authorizing impacts to streams or wetlands. If federal or State permits are obtained, the applicant shall provide a copy of the approved permits to the Planning Division for review and approval prior to issuance of grading permits. The applicant shall comply with all permit conditions when implementing the proposed activities, including any seasonal timing restrictions, impact avoidance measures, limitations on construction means and methods, site restoration, compensatory mitigation, and reporting requirements. **BIO 8(b) Re-vegetation Plan.** If jurisdictional waters are not avoided, areas of permanent disturbance shall be compensated for by creation, restoration, or enhancement of similar habitat at a 2:1 ratio, or as required by the regulatory agencies having permitting jurisdiction over the resources. Areas of temporary disturbance, if any, shall be restored to pre-existing or superior conditions through restoration of pre-existing contours and revegetation. Compensation for impacts to willow thickets shall consist of native and appropriate willow scrub species, unless otherwise specified by the regulatory agencies. Re-vegetation shall occur as close to the impact area as possible, and shall be within the same watershed. For this project, a likely revegetation area, should one be necessary, could be in the preservation area immediately north of the willow thicket, within the larger project boundaries. Payment of an in-lieu fee to a conservation organization approved by the City (and acceptable to the regulatory agencies, as appropriate) to conduct the mitigation may be accepted if no other locations are feasible, as confirmed by the City. The project Applicant shall submit a re-vegetation plan prepared by a qualified restoration biologist for review and approval by the City prior to issuance of a grading permit. The plan shall include, but not be limited to, the following components: Location of the mitigation/restoration and map; Success criteria (e.g., acceptable survivorship,	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
	percent cover, or other appropriate metric); Identification of the party responsible for achieving the success criteria; Plant species, container sizes, and seeding rates; Planting schedule; Monitoring frequency, methods, and duration; Means to control exotic vegetation; Contingency planning (i.e., if the effort fails to reach the performance criteria, what remediation steps need to be taken); Irrigation methods and schedule; and, Identification of a protection instrument providing for conservation of the mitigation site in perpetuity. The revegetation shall be initiated within one (1) year of completion of project construction. The Applicant shall maintain and monitor the restored areas for a minimum of five years. **BIO 8(c) Protection Measures During Construction.** The grading and improvement plans for the project shall indicate measures to minimize encroachment into the willow thicket habitat. These shall include the use of a retaining wall or walls, minimum improvements along the north side of the private extension of Canal Street through the project (i.e. no sidewalks on north side and minimum improvements to meet City standards for this roadway). The plans shall also indicate through drawing or notes that equipment and vehicle parking and staging areas are to be separated from the preserved areas by 100 feet or more, and shall prohibit vehicle and equipment from crossing or entering the willow thicket areas from the north (except as necessary for any approved revegetation work). The stormwater management plan shall ensure that runoff from construction areas is diverted away from the willow thicket areas as much as feasible.	
Impact BIO-10. The project may conflict with coastal policies to preserve Environmentally Sensitive Habitat Areas and to provide a 100-foot buffer between development and such areas. This is a Class II, potential impact that can be mitigated to a less than significant level.	Implementation of Mitigation Measures BIO-1(a), BIO-1(b) if necessary, BIO-7(a) and BIO-7(b), BIO-8(a), BIO-8(b) if necessary, and BIO-8(c), would address the biological issues associated with the applicable coastal policies and ordinance. No additional mitigation measures are necessary.	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
Cultural and Tribal Cultural Resources		
Impact CR-2. There are no known archeological resources on the project site. However, ground-disturbing activates associated with development carried out under the proposed project could result in damage to or destruction of archaeological and/or Native American cultural resources. Impacts would be Class II, significant but mitigable.	**CR-2(a). Procedures for Discovery of Intact Cultural Resources.** In the event that archaeological/paleontological resources are unearthed during project construction, all earth disturbing work within the vicinity of the find must be temporarily suspended or redirected until an archaeologist and/or paleontologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation work associated with Native American cultural material. **CR-2(b). Procedures for Discovery of Human Remains.** If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the California Native American Heritage Commission.	Less than significant.
Impact CR-3. Ground-disturbing activities associated with development under the proposed project could result in damage to or destruction of unique paleontological resources within rock units or geologic features. Impacts would be Class II, significant but mitigable**.**	Compliance with Mitigation Measure CR–3 would reduce impacts to paleontological resources to a less than significant level.	Less than significant.
Impact CR-4. Ground-disturbing activities associated with development under the proposed project have the potential to disturb unidentified human remains. Impacts would be Class II, significant but mitigable.	Compliance with Mitigation Measure CR–1(b) would reduce impacts to human remains and burial grounds to a less than significant level.	Less than significant.
Geology and Soils		
Impact GEO-2. The project site is within a State designated Liquefaction Hazard Zone. The Preliminary Soils Engineering Investigation determined that the project site has the potential for earthquake induced liquefaction, predominately within soil layers in the upper twenty five feet. Impacts would be Class II, significant but mitigable.	**GEO-2. Geotechnical Recommendations.** All recommendations contained within the Preliminary Soils Engineering Investigation conducted by SubSurface Designs, Inc. (Appendix E of this EIR) shall be followed for future development within the project site. These recommendations include the following: • Grading for the proposed development shall include the removal and re-compaction of the upper six feet (6') of the existing alluvium for support of the proposed foundation system. The grading shall extend outside of the footprint of the proposed structure ten feet (10'). A minimum of four feet (4') of compacted	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
	fill shall be maintained below the bottom of all foundations. A layer of bi-directional geogrid shall be placed within the bottom of the grading limits prior to the placement of compacted fill. Portions of the bottom excavation for the recommended removals are anticipated to require stabilization prior to the placement of compacted fill. In areas where excessive pumping is encountered, the geogrid shall be covered with one foot (1') of six inch (6") minus rock then covered with a geofabric. The earth material outside of the grading limits for the proposed structure shall be removed and re-compacted down two feet (2') for support in all areas to receive concrete slab, decking, or paving. • Grading shall be carried forth as described in the Grading and Earthwork section. Based on the granular nature of the upper alluvium, each layer shall be compacted to 95% of the maximum density as determined by the latest version of ASTM D 1557. • Structures shall be supported by a mat foundation. • Foundations shall be designed as outlined in the Foundations section.	
Impact GEO-3. The project site is located on soil that could potentially become unstable as a result of the project. Impacts would be Class II, significant but mitigable.	Mitigation GEO-2 would reduce impact to less than significant.	Less than significant.
Impact GEO-4. The near surface soils have the potential for expansion if consistent moisture content is not maintained. Impacts would be Class II, significant but mitigable.	**GEO-5** Drainage and Maintenance. Drainage and maintenance recommendations included in the Preliminary Soils Engineering Investigation shall be incorporated into the design of the project. These recommendations include, but are not limited to: • A comprehensive drainage system shall be designed and incorporated into the final plans. • Pad areas shall be maintained and planted in a way that will allow the drainage system to function as intended. • Positive pad drainage shall be incorporated into the final plans. All drainage from the roof and pad shall be directed so that water does not pond adjacent to the foundations or flow toward them. All drainage shall be collected and directed via no-erosive devices to a location approved by the building official.	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
Land Use and Planning		
Impact LU-1. The proposed project is consistent with applicable land use plans, policies and regulations, but does not precisely meet specified buffer distances. This impact would be Class II, significant but mitigable	Mitigation measures are contained in Sections 4.2, Air Quality, 4.5, Geology and Soils, and 4.10, Noise.	Less than significant.
Impact LU-3. The proposed project would be compatible with existing adjacent urban and airport uses, with incorporation of mitigation measures included in the noise sections of this EIR. This is considered a Class II, significant but mitigable, impact.	The mitigation measures recommended in Section 4.10, Noise would reduce noise impacts to levels that would avoid significant land use compatibility impacts.	Less than significant.
Noise		
Impact N-4. Construction of the proposed project would result in a short-term increase in noise levels due to the operation of heavy equipment. Therefore, impacts would be Class II, significant but mitigable.	**N-4(a). Concrete Masonry Unit (CMU) Wall Construction**. The six-foot tall CMU wall proposed for the project between the existing residential lots to the south and west and the proposed residential lots shall be constructed prior to construction of residential buildings and associated infrastructure. **N-4 (b). Construction Equipment**. Construction equipment shall be properly maintained and all internal combustion engine driven machinery with intake and exhaust mufflers and engine shrouds, as applicable, shall be in good condition and appropriate for the equipment. Equipment engine shrouds shall be closed during equipment operation. Whenever feasible, electrical power shall be used to run air compressors and similar power tools rather than diesel equipment. The developer shall require all contractors, as a condition of contract, to maintain and tune-up all construction equipment to minimize noise emissions. **N-4(c). Vehicle and Equipment Idling.** Construction vehicles and equipment shall not be left idling for longer than five minutes when not in use. **N-4(d). Stationary Equipment.** Stationary construction equipment that generates noise that exceeds 60 dBA Leq at the boundaries of the nearby residential uses shall be shielded. Temporary noise barriers used during construction activity shall be made of noise-resistant material sufficient to achieve a Sound Transmission Class (STC) rating of STC 40 or greater, based on sound transmission loss data taken according to ASTM Test Method E90. Such a barrier may provide as much as a 10 dB insertion loss, provided it is positioned as close as possible to the noise source or to the receptors. To be effective, the barrier must be long and tall enough (a minimum height of eight	Less than significant.

Table ES-1
Class II, Impacts that are Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure(s)	Residual Impact
	feet) to completely block the line-of-sight between the noise source and the receptors. The gaps between adjacent panels must be filled-in to avoid having noise penetrate directly through the barrier or sound blanket requirements would reduce construction noise levels by at least 10 dB. The equipment area with appropriate acoustical shielding shall be designated on building and grading plans. Equipment and shielding shall remain in the designated location throughout construction activities. **N-4(e). Disturbance Coordinator and Noticing.** A noise disturbance coordinator shall be designated by the contractor. The noise disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall require that reasonable measures warranted to correct the problem be implemented. In addition, the noise coordinator shall distribute notices to nearby residences, including construction hours and location, and anticipated use (time and location) of heavy noise-generating equipment. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site and on notices distributed to nearby residences.	

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Aesthetics		
Impact AES-1. Scenic vistas, including views of the project area and views from S. Harbor Boulevard and W. Wooley Road, would be partially blocked by the proposed project. However, given the limited portion of the site to be developed and the adjacent residential development, impacts would Class III, less than significant.	None required.	Less than significant.
Impact AES-2. The proposed project would convert the southern portion existing undeveloped site to residential development. However, the project would be a natural extension of the existing residential development immediately to the south and west. By adhering to City of Oxnard policies, the development would maintain the visual character of the region and would not degrade the existing visual character or quality of the site. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact AES-3. The proposed project would result in new sources of light and glare in the project area. However, these light and glare sources would be similar to the existing, adjacent residential development and would be regulated by the Oxnard Municipal Code. Impacts would be Class III, less than significant.	None required.	Less than significant.
Air Quality		
Impact AQ-1. Although the proposed project would emit greater than two pounds of ROG or NOX per day, the project would be consistent with the goals and policies of the Ventura County AQMP. Therefore, the impact is Class III, less than significant.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Impact AQ-2. Project construction would generate temporary air pollutant emissions of ozone precursors ROG and NOX above 25 pounds per day. However, VCAPCD does not have thresholds for construction and recommends that lead agencies include mitigation measures to reduce ROG and NOX for all construction activity. Operational emissions of ROG and NOX would not exceed VCAPCD's daily thresholds. Therefore, the impact would be Class III, less than significant.	**AQ-1(a) Dust Control Measures**. The following shall be implemented during grading and construction to control dust. 1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavating activities. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities: 4. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114. 5. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 6. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area within three weeks, it shall be seeded and watered until grass growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust. 7. Signs shall be posted on-site limiting traffic to 15 miles per hour or less. 8. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to affect adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust from being an annoyance or hazard, either off-site or on-site. 9. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
	adjacent streets and roads. 10. Personnel involved in grading operations, including contractors and subcontractors, shall wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations. 11. Shaker plates shall be installed at all truck exits from the site. 12. Dust control requirements shall be shown on all grading plans. 13. Signs displaying the APCD Complaint Line Telephone number for public complaints shall be posted in a prominent location visible off the site: (805) 645-1400 during business hours and (805) 654-2797 after hours. **AQ-1(b) Construction Equipment Controls**. The following shall be implemented during construction to minimize emissions of ozone precursors. 1. Construction contractors shall minimize equipment idling time throughout construction. Engines shall be turned off if idling would be for more than five minutes. 2. Equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications. 3. The number of pieces of equipment operating simultaneously shall be minimized. 4. Construction contractors shall use alternatively fueled construction equipment (such as compressed natural gas, liquefied natural gas, or electric) when feasible. 5. The engine size of construction equipment shall be the minimum practical size. 6. Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) shall be utilized wherever feasible. 7. During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time. **AQ-1(c) Low Volatile Paints**. Wherever feasible, non-painted exterior surfaces and low volatile interior and exterior paints shall be used for architectural coatings.	

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Impact AQ-3. Long-term mobile emissions associated with the proposed project would incrementally increase carbon monoxide (CO) concentrations at heavily congested intersections in the area. However, the Level of Service (LOS) at affected intersections would be C or better, and the CO levels would remain within state and federal standards. Furthermore, the proposed project would pay a Circulation System Improvement Fee, which would contribute to the Transportation Demand Management (TDM) plan to mitigate development impacts. The project would not exceed or make a substantial contribution to an exceedance of an ambient air quality standard; therefore, the impact would be Class III, less than significant.	None required.	Less than significant.
Impact AQ-3. The proposed project would not generate population growth beyond AQMP forecasts. It would not inhibit the City's ability to meet the goals of its EAP with implementation of energy efficiency measures. Impacts relating to AQMP and EAP consistency are, therefore, considered Class III, less than significant.	**AQ-3(a) Increased Efficiency**. The application would include the following energy savings requirements in construction and building management contracts. • Residential and commercial land use shall increase efficiency 15% beyond Title 24 to achieve a Tier 1 "green building" designation within the California Green Building Code. • Use of solar or low-emission water heaters in new buildings. • Require that commercial landscapers providing services use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced in Ventura County (meaning that the equipment can be easily purchased in stores in Ventura County and the cost of the equipment is not more than 20% greater than the cost of standard equipment). **AQ-3(b) Renewable Energy**. The proposed project would install solar panels and/or similar equipment that generates electricity from sunlight and/or wind. The owner/tenant of the building may elect to install such equipment to service the building and/or enter into a commercially reasonable public or private utility agreement for purposes of generating energy or transmission, if requested by the City and	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
	economically feasible. **AQ-3(c) Passive Energy Conservation Design**. The proposed project would include passive energy conservation design elements, including building material massing, orientation, landscape shading, recycled or low-impact materials, window glazing to increase insulation, water circulation pumps to reduce water use, and/or similar measures shown to be equally effective. **AQ-3(d) Natural Ventilation**. The applicant shall include natural ventilation in building design plans whenever feasible.	
Impact AQ-4. The proposed project would not generate population growth beyond AQMP forecasts. It would not inhibit the City's ability to meet the goals of its EAP with implementation of energy efficiency measures. Impacts relating to AQMP and EAP consistency are, therefore, considered Class III, less than significant.	AQ-3(a) Increased Efficiency. The application would include the following energy savings requirements in construction and building management contracts. • Residential and commercial land use shall increase efficiency 15 percent beyond Title 24 to achieve a Tier 1 "green building" designation within the California Green Building Code. • Use of solar or low-emission water heaters in new buildings. • Require that commercial landscapers providing services use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced in Ventura County (meaning that the equipment can be easily purchased in stores in Ventura County and the cost of the equipment is not more than 20 percent greater than the cost of standard equipment). AQ-3(b) Renewable Energy. The proposed project would install solar panels and/or similar equipment that generates electricity from sunlight and/or wind. The owner/tenant of the building may elect to install such equipment to service the building and/or enter into a commercially reasonable public or private utility agreement for purposes of generating energy or transmission, if requested by the City and economically feasible. AQ-3(c) Passive Energy Conservation Design. The proposed project would include passive energy conservation design elements, including building material massing, orientation, landscape shading, recycled or low-impact materials, window glazing to increase insulation, water circulation pumps to reduce water use, and/or similar measures shown to be equally effective. AQ-3(d) Natural Ventilation. The applicant shall	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
	include natural ventilation in building design plans whenever feasible.	
Impact AQ-5. Single family residences adjacent to the project site would be potentially exposed to toxic air emissions from construction of the proposed project. However, the temporary nature of construction emissions would be Class III, less than significant.	None required.	Less than significant.
Impact AQ-6. The project would not create objectionable odors that would affect neighboring properties. Impacts related to odors would be Class III, less than significant.	None required.	Less than significant.
Biological Resources		
Impact BIO-3. The yellow warbler could be impacted through losses of nesting and foraging habitat. This is a Class III, less than significant, impact.	None required.	Less than significant.
Impact BIO-4. The California horned lark could be impacted through losses of nesting and foraging habitat. This is a Class III, less than significant impact.	None required.	Less than significant.
Impact BIO-5. The globose dune beetle could be impacted through direct mortality and loss of habitat. This is a Class III, less than significant impact.	None required.	Less than significant.
Impact BIO-6. The silvery legless lizard could be impacted through direct mortality and loss of habitat. This is a Class III, less than significant impact.	None required.	Less than significant.
Impact BIO-9. Development of the project is not expected to disrupt wildlife movement or substantially reduce habitat connectivity. This is a Class III, less than significant impact.	None required.	Less than significant.
Impact BIO-11. Development of the project would not conflict with an adopted Habitat Conservation Plan or similar plan for conservation. This is a Class III, less than significant, impact.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Geology and Soils		
Impact GEO-1. Seismically-induced ground failure or shaking could result in the exposure of people and structures in the project area to the risk of loss, injury, or death. However, mandatory compliance with applicable City of Oxnard and California Building Code or California Residential Code requirements would reduce impacts to Class III, less than significant.	None required.	Less than significant.
Impact GEO-5. All of the coastal areas in Ventura County are susceptible to tsunamis. The tsunami hazard zone extends to all areas within one mile of the shoreline. Emergency Alert and Disaster Preparedness programs within the City reduce this potential impact to Class III, less than significant.	None required.	Less than significant.
Impact GEO-6. The proposed project is located approximately a half-mile north of the Channel Island Harbor and approximately 200 feet from the Edison Canal. However, the project would not alter existing risks associated with tsunami inundation in the project area. Impacts would be Class III, less than significant.	None required.	Less than significant.
Greenhouse Gas Emissions/Climate Change		
Impact GHG-1. Development of the proposed Avalon Homes project would generate additional GHG emissions beyond existing conditions. However, GHG emissions would not exceed the applicable threshold of significance. Impacts would therefore be Class III, less than significant.	None required.	Less than significant.
Impact GHG-2. With adherence to the mitigation measures included in this EIR, the proposed Avalon Homes project would be consistent with the statewide goals for GHG emissions reduction, as embodied in AB 32 and SB 375, as well as the Southern California Association of Governments	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
(SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), the City of Oxnard Sustainable Community Element, and the City of Oxnard Energy Action Plan. Impacts would therefore be Class III, less than significant.		
Hazards and Hazardous Materials		
Impact HAZ-1. The project site is located on a site listed as a hazardous waste site by the Department of Toxic Substances EnviroStor Database. However, the site was delisted in 1991 after DTSC determined the waste posed no risk. Therefore, the impact from the hazardous waste site would be Class III, less than significant.	None required.	Less than significant.
Hydrology and Water Quality		
Impact H-1. Construction of the proposed project would include ground disturbing activities that could result in erosion and sedimentation. Implementation of the project SWPPP would avoid adverse effects to water quality. Additionally, measures identified in the Post Construction Stormwater Quality Report would avoid adverse effects to water quality during project operation. Residences within the project would be connected to the City of Oxnard sewer system, delivering wastewater to the Oxnard Wastewater Treatment Plant. Impacts to water quality would be Class III, less than significant.be Class III, less than significant.	None required.	Less than significant.
Impact H-2. The project would generate demand for groundwater delivered by the City of Oxnard's. However, this demand is within the planned growth within the City of Oxnard's 2010 UWMP. Further, impacts of increasing water demand would be minimized by the management of groundwater resources by the Fox Canyon Groundwater Management Agency. Onsite management of stormwater would promote	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
retention and infiltration, such that the project would not substantially interfere with groundwater recharge. Impacts would be Class III, less than significant.		
Impact H-3. The proposed project would alter existing drainage patterns on the site. Proposed site features would promote infiltration of stormwater on-site to control runoff, and prevent runoff from exceeding the respective undeveloped storm amounts. Impacts to drainage patterns and stormwater runoff would be Class III, less than significant.	None required.	Less than significant.
Impact H-4. The proposed project would construct residences outside of a 100 year flood hazard area but within a 500 year flood zone. Impacts associated with a 100 year flood event would be Class III, less than significant.	None required.	Less than significant.
Impact H-5. The proposed project would construct residences within the inundation zone resulting from a failure of Santa Felicia Dam, Pyramid Dam, Bouquet Dam, and Castaic Dam. However, the project would not alter existing risks associated with dam inundation in the project area. Impacts would be Class III, less than significant.be Class III, less than significant.	None required.	Less than significant.
Impact H-6. The proposed project is located approximately 2,000 feet inland from the Pacific Ocean and the southern portion of the project site is within the tsunami inundation zone. However, the project would not alter existing risks associated with tsunami inundation in the project area. Impacts would be Class III, less than significant.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Noise		
Impact N-1. The proposed project is a residential neighborhood, which has an allowable exterior sound level of 55 dBA during daytime hours and 50 dBA during nighttime hours. The allowable interior sound level for residential uses is 50 dBA during daytime hours and 45 dBA during nighttime hours. The project would not be exposed to sound levels over this range; therefore impacts would be Class III, less than significant.	None required.	Less than significant.
Impact N-2. Construction activity associated with the proposed project would intermittently generate groundborne vibration on and adjacent to the project site. This may affect existing offsite receptors near the project site. However, construction vibration would not exceed the FTA thresholds for vibration. Therefore, impacts would be Class III, less than significant.	None required.	Less than significant.
Impact N-3. The proposed project would generate noise through daily operations and a result of project generated traffic on area roadways, including South Harbor Boulevard and West Fifth Street. However, operational noise and project generated traffic are not expected to result in a substantial increase in ambient noise levels that would significantly impact nearby sensitive noise receptors. Therefore, impacts would be Class III, less than significant.	None required.	Less than significant.
Impact N-5. Aircraft associated with the Oxnard Airport would periodically generate noise that may be audible to residences at the project site. However, the project site is outside the 65 dBA noise contour for the Oxnard Airport, therefore, impacts would be Class III, less than significant.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Impact N-6. Development within the project would cause minor increases in neighborhood noise levels and in adjacent willow and dune habitat areas to the north. These effects would typically be less than 1 dBA and would be Class III, less than significant.	None required.	Less than significant.
Traffic, Circulation, and Access		
Impact T-1. Implementation of the proposed project would not cause operations at study area intersections to exceed applicable LOS criteria under the Existing plus Project condition. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-2. Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Existing plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-3. Implementation of the proposed project would not cause operations at any of the study intersections to exceed acceptable LOS standards under Cumulative plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-4. Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Cumulative plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-5. The project would not increase hazards due to a design feature or incompatible uses. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-6. The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be Class III, less than significant.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Traffic, Circulation, and Access		
Impact T-1. Implementation of the proposed project would not cause operations at study area intersections to exceed applicable LOS criteria under the Existing plus Project condition. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-2. Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Existing plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-3. Implementation of the proposed project would not cause operations at any of the study intersections to exceed acceptable LOS standards under Cumulative plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-4. Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Cumulative plus Project conditions. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-5. The project would not increase hazards due to a design feature or incompatible uses. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact T-6. The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be Class III, less than significant.	None required.	Less than significant.

Table ES-2
Class III, Less than Significant Impacts

Impact	Mitigation Measure(s)	Residual Impact
Utilities and Service Systems		
Impact UTIL-1. The proposed project would be within the planned growth forecasted by the City of Oxnard in their 2010 Urban Water Management Plan. Therefore the City would have adequate water resources to serve the project site. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact UTIL-2. Wastewater generated from the proposed project would be collected through the City of Oxnard sewer system and treated at the Oxnard Wastewater Treatment Plan. The Oxnard Wastewater Treatment Plant has sufficient capacity to accommodate wastewater flows from the proposed project. Impacts would be Class III, less than significant.	None required.	Less than significant.
Impact UTIL-3. The project site would be served by the Simi Valley Landfill with an estimated remaining capacity of 36 years, and the Toland Road Landfill, with an estimated remaining capacity of 11 years. The amount of solid waste that would be generated during construction and operation of the project would not exceed this remaining capacity. Impacts to solid waste facilities from the proposed project would be Class III, less than significant.	None required.	Less than significant.
Impact UTIL-3. Energy consumed by the proposed project would comply with the City of Oxnard Energy Action Plan, the City of Oxnard 2030 General Plan, and the Green Building Standards Code (CALGreen). Impacts would be Class III, less than significant.	None required.	Less than significant.

1.0 INTRODUCTION

This document is an Environmental Impact Report (EIR) (City of Oxnard EIR# 2016-01, SCH# 2016051075) that evaluates foreseeable physical environmental impacts that would result from approval of the Avalon Homes Tentative Subdivision Map (PZ No. 16-300-03; Tract 5888) and Coastal Development Permit (PZ No. 16-400-02). The EIR was prepared in accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA), published by the Resources Agency of the State of California (Title 14, California Code of Regulations 15000 et. seq.), and the City of Oxnard's procedures for implementing CEQA and established CEQA thresholds of significance.

This Draft EIR was prepared by City Planning Division staff, with the assistance of Rincon Consultants, Inc. The Final EIR will represent disclosures, findings, and conclusions of the City regarding the environmental impacts and related aspects of the proposed project.

This section describes: (1) the general background of the proposed project and the EIR process; (2) the purpose and legal authority of the EIR; (3) the scope and content of the EIR; (4) the type of EIR; (5) lead, responsible, and trustee agencies; and (6) the CEQA-required environmental review process leading to the Final EIR that will inform the decision makers.

1.1 ENVIRONMENTAL IMPACT REPORT BACKGROUND

The City prepared an Initial Study and an EIR Notice of Preparation (NOP) and distributed the NOP for agency and public review during a 30-day scoping period between May 27, 2016 and June 27, 2016. During that period, the City received a total of eight comment letters and written memos, nine e-mails containing comments, and three additional items including transmittal letters and a request for additional time to comment. The NOP, Initial Study, and NOP comment letters are presented in Appendix A.

A public EIR scoping meeting was held on June 13, 2016 in the City's Community Room at 300 West Third Street in Oxnard. The intent of the scoping meeting was to provide interested individuals, groups, and public agencies a forum to provide input in an effort to assist in further refining the intended EIR scope and focus. Community members, environmental review consultants, and representatives from the City of Oxnard were present at the scoping meeting. Table 1-1 summarizes NOP and scoping meeting comments received, and lists the section in the EIR where the topics related to the comments are addressed.

Table 1-1
Summary of June 13, 2016 Scoping Meeting Comments

Subject	Where Subject is Addressed in EIR
Aesthetics • Applicable height limits and conformance with property development standards • Status of overhead utility lines and future undergrounding	EIR Section 4.1, *Aesthetics*

Table 1-1
Summary of June 13, 2016 Scoping Meeting Comments

Subject	**Where Subject is Addressed in EIR**
Air Quality • Effects related to the emissions of criteria pollutants • Effects related to emissions of toxic air contaminants associated with diesel exhaust	Section 4.2, *Air Quality*
Biological Resources • Potential for occurrence of Ventura marsh milk vetch and other endangered, threatened, or special status species • Potential effects on nesting birds • Potential effects on wildlife movement Indirect impacts from proximity of development to sensitive resources • Potential for introduction of invasive species • Consistency with policies related to preserving sensitive habitat areas • Requirement for a lake/streambed alteration agreement if waters or wetlands are affected The need for a management plan for the Resource Protection area to be preserved • Potential use of poison oak as buffer vegetation to discourage human use of preserved areas	Section 4.3, *Biological Resources*
Greenhouse Gas Emissions/Climate Change • Potential climate change and effects from coastal flooding	Section 4.6, *Greenhouse Gas Emissions/Climate Change*
Hazards and Hazardous Materials • Proximity of underground natural gas pipeline	Section 4.7, *Hazards and Hazardous Materials*
Hydrology/Water Quality • Adequacy of water supply/effects on groundwater • Management of stormwater and maintaining water quality • Potential effects on the Edison Canal related to stormwater runoff	Section 4.8, *Hydrology and Water Quality*
Noise • Effects related to noise from Harbor Boulevard	Section 4.10, *Noise*
Transportation/Circulation • Construction traffic, possible overweight loads on public highways • Effects on local on-street parking • Safety effects related to local traffic speed • Effects on local traffic related to restricted ingress-egress on Canal Street • Effects on traffic volumes on Harbor Boulevard, Fifth Street, and Wooley Road • Two-lane bridge constriction on Wooley Road – relationship to future pedestrian and bicycle lanes • Effects of cumulative traffic volumes on regional roadway network • Effects on beach access and parking • Jurisdiction/status of Fifth Street (unincorporated area instead of City of Oxnard)	Section 4.11, *Traffic, Circulation, and Access*
Utilities/Service Systems • Confirm and coordinate natural gas service	Section 4.12, *Utilities and Service Systems*

Table 1-1
Summary of June 13, 2016 Scoping Meeting Comments

Subject	Where Subject is Addressed in EIR
Project Alternatives • No Project (general opposition to project) • Alternate location – development within the RP designation • Reduced Project Alternative (fewer dwelling units)	Section 7.0, *Alternatives*

The full list of impacts, and discussion on how each impact is addressed in this EIR, is provided in Section 1.3, *Scope and Content*, below.

1.2 PURPOSE AND LEGAL AUTHORITY

This EIR has been prepared in accordance with CEQA. In accordance with Section 15121 of the *State CEQA Guidelines,* the purpose of this EIR is to serve as an informational document that:

> *...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

Therefore, the EIR is an informational document for use by decision makers, public agencies, and the general public. The EIR is not a policy document that establishes City policy about the desirability of the proposed project or any component within it.

The proposed project requires discretionary approvals from the City of Oxnard (described in Section 2.6, *Required Discretionary Approvals*) and, therefore, is subject to the requirements of the CEQA (Public Resources Code, Section 21000, et. seq.).

1.3 SCOPE AND CONTENT

In reviewing the project through preparation of the Initial Study and NOP, the City determined that the following topics included issues that represented potentially significant impacts:

- *Aesthetics and Urban Design*
- *Air Quality*
- *Biological Resources*
- *Cultural Resources*
- *Geology and Soils*
- *Climate Change and Greenhouse Gas Emissions*
- *Hazards and Hazardous Materials*
- *Hydrology and Water Quality*
- *Land Use and Planning*
- *Noise*
- *Transportation and Circulation*
- *Utilities and Energy*

This EIR provides a more detailed discussion of the topics referenced above and identifies the potentially significant environmental impacts, including site-specific and cumulative effects, of the proposed Avalon Homes development. The conclusions regarding environmental effects are based on adopted thresholds or other criteria used by the City of Oxnard or as suggested in the

State CEQA Guidelines. Where appropriate, the EIR recommends feasible mitigation measures that would eliminate or reduce adverse environmental effects below the City's adopted threshold of significance.

Topics for which potential environmental effects were determined to be less than significant in the Initial Study include the following:

- *Agriculture Resources*
- *Mineral Resources*
- *Population, Education and Housing*
- *Public Services and Recreation*
- *Recreation*

Information on these topics, for which effects were determined to be less than significant, is found in the Initial Study of this EIR (Appendix A).

During the public comment period, scoping process and review of the Initial Study, there were no specific comments related to these issues raised by agencies or members of the public. These issues are summarized and discussed briefly in this EIR in Section 6.0, *Impacts Found to be Less Than Significant.*

The Alternatives section of the EIR (Section 7.0) was prepared in accordance with Section 15126.6 of the *State CEQA Guidelines.* The Alternatives discussion evaluates the CEQA-required "no project" alternative and three other alternative development scenarios for the Avalon Homes project: an Alternate Development Location, an Alternate Design, and Reduced Number of Dwelling Units.

This EIR incorporates by reference the Oxnard 2030 General Plan Program EIR which was certified in 2011 when the 2030 General Plan was adopted. The Coastal Land Use Plan (CLUP), originally adopted in 1982 and updated several times through 2002, has also been used extensively in preparing this EIR. The CLUP along with the City's Coastal Zoning Ordinance (2004) form the Local Coastal Plan (LCP) for the City of Oxnard, which has been certified by the California Coastal Commission. The EIR references pertinent City policies and guidelines from these documents and from other City plans and programs. A full reference list is contained in Section 8.0, *References and Preparers*.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. The *State CEQA Guidelines* provide the standard of adequacy on which this document is based. The *Guidelines* state:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure. (CEQA Section 15151)*

1.4 TYPE OF EIR

This EIR is a project EIR as described in Section 15161 of the *State CEQA Guidelines*. As such, it is intended to cover all phases of the project development, and all discretionary approvals associated with the project.

1.5 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The City is the Lead Agency for preparation of the EIR under the California Environmental Quality Act. Section 15367 of the *State CEQA Guidelines* defines a "lead agency" as:

> *"…the public agency which has the principal responsibility for carrying out or approving a project. The Lead Agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared."*

This EIR provides environmental information to a number of other agencies which may be involved in reviewing the Avalon Homes project. Section 15381 of the *State CEQA Guidelines* defines a "responsible agency" as:

> *"…a public agency which proposed to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term "Responsible Agency" includes all public agencies other than the Lead Agency which have discretionary approval power over the project."*

Certain agencies, including the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), and the Los Angeles Regional Water Quality Control Board (RWQCB), may have permitting authority (and thus discretionary approval authority) over the proposed project in relation to any effects on jurisdictional waters or wetlands and riparian habitats. Any activity that would remove or otherwise alter jurisdictional waters or wetlands is subject to review by these regulatory agencies through the CEQA process and then later, if applicable, through the CDFW, USACE, and RWQCB permitting processes. Although the project site is near the Edison Canal, the nearest point of proposed development is approximately 150 feet from the edge of the waterway. For further discussion of potential permitting requirements for biological resources on the project site, refer to Section 4.3, *Biological Resources,* of this EIR.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. *State CEQA Guidelines* Section 15386 designates four agencies as trustee agencies: CDFW with regards to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the State Lands Commission with regard to state-owned "sovereign" lands, such as the beds of navigable waters and state school lands; the California Department of Parks and Recreation, with regard to units of the state park system; and, the University of California, with regard to sites within the Natural Land and Water Reserves System.

Finally, other agencies may be involved in an appeal or review capacity. These could include the California Coastal Commission, in the event the City action on the Coastal Development

Permit were to be appealed; the Ventura County Airport Land Use Commission and California Division of Aeronautics since the project site is within the airport influence area of the Oxnard Airport; and the California Department of Transportation, in the event an encroachment permit is required for any offsite work within a state highway right-of-way.

1.6 ENVIRONMENTAL REVIEW PROCESS

The major steps in the CEQA environmental review process are outlined below in sequential order. Figure 1-1 illustrates the review process.

1. **Notice of Preparation (NOP).** After deciding that an EIR is required, the lead agency files a NOP with the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing *(State CEQA Guidelines* Section 15082; Public Resources Code Section 21092). The NOP must be posted in the County Clerk's office for 30 days. The NOP may be accompanied by an Initial Study that identifies the issue areas for which the proposed project could create significant environmental impacts.

2. **Draft Environmental Impact Report (DEIR) Prepared.** The DEIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and, h) discussion of irreversible changes.

3. **Notice of Completion.** A lead agency must file a Notice of Completion with the State Clearinghouse when it completes a DEIR and prepare a Public Notice of Availability of a DEIR. The lead agency must post the Notice of Availability in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the Notice to anyone requesting it *(State CEQA Guidelines* Section 15087). Additionally, public notice of DEIR availability must be given by at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public, and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a DEIR is 30 days. When a DEIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the Clearinghouse (Public Resources Code Section 21091) approves a shorter period.

4. **Final EIR.** A Final EIR (FEIR) must include: a) the DEIR; b) copies of comments received during public review; c) list of persons and entities commenting; and, d) responses to comments on the DEIR.

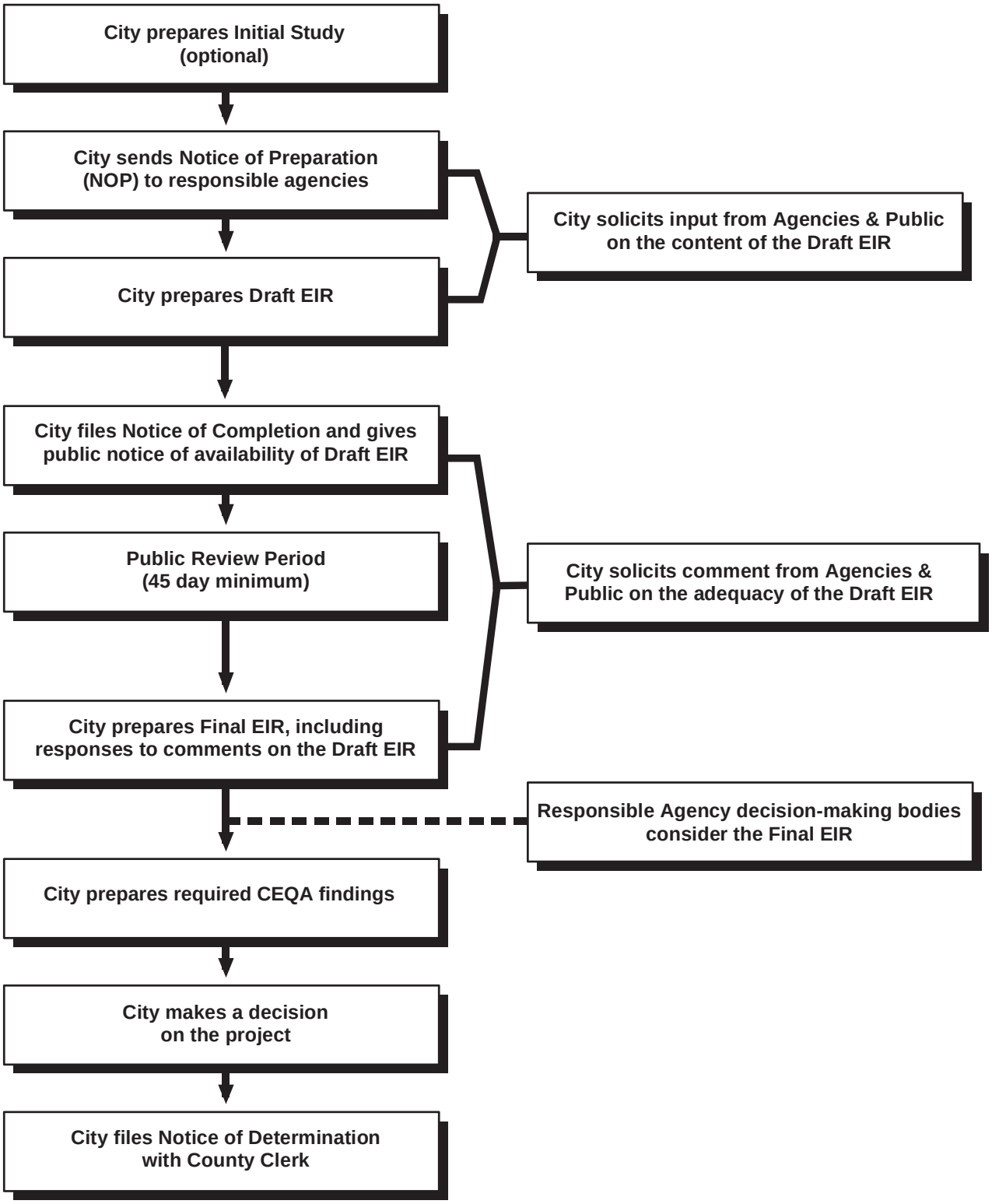
5. **Certification of FEIR.** Prior to approving a proposed project, the lead agency must certify that: a) the FEIR has been completed in compliance with CEQA; b) the FEIR was presented to the decision-making body of the lead agency; and, c) the decision-making body reviewed and considered the information in the FEIR prior to approving a project *(State CEQA Guidelines* Section 15090).

6. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or, c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted *(State CEQA Guidelines* sections 15042 and 15043).

7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or, c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible *(State CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.

8. **Mitigation Monitoring Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

9. **Notice of Determination.** An agency may file a Notice of Determination after deciding to approve a project for which an EIR is prepared *(State CEQA Guidelines* Section 15094). A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice to start a 30-day statute of limitations on CEQA legal challenges [Public Resources Code Section 21167(c)].



Environmental Review Process

Figure 1-1

2.0 PROJECT DESCRIPTION

The project analyzed in this EIR is the proposed Avalon Homes Subdivision. This section of the EIR describes the key characteristics of Avalon Homes, the project applicant, project location, major project characteristics, project objectives, and discretionary approvals needed for project approval.

2.1 PROJECT APPLICANT

Oxnard Dunes, LLC
Mike Marlow
1015 S. Harbor Blvd.
Oxnard, CA 93035
Phone: (805) 985-1557

2.2 PROJECT LOCATION

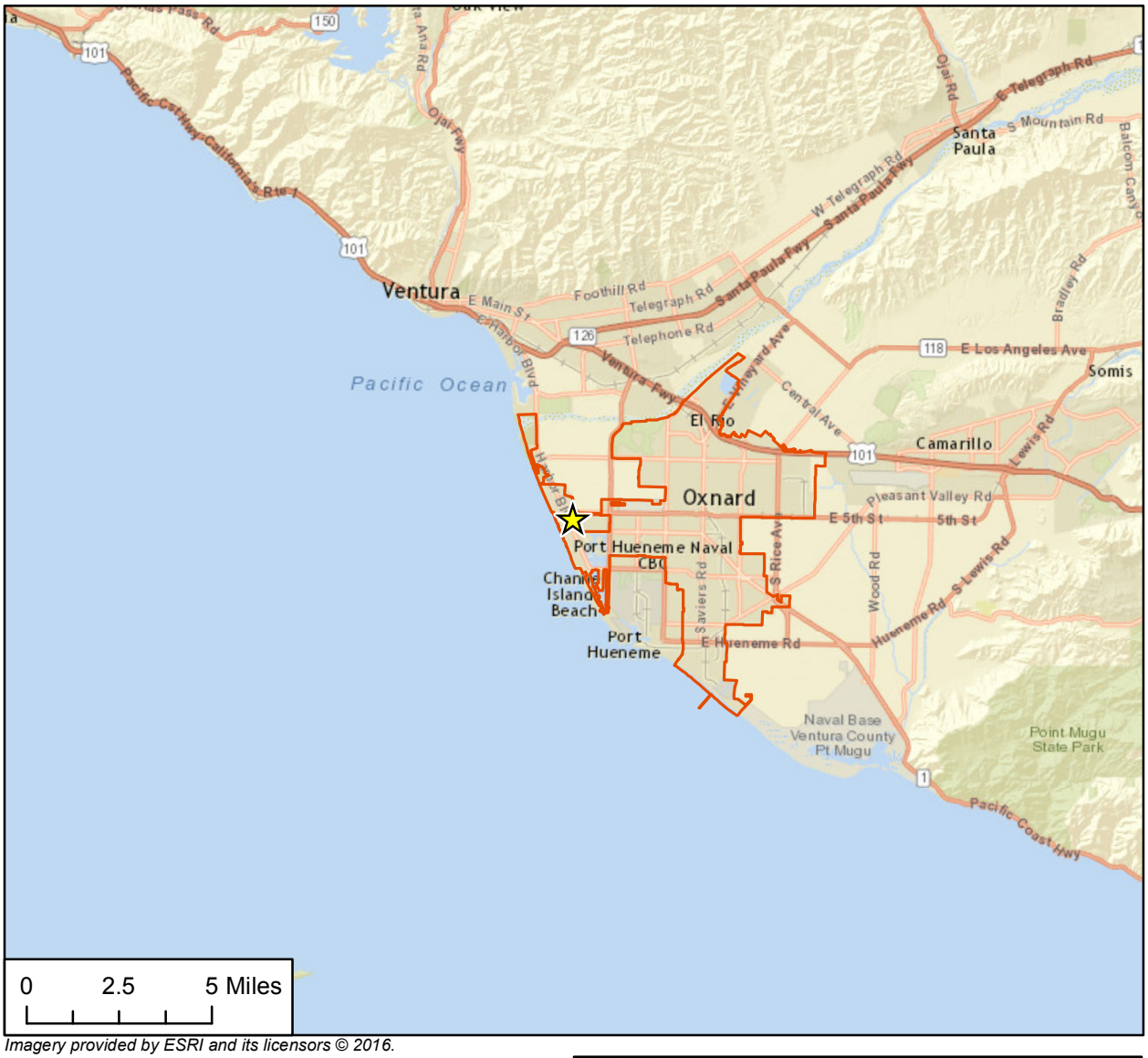
The 38.33 acre property is composed primarily of Assessor's Parcel Numbers (APN) 196-001-022, 023, and 027. The site is located at the southeastern corner of the intersection of Harbor Boulevard and West Fifth Street, north of the existing Oxnard Dunes Subdivision. The proposed project has two major components: an open space or preserve area in the northern area of approximately 29.6 acres, just south of West Fifth Street, and proposed residences in the southern 8.75 acres of the project site extending from the northern terminus of Canal Street to Dunes Street to the northwest. Figure 2-1 provides the regional location and Figure 2-2 provides an aerial view of the property and surrounding vicinity. The site is accessible from Dunes Street off of Harbor Boulevard to the west and Canal Street off of West Wooley Road to the south. Regional access is provided by Highway 101 and Highway 1 (Pacific Coast Highway).

2.3 CURRENT LAND USE AND REGULATORY SETTING

2.3.1 Existing Development and Uses

The project site is currently vacant and undeveloped land consisting of disturbed sand surfaces and willows in both the northern preserve area and in the southern portion proposed for development.

East of the project site is the Edison Canal, which runs generally north to south. To the south of the project site is residential development within the existing Oxnard Dunes subdivision. The western side of the project site is bordered by Harbor Boulevard and the north is bordered by West Fifth Street. The approved beachwalk on the Mandalay Coast residential development (formerly North Shore at Mandalay Bay) is located to the north, at the northeast corner of Harbor Boulevard and West Fifth Street (Figure 2-2).



Imagery provided by ESRI and its licensors © 2016.

Oxnard City Limits

Project Location

N

Regional Location

Figure 2-1

Imagery provided by Google and its licensors © 2016.

Project Location

Figure 2-2

2.3.2 Regulatory Setting

The project site is located in the City's Oxnard Dunes neighborhood within the City's Coastal Zone. The northern portion of the property (29.6 acres, Parcels A and B on Tentative Tract Map 5888) is located within the Resource Protection category in the Coastal Land Use Plan (CLUP, Oxnard February 1992: page II-4 Map 18). The zoning for this northern portion of the property is also RP, as shown in the Coastal Zoning Ordinance (Oxnard February 2004:Map B-3) and in the City's current Zoning Map (Oxnard, January 2017). The southern portion of the property (8.75 acres) is located within the Existing Residential Area land use category in the CLUP (Oxnard February 1992:page II-4 and Map 18), and is zoned R-2-C. The CLUP describes this category as follows:

> *"Existing Residential Area: Applied only to existing, partially developed neighborhood, this designation will allow the full buildout of these areas at existing densities."*

The 2030 General Plan Map also shows the "REX" Coastal Zone Area Residential Existing designation on the southern portion of the property.

The project, as proposed, would be consistent with the City of Oxnard's 2030 General Plan land use designations and zoning districts on the property. The northern portion of the project site extends into the Resource Protection land use designation, which includes Environmental Sensitive Habitat Areas associated with the Oxnard Dunes and riparian vegetation. The project includes these habitat areas in open space lots. The southern portion of the property, where residential development is proposed, is designated REX – Residential Existing. This southern area contains remnant sand surfaces that are less exposed to prevailing winds, which have been disturbed by the introduction of non-native plants (mainly ice plant) and by informal use, such as dog walking by residences in the adjacent neighborhood. The project also falls within the Coastal Zone Boundary, putting it within the area subject to the City of Oxnard's CLUP. The CLUP designates the southern portion of the site for Coastal Low-Density Multiple Family land use and the northern portion of the site for Resource Protection land use to protect the Northern Dunes Area.

The project would be consistent with the CLUP land use designations, but this determination must be made by the City as part of the project review and approval of a Coastal Development permit. Because the project is within 300 feet of the Edison Canal, which is considered part of the "sea" due to tidal influence, any decision of the City regarding the Coastal Development permit may be appealed to the California Coastal Commission (Coastal Zoning Ordinance Section 37-1.2.1).

2.4 PROJECT CHARACTERISTICS

2.4.1 Overview

The Avalon Homes Subdivision (project) involves the construction of a maximum of 65 residential dwelling units on 8.75 acres of a 38.33 acre property (Figure 2-3). The property would be subdivided into 17 residential lots and five open space lots. Tentative Tract Map 5888 would create 15 individual lots for the 15 single family residences or 30 duplex residences and

Source: Jensen Design& Survey, Inc. Oxnard Shores North Tentative Tract No. 5888, Feb 8, 2016

Overall Project Site Plan

Figure 2-3

two lots for 35 single family residential clustered condominium units. The 35 condominium units would share driveways between groups of four to six units to minimize driveway access to the collector street.

There would be five open space or common use parcels throughout the project site. Proposed Lots A and B (totaling 29.58 acres) are designated and zoned for Resource Protection (R-P) and would remain undeveloped, except for minimal improvements to allowed controlled public access. Together with land already owned by the City of Oxnard, this component of the project would preserve the designated sensitive habitat within the "Northern Dunes Area" shown as Area 6 on Map 3 in the CLUP. The three remaining open space or common lots would include a drainage mitigation area, open space at the project gated entry and a private community recreation area.

The project includes a restoration plan for the Northern Dunes Area, which details the access and management proposed for this area. Section 4.4.2 below provides more information regarding this plan.

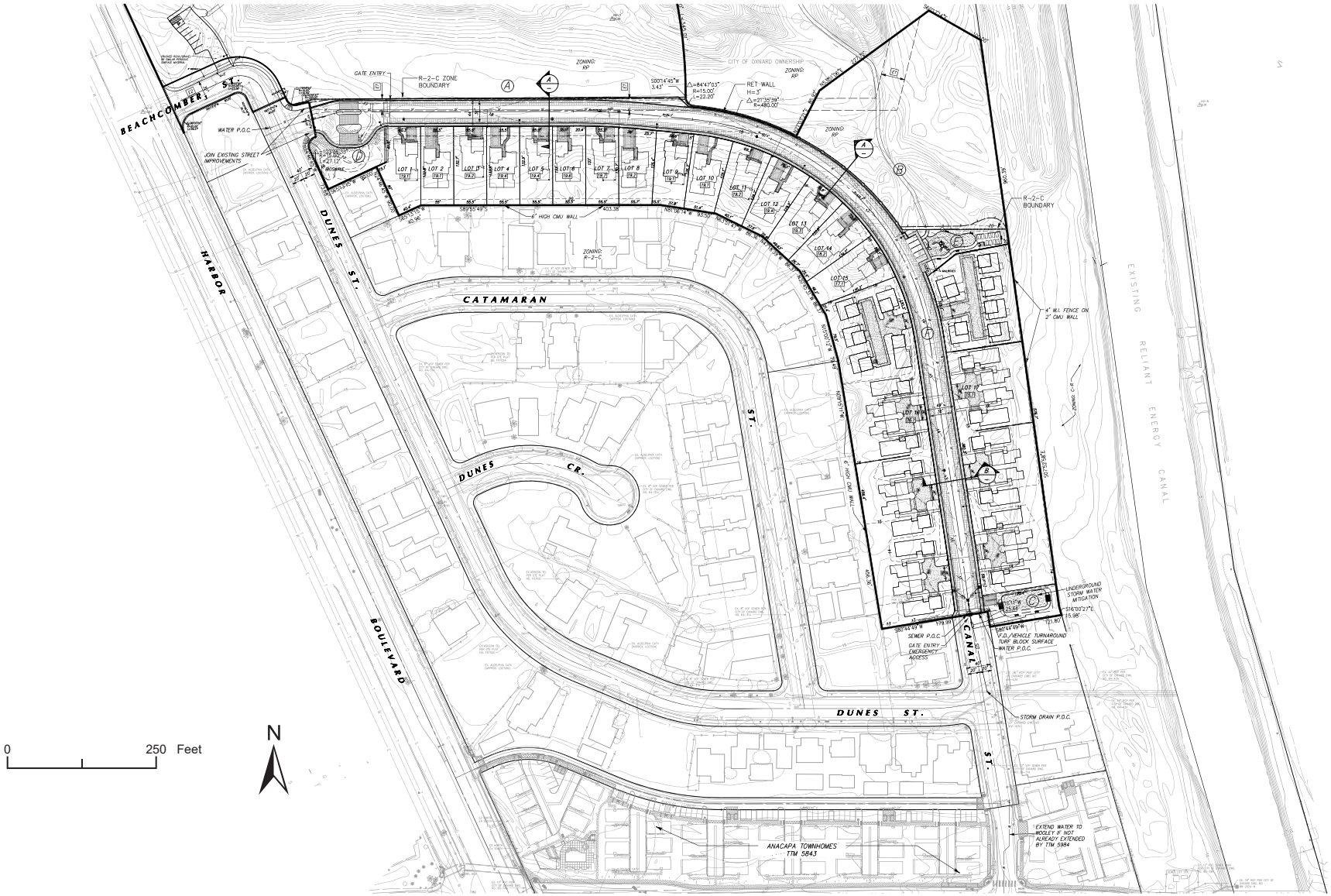
Table 2-1 summarizes the uses and acreages proposed within the project.

Table 2-1
Project Development Types and Acreage

Lot No.	Development Type	Units	Acres
1 through 15	Residential - Single Family or Duplex	15 single family, or maximum 30 if all duplex	2.62
16 and 17	Residential - Cluster Single Family	35	3.39
A	Resource Protection (small parking area and trail system)	---	27.67
B	Resource Protection (No Development Proposed)	---	1.91
C	Drainage Basin	---	0.15
D	Entry / Vegetated Bio Swale	---	0.16
E	Private Community/Recreation Area	---	0.19
F	Private Street	---	2.24
Total		**Maximum 65**	**38.33**

As shown on the Proposed Residential Development Site Plan (Figure 2-4) for the project, lots 1-15, for either single-family or duplex residential use, would range in size from 7,037 square feet (sf) to 8,410 sf, with residential units ranging in size from 3,000 sf to 4,500 sf. The two single family condominium lots, lot 16 (75,590 sf) and lot 17 (72,177 sf), would accommodate 35 cluster residences ranging in size from 1,500 sf to 2,800 sf.

The project would include one private road with gated entry off of Dunes Street to the west, and a second security gate at Canal Street to the south (refer to Figure 2-4). The project would connect to the terminus of Canal Street for egress and use by emergency vehicles only. The proposed private road would have a width of 36 feet with monolithic sidewalks and rolled



Source: Jensen Design & Survey, Inc.,Oxnard Shores North, Tentative Tract No. 5888, September 18, 2018.

Proposed Residential Development Site Plan

Figure 2-4

City of Oxnard

curbs for aesthetic purposes. Street trees would be located within the lots and would be maintained by a future homeowners association. A rural transition is proposed along the northern portion of the private road at the border of Parcel A. Homes are only proposed at the south side of the road and a split rail fence would be built along the north side, adjacent to the open space.

The project would contain storm water management features such as permeable pavement in the parking lanes along the private road in conjunction with an underground detention and infiltration area near the discharge point at the Canal Street terminus. Additionally, a bioswale is proposed in the gate entry open space area in Parcel D, which would drain to Dune Street to the west.

2.4.2 Requested Variances

The City's Property Development Standards for the R-2-C zone (Section 17-13 of the Oxnard Municipal Code) require front yard setbacks of 20 feet and rear yard setbacks of 25 feet. The project would require approval of a zoning variance to implement a proposed 10-foot minimum front yard setback for residential structures and 20-foot minimum rear yard setbacks. The proposed interior side yard and street side yard setbacks for the project would be consistent with the City's minimum required setback of five feet for these areas.

There is a project alternative (Alternative 5 discussed in Section 7) that would meet the yard setback requirements. The overall development footprint of this alternative is similar to that of the project as proposed.

2.4.3 Project Construction

Project grading and construction would occur over an estimated 16 to 18 month period and would include typical construction phases such as site preparation and grading, building construction, paving, and architectural coating. It is expected that the site soils would shrink upon compaction and that grading would be balanced on the site, with no import or export of soils. Table 2-2 shows the preliminary schedule for the proposed project.

Table 2-2
Preliminary Project Schedule

Date	Task
Winter 2020	Prepare Project Improvement Drawings
Spring 2021	Plan Check Process
Summer 2021	Project Final Approvals
Summer 2021	Site Preparation and Grading
Summer 2021	Approval of Final Architectural Plans
Fall 2021	Project Construction
Fall 2022	Project Completion

During project construction, typical construction equipment that would be used on the project site would include backhoes, dozers, pavers, concrete mixers, trucks, air compressors, saws, and hammers.

2.4.4 Restoration and Open Space Plan

Within the 29.58 acres of Parcels A and B, which would be preserved for open space, the project would include minor improvements to allow controlled public access. These improvements include a small parking lot, loop path that would be ADA accessible, and a longer loop trail through the open space area. Access would be limited with a security gate that would be locked at night and appropriate signage and railings would be installed to protect sensitive resources present. Figure 2-5 shows the general configuration of this area and the proposed improvements.

The restoration plan also shows potential areas for enlargement of willow thickets, as a measure to compensate for the direct loss of similar habitat by the residential component of the project. The area or detailed requirements for this aspect of the plan will be determined through a more formal determination of jurisdictional waters and/or aquatic habitat under state and federal procedures, as described in Section 4.3.1.e in the Biological Resources chapter of this EIR.

The proposed parking and trail improvements have been designed to take advantage of already disturbed areas and to minimize effects on native vegetation. Based on the preliminary plan, the parking area, accessible path, and trail loop would occupy up to approximately 1.5 acres. The plan would also include removal of non-native vegetation (primarily ice plant) to expand the native dune vegetation and maintain habitat value. This would offset adverse effects of the trail construction and help to mitigate other effects of the project.

Review and approval of the restoration plan will occur along with the project, with the requirement that the final plan be approved prior to recordation of the final map for the subdivision (see Biology Mitigation Measure 7(a). As the City and other agencies review the project plans, it is likely that revisions and additional detail will be developed for the restoration plan as part of the final conditions for the project approval.

2.5 PROJECT OBJECTIVES

The Avalon Homes proposal is intended to complete development of the Oxnard Dunes neighborhood consistent with the intentions of the City of Oxnard 2030 General Plan. The project objectives are as follows:

Objective 1: Complete this portion of the Oxnard Dunes neighborhood with an attractive residential neighborhood pursuant to the requirements of the City of Oxnard 2030 General Plan; and provide the ability for efficiently providing municipal services.

Objective 2: Comply with underlying R-2-C Zoning requirements with respect to unit setbacks, lot coverage, height, and density.

Objective 3: Comply with Local Coastal Plan (LCP) policies. The site is within the urban-rural boundary, and the project is within the residential density requirements of the General Plan. The project provides a buffer to Agricultural lands to the east.

Source: Jensen Design & Survey, Inc.,Oxnard Shores North, Tentative Tract No. 5888, September 18, 2018.

Open Space Preliminary Restoration Plan

Figure 2-5

Objective 4: Provide on-site habitat mitigation for any sensitive areas disturbed within the R-2-C area. It is envisioned that this area could serve as both a naturally enhanced access point to West Fifth Street, as well as a natural habitat area.

Objective 5: Ensure that proposed development and land use conserve energy and natural resources.

Objective 6: Provide for compatibility with existing residential uses in the area through effective and appropriate urban and architectural design.

The project would also preserve the 27.67 acres (Lot A) resource protection area, and would include activities to preserve and enhance the habitat value of this area and improvements to allow limited public access, as summarized in the previous section. The preliminary restoration plan for this area includes the following goals:

- Provide responsible and balanced public access framework that allows for community enjoyment of the open space area, while preserving and protecting sensitive habitat areas.
- Restore, protect, and improve native dune plant communities, habitat, and vegetation.
- Ensure the open space area remains safe by establishing security and maintenance processes and protocols.

Refer to Section 4.9, *Land Use and Planning*, for a detailed discussion of the project as it relates to the specific goals, policies, and objectives contained in the City's 2030 General Plan.

2.6 REQUIRED DISCRETIONARY APPROVALS

With recommendations from the City of Oxnard Planning Commission, the Oxnard City Council will need to take the following discretionary actions in conjunction with the proposed project:

- Approval of a Tentative Subdivision Map for Tract No. 5888, and zone variance allowing minor deviations from setback requirements in the R-2-C zone (PZ 16-300-03)
- Approval of a Development Agreement, that will identify measures related to phasing of the project and funding and implementation of private and public improvements
- Approval of a pre-application allowing developer to make affordable housing in-lieu payment
- Approval of Coastal Development Permit (PZ 16-400-02)
- Approval of Variance from front and rear yard setback requirements of the Property Development Standards for the R-2-C zone (Section 17-13 of the Oxnard Municipal Code)

The City of Oxnard LCP was recently amended and certified by the California Coastal Commission on May 14, 2002. As such, the authority to approve Coastal Development Permits for the project rests with the City of Oxnard, and the environmental effects of the coastal

permits will be considered in the EIR along with the proposed Tentative Tract Map. However, approval by the City is appealable to the California Coastal Commission.

3.0 ENVIRONMENTAL SETTING

This section describes the current environmental conditions on, and in the vicinity of, the Avalon Home project site. More detailed descriptions of the setting for each environmental issue area can be found in Section 4.0, *Environmental Impact Analysis* and Section 6.0, *Impacts Found to be Less Than Significant*.

3.1 REGIONAL SETTING

The City of Oxnard (City) encompasses approximately 26.9 square miles (United States Census Bureau, 2010) and has an estimated population of 206,997 residents (California Department of Finance [DOF], 2016). Oxnard is situated roughly midway between Santa Barbara and Los Angeles and is bounded by the Santa Clara River and unincorporated Ventura County to the north, unincorporated County areas to the east, and the City of Port Hueneme and the Pacific Ocean to the south and west. The City of San Buenaventura (Ventura) is located to the northwest across the Santa Clara River and the City of Camarillo is located to the east. Naval Base Ventura County is located at Port Hueneme and Point Mugu, south of the City.

The City is located on the Oxnard Plain, an alluvial plain that covers over 200 square miles in the western portion of Ventura County. The Oxnard Plain contains fertile soils suitable for year-round farming and is relatively flat with elevations ranging from sea level to about 80 feet above mean sea level. Drainage is generally to the southwest toward the Pacific Ocean. Similar to much of Southern California, Oxnard is located within a seismically active region.

Located adjacent to the Pacific Ocean, Oxnard enjoys a mild climate characterized by cool winters and moderate summers. Ocean breezes cool the region in the summer and warm it in the winter. According to the Western Regional Climate Center, average temperatures range from about 75 degrees Fahrenheit (F; 24 degrees Celsius [C]) in summer to 65 degrees F (18 degrees C) in winter. Annual rainfall averages about 15 inches per year, with most rainfall occurring between November and April, but rainfall may vary significantly from having several years of drought to years with intense rain events that bring an entire year's rainfall in several severe storm events.

3.2 PROJECT SITE SETTING

The proposed Avalon Homes subdivision would be located in the western area of the City. The site is located at the southeastern corner of the intersection of Harbor Boulevard and Fifth Street, north of the existing Oxnard Dunes Subdivision. The proposed residences would be in the southern 8.75 acres of the project site extending from the northern terminus of Canal Street to Dunes Street to the northwest. The site is accessible from Dunes Street off of Harbor Boulevard to the west and Canal Street off of West Wooley Road to the south. Regional access is provided by Highway 101 and Highway 1 (Pacific Coast Highway). An aerial view of the project area is shown on Figure 2-2 in Section 2.0, *Project Description*.

The project site is currently vacant and undeveloped land consisting of disturbed sand surfaces and willows in both the northern preserve area and in the southern portion proposed for development. The northern portion of the project site extends into the Resource Protection land

use designation, which includes Environmental Sensitive Habitat Areas associated with the Oxnard Dunes and riparian vegetation. The project site also falls within the Coastal Zone Boundary. The City of Oxnard's Coastal Land Use Plan designates the southern portion of the site for Coastal Low-Density Multiple Family land use and the northern portion of the site for Resource Protection land use to protect the Northern Dunes Area. East of the project site is the Edison Canal, which runs generally north to south. To the south of the project site is residential development within the existing Oxnard Dunes subdivision. The western side of the project site is bordered by Harbor Boulevard and the north is bordered by Fifth Street.

Additional setting information is included in each environmental topic subsection in Section 4.0, *Environmental Impact Analysis*.

3.3 CUMULATIVE PROJECTS

Cumulative impacts are defined as two or more individual events that, when evaluated together, are significant or would compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of the development of a proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be inconsequential when analyzed separately, but could have a substantial impact when analyzed together.

State CEQA Guidelines § 15130 requires a discussion of cumulative impacts. The discussion of related or cumulative projects may be drawn from either a "list of past, present, and probable future projects producing related or cumulative impacts" or a "summary of projections contained in an adopted general plan or related planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

For the purposes of this EIR and the impacts analyzed herein, both the list and projection approached for analyzing cumulative impacts has been utilized. The cumulative impacts analyses in this EIR are based in part on the City's 2016 Panning Division Quarterly Project List (updated April 2016), which provides a general summary of proposed developments within the City of Oxnard, as shown in Table 3-1 below. Planned development in close proximity to the project site but outside of the City in the unincorporated area of Ventura County is also considered in the analysis of cumulative impacts in this EIR.

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
Residential Project List			
Oakmont Senior Living	Two-story, 85-unit senior care facility	861 Town Center Drive	Proposed
"The Village" Wagon Wheel Development Project (PA 4)	Proposed construction of 88 condominium dwelling units (57 2-bdrm., 29 3-bdrm., and 2 4-bdrm. units) in 6, three-story residential buildings on 4.03 acres within the Village Specific Plan area.	Southwest of the intersection of N Oxnard Blvd and the US-101 Freeway	Proposed

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
"The Village" Wagon Wheel Development Projects (PA5 & PA11)	Proposed construction of 78 condominium dwelling units (52 3-bdrm., and 26 4-bdrm. units) in 26, four-story residential buildings on 4.34 acres within the Village Specific Plan area.	Southwest of the intersection of N Oxnard Blvd and the US-101 Freeway	Proposed
"The Village" Wagon Wheel Development Projects (PA7, -9, -10 & a portion of -8))	Proposed construction of 144 condominium dwelling units (36 2-bdrm., and 108 3-bdrm. units) in 12, four-story residential buildings on 6.51 acres within the Village Specific Plan area.	Southwest of the intersection of N Oxnard Blvd and the US-101 Freeway	Proposed
Single-Family Beachfront House	Demolish one existing multi-family building and construct one three-story, 4,020 square-foot (sf) beachfront home with an attached garage and decks.	703 Mandalay Beach Road	Proposed
Ventura/Vineyard Homes	152 residential dwelling units.	NW Vineyard Ave. and Ventura Rd.	Plan Check
Two Single-Family Residences	Two 1,026 sf, single-family residences with detached garages on a 7,000 sq. ft. lot.	316 S "D" St.	Proposed
Oxnard Johnson Apartments	19 affordable apartments on a 0.79 acre site.	234 Johnson Rd.	Proposed
Single-Family Beachfront House	One three-story, 4,020 sf beachfront home with an attached garage.	701 Mandalay Beach Road	Proposed
Marluna Condominiums Seabridge	42 attached condominiums.	Tradewinds and Seabridge Drive	Plan Check
River Park Senior	A four-story, 166,000 sf, 136-unit independent senior living facility with three guest rooms and associated site improvements.	SE Corner of Ventura Rd. & Clyde River Dr.	Plan Check
Two Single-Family Residences	Two 1,026 sf, single-family residences with detached garages on a 7,000 sq. ft. lot.	126 South B St.	Proposed
Channel Islands Apartments	Two and three-story, 72-unit multi-family apartments and associated site improvements.	Vacant property at northeast corner of Statham and Channel Islands	Proposed
Single-Family Beachfront House	A 6,997 sf, single-family house and garage on a 3,744 sq ft lot.	855 Mandalay Beach Road	Plan Check
Skyview Apartment Complex	240-unit affordable apartment housing complex on 12 acre drive-in site	1250 South Oxnard Blvd	Proposed
Las Cortes Phase I	144 multi-family apartments (142-affordable) within 10 buildings on a 2,500 sf community center on three lots.	Northeast Corner of E First Street and Marquita Street	Plan Check

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
Port 121 / The Reserve at Seabridge	75 condominiums with 15 live-work units (completion of DR Horton building).	3851 Harbor Island Lane	Plan Check
101 Apartment Units	Construction of approximately 101 apartment units. Required approval of PRG; ZC; DB; LLA; and cultural review.	N/W (Corner of Pleasant Valley Rd, SW of Hwy 1)	Plan Check
Single-Family Beach Front Home	New two-story 3,376 sf beachfront home with an attached garage.	861 Mandalay Beach Rd.	Under Construction
70 Senior Housing Units	Construction of approximately 70 senior living units. 14-500-04(SUP; 14-580-01(ZTA); 14-570-02(ZC).	Northwest corner of Pleasant Valley Rd., Southwest of Hwy 1	Approved
Vista Pacifica	Multi-family condominium complex with 40 units in 5 buildings within community park. 14-300-03 (Special Use Permit and Density Bonus); 14-300-004 (Tentative Tract Map).	5557 & 5527 Saviers Rd.	Approved
"The Village" Wagon Wheel Development Projects (PA18 & -19)	219 market rate apartments (1, 2 & 3 bedrooms), recreation/meeting room, tot lot, and landscaped paseos and 16,303 sf of commercial.	Southwest of the intersection of N Oxnard Blvd and the US-101 Freeway	Plan Check
Garcia Property	One 1,208 sf, single-family home with a detached 2-car garage.	144 & 146 S Hayes Ave	Under Construction
Single-Family Home	One 2,317 sf, single-family house and garage.	1256 South I St	Under Construction
Pacifica Senior Living at East Village	Convert existing 57-room hotel to 80 Assisted Living and Memory Care senior living facility.	2211 East Gonzales Rd.	Under Construction
Single-Family Beachfront Home	One 4,500 sf, single-family beachfront house on piles.	935 Mandalay Beach Rd.	Under Construction
Single-Family Beachfront Home	One 5,240 sf, single-family beachfront house on piles.	1131 Capri Way	Under Construction
Multi-Family Affordable	42 affordable farmworker rental units on 2 acres.	Etting Road and Pleasant Valley	Proposed
The Lofts Affordable Senior Apartments	Conversion of existing 52,000 sf industrial building into 115 affordable senior apartments.	300 W Ninth St	Plan Check
Las Palmas	Four 1,350 sf, two-story homes on a 9,615 sf lot.	161 Garfield Ave	Plan Check
Avalon Homes Subdivision*	65 single-family homes on a tentative tract map for 16 parcels (4 houses per parcel) on an 8.1-acre property.	Between Dunes and Canal Streets, north of Catamaran Street	Proposed
River Park: Tempo Apartments	235 apartments (three-story buildings) with garages &	SE corner Moonlight Park Av & Forest Park Blvd.	Under Construction

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
	recreation facilities.		
River Park: Sonata Apartments	53 affordable apartments (three-story buildings) with garages & recreation facilities.	NW RiverPark Blvd. and Danvers Rivers Drive	Under Construction
Oneida Court	Subdivide 1 acre into 4 lots and construct 4 detached single-family homes.	1071 N Ventura Rd / Oneida Place	Under Construction
Anacapa Townhomes	70 condominiums in 5 buildings on a 3.5 acre property.	5001 W Wooley Rd	Plan Check
The District (Morning View) RiverPark Dist H-4	113-single-family homes.	South of Tiber Way at N Oxnard Blvd.	Under Construction
Veranda RiverPark Dist H-3	95 single-family homes.	Northeast corner of Owens River Drive and Albion Drive	Under Construction
The Axis (Sienna) RiverPark Dist H-5	91 single-family homes.	North of Tiber River Way at N Oxnard Blvd.	Under Construction
Shorewalk RiverPark Dist H-2	69 single-family homes.	N Oxnard Blvd. and Nile River Drive	Under Construction
Victoria/Hemlock	116 multi-family condominiums.	1830 S Victoria Ave	Under Construction
North Shore Subdivision	183 single-family homes and 109 detached condominiums.	Northeast corner of W Fifth Street and Harbor Blvd.	Plan Check
	Residential Subtotal	*3,163 units*	
Commercial Project List			
Ventura County Credit Union	A one-story, 3,391 sf bank featuring a drive-thru and associated site improvements on a vacant pad within the Collection Shopping Center.	691 Town Center Drive	Proposed
Waterdrops #2	Automated carwash with 26 canopy covered vacuum stations on former “Monday Club”.	1401 W Gonzales Rd.	Approved
Renovation of Old Kmart Shopping Center	Renovation of an existing shopping center (Kmart), which involves a full façade upgrade, repaving of parking lot, installation of new loading zone, curb cut, trash enclosures, and the establishment of an upgraded sign program.	NE Corner of Ventura Rd. and Channel Islands Blvd.	Plan Check
76 Gas Station Car Wash	Automated car wash (1,005 sf) and addition to the existing convenience store (614 sf) at existing gas station.	1861 N Ventura Rd.	Proposed
Red Robin	A single-story, 5,670 sf restaurant with an outdoor patio and associated site improvements.	681 Town Center Drive	Under Construction

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
5th Street Banquet Hall	Convert a portion of an existing office building to an assembly hall and event facility and construct a 2,274 sf addition.	141 W Fifth St.	Approved
Starbucks Drive Thru	A single-story Starbucks coffee shop with a drive thru on a 20,603 sf lot.	1921 N Rose Ave.	Under Construction
RiverPark Retail	A single-story, multi-tenant commercial building featuring a drive thru anticipated for Krispy Kreme Doughnuts and WSS Shoe Warehouse.	Southeast corner of RiverPark Blvd. and Vineyard Ave.	Under Construction
Gold Coast Maintenance Facility	Construction of an operations and maintenance facility: construct a 49,533 sf facility – 17,935 sf office building; a 24,330 sf maintenance building; a 2,105 sf fuel service station with fueling bays; and a 5,163 sf. wash building. The project includes outdoor parking for 125 buses along with landscaping and parking improvements to serve employees and visitors.	Northwest corner of Auto Center Drive and Paseo Mercado	Plan Check
Surf Thru Carwash	A 3,831 sf automated car wash building, 591 sf pay building, self-service vacuum stations, and associated site improvements on a 1.57 acre lot within the Carriage Square Shopping Center.	1971 N Oxnard Blvd.	Under Construction
Trinity Plaza	A commercial center including a 7,400 sf church, a 2,999 sf fast food (Carl's Jr) restaurant with a drive thru and a 6,100 sf, multi-tenant retail building.	1800 Camino Del Sol 450 N Rose Ave.	Under Construction
Rancho Victoria Plaza Shopping Center	Major modification to revise the site plan and architecture for an approved shopping center, and a revision to the approved tentative subdivision map to create and accommodate 11 commercial buildings on 11 separate parcels.	3600 & 3700 W Fifth St.	Approved
Leasing Corp. of America	Outdoor RV and vehicle storage facility on 3 acres behind an existing automobile dealership.	2121 N Oxnard Blvd.	Under Construction
Dewey Pest Control	A 5,700 sf office building and associated site improvements.	2991 Ventura Blvd.	Plan Check
Oralia's Bakery	A 1,825 sf addition to the existing bakery including landscaping and site improvements.	942 W Wooley Rd.	Plan Check

Table 3-1
Cumulative Projects in the Oxnard Area

Project Name	Description	Location	Project Status
Buildings 1100A and B The Collection at RiverPark	40,000 sf, single-story, multi-tenant commercial within The Collection at RiverPark Shopping Center.	601-691 Collection Boulevard	Under Construction
Third Tower	Proposed 300,000 sf, 15-story office tower at Esplanade Financial Square.	E Esplanade Drive	Approved
Costco Fuel Facility	Amend the Rose Santa Clara Specific Plan to allow the merger of two lots and the relocation of gas station associated with the existing Costco.	2100 Ventura Rd.	Proposed
	Commercial Subtotal	*660,010 sf* *3 acres*	
Industrial Project List			
Amoretti	A 27,760 sf, multi-tenant industrial building and associated site improvements.	1501 & 1551 Pacific Ave.	Under Construction
Pacific Water Conditioning	A single-story warehouse building.	2040 Eastman Ave.	Plan Check
Mission Produce	Reuse and expansion of former US Post Office Distribution center to a 230,000 sf produce packaging and distribution facility.	2901 Camino Del Sol	Under Construction
Gill's Onion Plant Expansion	Construct 3 buildings; demolish 13,059 sf; associated site improvements consisting of parking, stormwater and street improvements for existing food processing and manf. facility operating within a 13.72-acre site.	1051 S Pacific Ave.	Under Construction
St. Paul Baptist Church	18,000 sf church with 788 seats.	1777 Statham Blvd.	Under Construction
Saint John the Baptist Coptic Church	A one-story church on a vacant 35,000 sf lot.	1200 Pacific Ave.	Under Construction
Rincon Recycling	Convert warehouse to recycling facility.	720 Pacific Ave. & 14214 Mountain View Ave.	Under Construction
	Industrial Subtotal	*383,645 sf*	

Source: City of Oxnard, 2016.
** Adjusted unit number based on current subdivision tentative tract map with maximum of 65 units.*

Table 3-2 summarizes the total amount of development currently planned and pending within the Oxnard area as listed in Table 3-1.

Table 3-2
Total Cumulative Development

Type of Development	Total
Residential	3,163 units
Commercial	660,010 sf 3 acres
Industrial	383,645 sf

In addition, the cumulative impacts analyses in this EIR for certain issues are based on the City's 2030 General Plan, adopted in October 2011, and its Draft Program Environmental Impact Report (DPEIR) (February 2009, certified in October 2011). The 2030 General Plan accommodates a population between 238,000 to 286,000 people by 2030, depending on household size and other demographic factors. This would be an increase of between 31,003 and 79,003 persons over the City's 2016 population estimate of 206,997 persons (DOF, 2016).

The project area is located geographically in the western portion of the City along the Edison Canal; however, cumulative development is spread throughout the City. Some cumulative impacts are not necessarily significant in relation to development that occurs further from the proposed project. For example, aesthetic and noise impacts associated with this project are not likely to be detected in the central area of the City. Selected cumulative impact discussions rely on a smaller geographic area: these are noted as appropriate within the cumulative impact discussion for each environmental topic subsection in Section 4.0, *Environmental Impact Analysis*.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified by the City, expert consultation, and NOP responses as having the potential to experience significant impacts. "Significant effect" is defined by the *State CEQA Guidelines* Section 15382 as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

The assessment of each issue area includes the setting and impact analysis. Within the impact analysis, the first subsection identifies the methodologies used and the significance thresholds, which are those criteria adopted by the City, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. Impacts were evaluated based upon the City's *CEQA Guidelines* and Appendix G of the *State CEQA Guidelines*. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded effect listing also contains a statement of the significance determination for the environmental effect as follows:

- **Class I - Significant and Unavoidable**. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the *State CEQA Guidelines*.
- **Class II - Less than Significant with Mitigation Incorporated**. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under Section 15091 of the *State CEQA Guidelines*.
- **Class III - Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **Class IV - No Impact**. The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental effect discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

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4.1 AESTHETICS AND URBAN DESIGN

4.1.1 Setting

a. Visual Character. The 38.33 acre project site is comprised of disturbed, remnant sand dunes, bounded by residential development to the southwest, S. Harbor Boulevard to the west, West Fifth Street to the north, and Edison Canal to the east. To the west, across S. Harbor Boulevard, is residential development; to the east, across Edison Canal, is agricultural land; and to the north, across West Fifth Street is vacant. A willow stand runs east-west across the central portion of the project site. Figure 2-2 in Section 2.0, *Project Description,* provides an aerial view of the project site and the surrounding areas.

b. Views and Scenic Resources. The most prominent public views of the project area are from adjacent roadways: W. Wooley Road, S. Harbor Boulevard, and West Fifth Street. Views of the project area are also available from the adjacent Oxnard Dunes residential development to the southwest of the project site, residential development to the west of S. Harbor Boulevard, and agricultural parcels across Edison Canal. Currently, public views of the project site from the west and south are obstructed by the existing Oxnard Dunes residential development and views from the north are obstructed by existing sand dunes.

The primary visual features of the project site include the sand dunes on the northern portion of the project site, located in the RP zone and outside of the proposed development area, disturbed sand surfaces on the southern portion of the site, as well as the willow thicket running east-west through the center of the project site. Vegetation is spread throughout the project site. Vegetation to the south of the willow stand is of moderate quality, and more healthy vegetation is located to the north of the willow stand.

c. Shade and Shadow Conditions. The project area is comprised of disturbed sand surfaces. Morning and afternoon winter shadows do not extend offsite and do not significantly shade any on or off-site residential structures.

d. Light and Glare. The project site currently has very low light levels, being that the project site is composed of disturbed sand surfaces. Sources of light in the project area include the adjacent Oxnard Dunes residential development to the southwest of the project site, street lighting from S. Harbor Boulevard, W. Wooley Road, and West Fifth Street, and light from the residential area to the west of S. Harbor Boulevard. Because of the small amount of structures within the project area and lack of high glare building materials, daytime glare levels from the project area are relatively low. Land uses in the vicinity that would be most sensitive to night lighting and glare are the adjacent Oxnard Dunes residences and the residences to the west of S. Harbor Boulevard.

e. Regulatory Setting. The City of Oxnard 2030 General Plan includes a number of policies pertaining to aesthetics and visual resources in Chapter 3, *Community Development,* Chapter 4, *Infrastructure and Community Services,* and Chapter 5, *Environmental Resources.* The 2030 General Plan identifies five roads (Ventura Road, Patterson Road, Doris Avenue, Victoria Avenue, and Fifth Street) as routes within the City's Scenic Highway System. The following General Plan policies are relevant to the aesthetic resources impact discussion:

CD-1.7 ***Compact Development.*** *Promote the use of development patterns that are more compactly built and use space in an efficient aesthetic manner as part of the community vision.*

CD-9.1 ***Neighborhood Identity.*** *Recognize, preserve, and improve the visual identity and character of existing neighborhoods. Infill development shall respect historic structures and be of compatible scale and character with historic areas.*

CD-9.5 ***Unique Character Preservation.*** *Ensure that new public and private investment maintains the unique coastal and agricultural character of the City.*

CD-10.1 ***Human-Scale Development.*** *In the evaluation of development proposals, require urban development on a human scale, by emphasizing the pedestrian experience over the movement and storage of vehicles.*

CD-10.2 ***Neighborhood Themes.*** *In the evaluation of development proposals, require neighborhood themes and principles of design, such as new traditional town planning, which include central parks, schools, and community and commercial facilities, strong pedestrian orientation and de-emphasis of automobile related elements in new development projects.*

CD-14.1 ***Design Review Process.*** *In the evaluation of development proposals, continue to ensure that public and private development projects comply with City design policies, plans, and guidelines.*

ICS-2.11 ***Scenic Highway Preservation.*** *Preserve and enhance the character of scenic highways, and publicly owned and utility rights-of-way.*

ER-1.1 ***Protect Oxnard's Natural and Cultural Resources.*** *Protect the City's natural resource areas, fish and wildlife habitat, scenic areas, open space areas, parks, and cultural and historic resources from unnecessary encroachment or harm and if encroachment or harm is necessary, fully mitigate the impacts to the maximum extent feasible.*

ER-6.1 ***Incorporate Views in New Development.*** *Preserve important public views and viewsheds by ensuring that the scale, bulk, and setback of new development does not significantly impede or disrupt them and ensure that important vistas and view corridors are enhanced. Require development to provide physical breaks to allow views into these vistas and view corridors.*

ER-6.2 ***Protect and Enhance Major Scenic Resources.*** *Protect and enhance the scenic resources of the beaches, Channel Island Harbor, windrows, farmland, the Channel Islands, and surrounding mountains.*

ER-6.3 ***Preserve Views of Small Aesthetic Resources.*** *Preserve views of significant small-scale plant communities including wetlands, riparian vegetation, man-made water features, and the like wherever possible.*

ER-6.5 ***Control of Lighting and Glare.*** *Require that all outdoor light fixtures including street lighting, externally illuminated signs, advertising displays, and billboards use*

low-energy, shielded light fixtures which direct light downward and, where public safety would not be compromised, encourage the use of low-pressure sodium lighting for all outdoor light fixtures.

ER-6.6 ***New Development Private Open Space.*** *Ensure that new development incorporates open space areas that provide community and neighborhood identity, private quality exterior private space for each housing unit, and minimize conflicting land uses and noise generators.*

ER-8.2 ***New Coastal Development.*** *Design new coastal development along primary access routes to the beach so as to maintain and enhance the scenic quality of such routes.*

ER-9.3 ***Residential Street Lighting.*** *Provide residential street lighting that is appropriate in appearance, scale, and intensity for residential use.*

ER-9.4 ***Human Scale Development.*** *Ensure that all new development emphasizes a human, pedestrian scale and minimizes its effect on the area's sensitive visual resources.*

Oxnard Municipal Code. The Oxnard Municipal Code (OMC) contains regulations government the physical appearance of development within the City. Regulations include permitted uses and regulations relating to architectural standards, minimum lot areas, building sizes, height limits, and setbacks. Requirements for the Coastal Low-Density Multiple Family (R-2-C) and Coastal Resource Protection (RP) are included in Chapter 17, *Coastal Zoning*. OMC requirements for the R-2-C Zone (Section 17-13) include:

- *Maximum building height of two stories, not to exceed 25 feet;*
- *Interior yard space of 25% of lot area, minimum dimension of 15 feet;*
- *Front yard setback of 20 feet;*
- *Rear yard setback of 25 feet;*
- *Side yard setback:*
- *Interior side yard of 5 feet, and*
- *Street side yard of 5 feet, and*
- *Reverse corner side yard: ½ of front yard of abutting lot;*
- *Accessory buildings may occupy any portion of rear yard if located at least six feet from main structure, if it is no more than one story in height, and is setback a minimum of 15 feet from any alley or way; and*
- *There shall be no more than six attached dwelling units in any building cluster.*

Further design standards for all development in the Coastal Zone are included in Section 17-46:

- *The proposed development will be of a quality and character which is compatible with the surrounding development;*
- *The design will improve the community's appearance by avoiding excessive variety and monotonous repetition;*
- *Proposed signage will be an integral architectural feature which does not overwhelm or dominate the structure or object it is attached to;*
- *Lighting will be stationary and deflected away from adjacent properties;*

- *Mechanical equipment, storage, and trash areas and utilities will be architecturally screened from view;*
- *The plans show proper consideration for the relationship between the existing and finished grades of the site to be improved and adjacent properties;*
- *The proposed development or modification will not, in its exterior design and appearance, be so at variance with the appearance of existing buildings and development in the neighborhood as to cause the nature of the local environment to materially depreciate in appearance;*
- *The proposed design is compatible with existing development in the area in terms of scale, height, bulk, materials, cohesiveness, colors, and the preservation of privacy;*
- *The proposed design promotes a harmonious transition in terms of scale and character between areas of different land use designations;*
- *All building elevations have been architecturally treated in a uniform manner, including the incorporation within the side and rear building elevations of some or all of the design elements used for the primary façades;*
- *The plans provide for adequate on-site vehicular and pedestrian circulation; and*
- *The main entrance to the dwelling unit or commercial or industrial building provides independent access for the physically impaired.*

Further, Article IV of the Zoning Code (OMC Chapter 16), *Standards for all Zones,* contains various regulations applicable to all property in the City, including Section 16-320 regarding lighting:

> *Lighting within physical limits of the area required to be lighted shall not exceed seven footcandles, nor be less than one footcandle at any point. A light source shall not shine upon, or illuminate directly any surface other than the area required to be lighted. No lighting shall be of a type or in a location that constitutes a hazard to vehicular traffic, either on private property or on abutting streets. The height of light standards shall not exceed 26 feet. To prevent damage from automobiles, standards shall be mounted on reinforced concrete pedestals or otherwise protected.*

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual area, and the surrounding area, to assist in the analysis. The City's adopted policies regarding aesthetic resources; project consistency with these policies is discussed in Section 4.9, *Land Use and Planning*.

Significance Thresholds. The following thresholds are based on Appendix G of the *State CEQA Guidelines* and the City of Oxnard 2017 Threshold Guidelines. Impacts would also be potentially significant if the proposed project would result in:

1. *A substantial adverse effect on a scenic vista such as an ocean or mountain view from an important view corridor or location as identified in the 2030 General Plan or other City planning documents;*

2. *Substantial damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, or route identified as scenic by the County of Ventura or City of Oxnard;*
3. *Substantial degradation the existing visual character or quality of the site and its surroundings such as by creating new development or other physical changes that are visually incompatible with surrounding areas or that conflict with visual resource policies contained in the 2030 General Plan or other City planning documents; and/or*
4. *Add to or compound an existing negative visual character associated with the project site;*
5. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.*

The Initial Study for the project determined that Threshold 2 would not be significantly impacted due to the location of the project in relation to state scenic highways. See the Initial Study in Appendix A for more information.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project have a substantial adverse effect on a scenic vista such as an ocean or mountain view from an important view corridor or location as identified in the 2030 General Plan or other City planning documents?*
Threshold 2:	*Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, or route identified as scenic by the County of Ventura or City of Oxnard?*

Impact AES-1 **Scenic vistas, including views of the project area and views from S. Harbor Boulevard and W. Wooley Road, would be partially blocked by the proposed project. However, given the limited portion of the site to be developed and the adjacent residential development, impacts would Class III, *less than significant.***

The proposed project would be visible from adjacent roadways, including S. Harbor Boulevard and W. Wooley Road. Views from West Fifth Street would be blocked by the sand dunes on the northern portion of the parcel, which would remain undeveloped as a resource protection zone. Views of the project site from W. Wooley Road and S. Harbor Boulevard would be moderately affected as a result of the project. However, development of the site would be condensed around the existing residential development in the City's Oxnard Dunes neighborhood. As shown in Figure 2-3 in Section 2.0, *Project Description,* the proposed private road would curve around the existing development, with residences on the south, west, and east sides of the roadway. This would decrease the view of the sand dunes from W. Wooley Road and S. Harbor Boulevard by a marginal amount. However, the affect would be minimal as the new residences would be adjacent to existing residences and the sand dunes on the northern portion of the project site would remain visible.

Views of the Los Padres Mountains are present from W. Wooley Road, S. Harbor Boulevard, and West Fifth Street. However, the project would not block any of these views. The existing

Oxnard Dunes residential development partially obstructs the view of the mountains from W. Wooley Road. The proposed project would locate residences on the north side of the existing residences in the Oxnard Dunes neighborhood, away from W. Wooley Road, and would not further obstruct the view. Views of the mountains from S. Harbor Boulevard and West Fifth Street would not be obstructed as the proposed project would not be located within the view corridor.

No other scenic vistas are present within the vicinity of the project site. Given the limited scenic vistas in the area, the location of the project adjacent to existing development, and the surrounding dunes to be maintained, impacts would not have a significant adverse impact on scenic vistas.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 3:	*Would the project substantially degrade the existing visual character or quality of the site and its surroundings such as by creating new development or other physical changes that are visually incompatible with surrounding areas or that conflict with visual resource policies contained in the 2030 General Plan or other City planning documents?*
Threshold 4:	*Would the project add to or compound an existing negative visual character associated with the project site?*

Impact AES-2 **The proposed project would convert the southern portion existing undeveloped site to residential development. However, the project would be a natural extension of the existing residential development immediately to the south and west. By adhering to City of Oxnard policies, the development would maintain the visual character of the region and would not degrade the existing visual character or quality of the site. Impacts would be Class III, *less than significant*.**

The City of Oxnard 2030 General Plan and the Oxnard Municipal Code provide standards to guide the design and siting of development. The proposed residential development would be required to comply with these policies, including height limits, design review, and lighting requirements.

Although the site is undeveloped and is currently disturbed sand surfaces, there is existing residential immediately to the south and west of the site. The existing Oxnard Dunes subdivision is comprised of two-story single-family homes and duplexes. The proposed residences would be similar in height to the existing residences, with no structures proposed to exceed two stories. The project could result in the development of four-unit multi-family structures adjacent to existing single-family residences in the southernmost portion of the project site. The massing of the four-unit structures may be larger than the existing, adjacent residences, but would be consistent with the zoning for the area, and consistent with additional

development that has been approved, but not yet built, south of the site. Additionally, some land would be utilized for a drainage mitigation area, for open space at the gated entry to the site, and as a private community recreation area. These components of the project would reduce the intensity of the developed area and, therefore, result in reduced impacts relative to changes in the visual character of the project site and vicinity.

Further, only the southern 8.75 acres of the project site would be developed. The northern 29.58 acres would be zoned for Resource Protection (R-P) and would remain undeveloped to protect sensitive Northern Dunes Habitat. The developed portion of the project site would connect to the existing residential development and would be comparable in nature and intensity. The undeveloped northern portion of the site would maintain the existing sand dunes that characterize the area.

As the project site would be a natural extension of existing development, would undergo design review by the City of Oxnard to ensure compatibility with the surrounding development, and the majority of the project site would be left undeveloped as Resource Protection, the project would not constitute a substantial degradation of visual character or quality. Similarly, the project development would not adversely add to or compound any existing negative visual character. The highly-disturbed, remnant dunes in the southern part of the project are the least aesthetic areas on the property. These would be developed with residential uses consistent with the character of the adjacent neighborhood. The more visible, abiding dunes in the north, along with most of the willow thicket vegetation on the property, would be preserved. The project design also includes landscaping along the internal street and in common areas, and would increase public accessibility to the abiding, aesthetic dune and willow areas preserved on the north. For these reasons, impacts to the visual character and quality of the site and surroundings would be less than significant.

Mitigation Measures. No mitigation is required.

Significance after Mitigation. Impacts would be less than significance without mitigation.

Threshold 5:	*Would the project create a source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Impact AES-3 **The proposed project would result in new sources of light and glare in the project area. However, these light and glare sources would be similar to the existing, adjacent residential development and would be regulated by the Oxnard Municipal Code. Impacts would be Class III, *less than significant.***

Lighting. Implementation of the proposed project would increase development in the project area and introduce new sources of light. Potential sources of new nighttime light include light spillover from windows of residences, outdoor security lighting, and streetlights. Although the project site is currently vacant, the parcels that would be developed adjacent to existing residential development which produces a similar amount of light as is anticipated for the proposed development. As discussed in Section 4.1.1(e), *Regulatory Setting*, the 2030 General

Plan and OMC contain various requirements that would help ensure that development under the project would not have negative aesthetic or safety impacts due to lighting. For these reasons, the project would not have adverse effects related to lighting.

Glare. Glare is primarily a daytime phenomenon, caused by sunlight reflecting from structures, roadways, and cars. However, glare can also be created at night by vehicle headlights. Potential sources of glare associated with the proposed project would consist of glazing (windows) and other reflective materials used in the façades of proposed structures, the reflective surfaces of vehicles parked and travelling within and around the project area, and nighttime vehicle headlights. As noted above, the parcels of the project site that would be developed under the proposed project are adjacent to existing residential development with similar sources of glare. The project would also be subject to OMC Section16-320, discussed in Section 4.1.1(e), *Regulatory Setting,* which is designed to limit light spillover and off-site lighting impacts. For these reasons, the project would not have significant adverse effects related to lighting.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The geographic extent for this cumulative impact analysis includes Harbor Boulevard, Wooley Road, and Fifth Street. The geographic extent is appropriate because the project's aesthetic impacts are localized and site-specific. Cumulative development in the area has the potential to increase to impact existing scenic vistas. However, the project site is a small expansion of residential development that would maintain the majority of the project site for the conservation of the sand dunes located to the north. The project would not have any significant aesthetic impacts and would prevent further development on the project site that could potentially degrade aesthetic quality of the area.

With respect to light and glare impacts, while the project would create a new source of light and glare, impacts would be less than significance due to the comparable residential development adjacent to the site and compliance with the 2030 General Plan and OMC.

4.2 AIR QUALITY

This section assesses the impacts of the proposed Avalon Homes project on local and regional air quality. Both temporary impacts relating to onsite construction activity and long-term impacts associated with operation of the proposed project are discussed. Discussions regarding greenhouse gas emissions and climate change are in Section 4.6, *Greenhouse Gas Emissions/ Climate Change*, of this EIR.

4.2.1 Setting

a. Climate and Meteorology. The semi-permanent high-pressure system west of the Pacific Coast strongly influences California's weather. It creates sunny skies throughout the summer and influences the pathway and occurrence of low-pressure weather systems that bring rainfall to the area during October through April. As a result, wintertime temperatures in Oxnard are generally mild while summers are warm and dry. During the day, the predominant wind direction is from the west and southwest, and at night, wind direction is from the northeast.

These predominant wind patterns are occasionally broken during the winter by storms coming from the north and northwest and by episodic Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, very dry, and often full of dust. They are particularly strong in the mountain passes and at the mouths of canyons.

Average daytime summer temperatures in the area are usually in the high 60s to low 70s (Fahrenheit). Nighttime low temperatures during the summer are typically in the high 50s, while the winter high temperature tends to be in the 60s. Characteristic of Oxnard's Mediterranean-type climate, typical winter low temperatures are in the 40s. Annual average rainfall in Oxnard is about 14 to 16 inches with most rainfall occurring between November and April (City of Oxnard General Plan Background Report, 2006).

Two types of temperature inversions (warmer air on top of colder air) are created in the Ventura County area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. Surface inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. The primary air pollutant of concern during the subsidence inversions is ozone, while carbon monoxide and nitrogen oxides are of greatest concern during winter inversions.

b. Regulatory Jurisdiction. The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer air

quality regulations, while the California Air Resources Board (ARB) in the California Environmental Protection Agency is the state agency that administers air quality regulations. Local control in air quality management is provided by the ARB through county-level Air Pollution Control Districts (APCDs) and multi-county Air Quality Management Districts (AQMDs). The ARB has established state air quality standards and is responsible for control of mobile emission sources, while the local APCDs and AQMDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 14 air basins statewide. The project site is located in the South Central Coast Air Basin and is within the jurisdiction of the Ventura County Air Pollution Control Districts (VCAPCD).

c. Air Quality Standards. Federal and state standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). California has additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. Table 4.2-1 lists the current ambient air quality standards.

Table 4.2-1
Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 µg/m^3	0.070 µg/m^3
PM_{10}	24-Hour	150 µg/m^3	50 µg/m^3
	Annual	---	20 µg/m^3
$PM_{2.5}$	24-Hour	35 µg/m^3	---
	Annual	12 µg/m^3	12 µg/m^3
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	24-Hour	---	0.04 ppm
	3-Hour	0.5 ppm (secondary)	---
	1-Hour	0.075 ppm (primary)	0.25 ppm
Lead	30-Day Average	---	1.5 µg/m^3
	3-Month Average	0.15 µg/m^3	---

ppm = parts per million µg/m^3 = micrograms per cubic meter
Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, last updated October, 2015.

Air pollution is hazardous to health, diminishes the production and quality of many agricultural crops, reduces visibility, degrades soils materials, and damages native vegetation. Of these effects, human health effects are of the greatest concern and are the key determinant for the establishment of the primary air quality standards discussed in this section of the EIR. The health and safety effects of air pollutants are described in the VCAPCD Air Quality

Assessment Guidelines (October 2003). The criteria pollutants and their potential health effects are described below.

Carbon Monoxide. Carbon monoxide, a colorless, odorless, poisonous gas, is a local pollutant that in high concentrations is found only very near the source. Carbon monoxide is a by-product of fuel combustion, but is generally not a concern with typical residential stationary sources (gas water and space heaters, gas dryers) since these are required by law to be properly vented. Automobile traffic is a major source of carbon monoxide with elevated concentrations usually found only near areas of high traffic volumes. Health effects due to carbon monoxide are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)[1]. Nitrogen oxides are formed during fuel combustion while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of May and October. Ozone is a pungent, colorless toxic gas that can cause detrimental health effects, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant, but at typical atmospheric concentrations, it is only potentially irritating. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. PM_{10} is small particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates, and sulfates. Suspended particulates are a by-product of fuel combustion and wind erosion of soil and unpaved roads, and are directly introduced into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small

[1] *Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). VCAPCD uses the abbreviations ROG and ROC interchangeably to denote organic precursors.*

particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an adsorbed toxic substance.

d. Current Ambient Air Quality. VCAPCD is required to monitor air pollutant levels to assure that the applicable air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "nonattainment." Ventura County was designated as attainment for the federal 1-hour ozone standard as of May 27, 2009. Furthermore, as of August 30, 2012, the EPA has found Ventura County in attainment of the federal 1997 8-hour ozone standard. Ventura County is designated under the federal 2008 standard as nonattainment for 8-hour ozone (Ventura County Air Quality Management Plan [AQMP], 2007) and under the state standards as nonattainment for ozone, $PM_{2.5}$, and PM_{10}.

Data on existing air quality in the Ventura County Air Basin are available for ozone and particulate matter emissions within the 2011 Ambient Air Monitoring Network Plan. The 2011 Ambient Air Monitoring Network Plan contains data for six monitoring locations throughout Ventura County. The monitoring station located closest to the project area and most representative of air quality within the City of Oxnard is the El Rio Station in Oxnard (545 Central Avenue; about 7 miles northeast of the project site). Table 4.2-2 summarizes the annual air quality data for 2012-2014 in the local airshed for the criteria pollutants of greatest concern in Ventura County.

As shown, the ozone concentrations at the El Rio Monitoring Station exceeded state one-hour standards once in 2014. Eight-hour ozone levels exceeded federal standards once and state standards twice in 2014. PM_{10} state standards were estimated to exceed standards for 5.7 days in 2012. No $PM_{2.5}$ standards were exceeded between 2012 and 2014.

Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between NO_X and ROG in the presence of sunlight. Reductions in ozone concentrations are dependent upon reducing emissions of these precursors. The major sources of ozone precursors in Ventura County are motor vehicles and other mobile equipment, solvent use, pesticide application, the petroleum industry, and electric utilities. The major sources for PM_{10} are road dust, construction equipment and activities, mobile sources, and farm operations. Locally, Santa Ana winds are responsible for entraining dust and occasionally causing elevated PM_{10} levels.

Table 4.2-2
Ambient Air Quality at the El Rio Monitoring Station

Pollutant	2012	2013	2014
Ozone, ppm - Worst Hour	0.082	0.067	0.112
Number of days of State exceedances (>0.09 ppm)	0	0	1
Ozone, ppm – Worst 8 Hours	0.065	0.062	0.077
Number of days of State exceedances (>0.070)	0	0	2
Number of days of Federal exceedances (>0.075)	0	0	1
Carbon Monoxide, ppm - Worst 8 Hours	N/A	N/A	N/A
Number of days of State/Federal exceedances (>9.0 ppm)	N/A	N/A	N/A
Nitrogen Dioxide, ppm - Worst Hour	57.0	40.0	39.0
Number of days of State exceedances (>0.18 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours*	56.3	45.9	51.1
Estimated Number of Days of State exceedances (>50 $\mu g/m^3$) *	5.7	0.0	N/A
Estimated Number of Days of Federal exceedances (>150 $\mu g/m^3$) *	0	0	N/A
Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours*	30.8	22.2	22.2
Estimated Number of Days of Federal exceedances (>35 $\mu g/m^3$) *	0	0	0

N/A = not available
Source: California Air Resources Board, 2012, 2013, 2014 Annual Air Quality Data Summaries available at http://www.arb.ca.gov/adam/topfour/topfour1.php
** California standards for ozone, carbon monoxide, and particulate matter are not to be exceeded. Federal standard for CO not to be exceeded more than once per year. Federal ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard for PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

e. Ventura County Air Quality Management Plan. The Federal Clean Air Act Amendments (CAAA) mandates that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. The SIP includes pollution control measures to demonstrate how the standards will be met through those measures. The SIP is established by incorporating measures established during the preparation of an AQMP and adopted rules and regulations by each local air quality management district, which are submitted for approval to the ARB and the USEPA. The goal of an AQMP is to reduce pollutant concentrations below the National Ambient Air Quality Standards (NAAQS) through the implementation of air pollutant emissions controls.

In 2008, the USEPA classified Ventura County as a serious 8-hour ozone nonattainment area. This means that Ventura County was required to meet the federal 8-hour ozone standard by June 15, 2013. VCAPCD adopted the Final 2007 AQMP in May 2008, which presented strategies and control measures that were intended to bring the County into compliance by that date.

Ventura County is still designated as a serious nonattainment area. The 2007 AQMP emission factors based its population forecasts on the 2008 South Coast Association of Governments (SCAG) Regional Transportation Plan (RTP). The 2007 AQMP also presents the 2003 – 2005 Triennial Assessment and Plan Update required by the California Clean Air Act (CCAA). The goal of the CCAA is to achieve more stringent health-based state air quality standards at the earliest practicable date. Ventura County is designated a severe nonattainment area under the CCAA and must meet many of the most stringent requirements under this act.

f. City of Oxnard Energy Action Plan (EAP). The City of Oxnard adopted its Energy Action Plan in April 2013, as required by the 2030 General Plan. The EAP builds upon existing energy conservation efforts and identifies energy conservation and production programs consistent with 2030 General Plan goals and policies, utility company programs, and State and Federal legislation and initiatives. The EAP focuses primarily on electricity efficiency and conservation, but also includes natural gas and renewable energy production strategies. The City proposes a reduction target of 10 percent below the 2005 baseline for electricity and natural gas consumption provided by Southern California Edison and SoCal Gas Company.

g. Sensitive Receptors. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. The proposed project consists of a maximum of 65 residential dwelling units on 17 lots (6.01 acres). In addition, there would be five open space parcels throughout the project site. Two lots (29.58 acres) would continue to be zoned for Resource Protection and would remain undeveloped to protect Environmentally Sensitive Habitat Area (ESHA). Sensitive receptors include residences adjacent to the project site at the southern edge and 100 feet west of the project site across South Harbor Boulevard and South Harbor Service Boulevard. The Center for Family Health is located approximately one mile northeast of the project site. Hollywood Beach Elementary School is located approximately 1.3 miles south of the project site.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. Based on Appendix G of the *State CEQA Guidelines* and the City's 2017 Threshold Guidelines, air quality impacts would be considered significant if the proposed project would:

1. *Conflict with of obstruct implementation of the Ventura County AQMP;*
2. *Violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation;*
3. *Result in a cumulatively considerable net increase of any criteria in excess of quantitative thresholds recommended by the VCAPCD;*
4. *Expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants; and/or*

5. *Create objectionable odors affecting a substantial number of people.*

The threshold guidelines used to analyze air quality impacts are derived from those of the VCAPCD. The most recent VCAPCD comprehensive publication regarding air quality assessment is the Ventura County *Air Quality Assessment Guidelines* (October 2003). The VCAPCD's *Air Quality Assessment Guidelines* recommend significance thresholds for projects proposed in Ventura County. Under these guidelines, projects that generate more than 25 lbs per day of ROG or NO_X are considered to jeopardize attainment of the federal ozone standard and thus have a significant adverse impact on air quality.

The VCAPCD has not established quantitative thresholds for particulate matter. However, a project that may generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons; may endanger the comfort, repose, health, or safety of any such person; or which may cause or have a natural tendency to cause injury or damage to business or property is considered to have a significant air quality impact by the VCAPCD. This threshold is particularly applicable to the generation of fugitive dust during construction grading operations.

The VCAPCD's 25 lbs per day thresholds for ROG and NO_X are not intended to be applied to construction emissions since such emissions are temporary. For construction impacts, the VCAPCD recommends minimizing fugitive dust through various dust control measures. Therefore, as outlined in the VCAPCD's *Guidelines for the Preparation of Air Quality Impact Analyses*, the project's impact is considered significant if it would:

1. *Generate daily emissions exceeding 25 pounds of reactive organic compounds (ROG) or nitrogen oxides (NO_X);*
2. *Cause an exceedance or making a substantial contribution to an exceedance of an ambient air quality standard;* [2]
3. *Directly or indirectly cause the existing population to exceed the population forecasts in the most recently adopted AQMP;*
4. *Be inconsistent with goals and policies of the Ventura County AQMP and emit greater than two pounds of ROG or NO_X per day;*
5. *Create a human health hazard by exposing sensitive receptors to toxic air emissions; or*
6. *Create objectionable odors affecting a substantial number of people.*

Construction Emissions. As discussed above, the VCAPD does not recommend any thresholds of significance for construction emissions; therefore, significance is determined based on a consideration of the control measures to be implemented.

Operational Emissions Estimates. The California Emissions Estimator Model (CalEEMod) software was used to perform emissions estimates. When project specific information was not available, default assumptions were used to calculate area, energy, and mobile source emissions associated with the project. The estimated number of vehicle trips used

[2] *"Substantial" is defined as making measurably worse an existing exceedance. Since the VCAPCD does not provide a numerical value for "substantial contribution," changes in carbon monoxide concentrations were determined to be significant and substantial for this analysis if concentrations including project traffic caused a level of service (LOS) E or F.*

to estimate air pollutant emissions impacts is from the EIR traffic study (Appendix I), and that assumption included .

Carbon Monoxide "Hot Spot" Analysis. According to the Ventura County *Air Quality Assessment Guidelines*, a CO screening analysis should be conducted for intersections that would be significantly affected by a proposed project and that experience, or are anticipated to experience, level of service (LOS) E or F. "Hot spots" are defined as locations where local ambient CO concentrations exceed the State or Federal ambient air quality standards. Such concentrations typically occur near heavily congested roadway intersections.

b. Project Impacts and Mitigation Measures.

Threshold 1:	*Would the project conflict with or obstruct implementation of the Ventura County AQMP?*

Impact AQ-1 Although the proposed project would emit greater than two pounds of ROG or NO_X per day, the project would be consistent with the goals and policies of the Ventura County AQMP. Therefore, the impact is Class III, *less than significant*.

A project with emissions of two pounds per day or greater of ROG or NO_X that is found to be inconsistent with the Ventura County AQMP would have a significant cumulative adverse air quality impact. As shown in Table 4.2-4, the proposed project would exceed two pounds of ROG and NO_X per day and thus requires assessment of consistency with the AQMP. Inconsistent projects are usually those that cause the existing population to exceed the population forecasts. However, as discussed in Impact AQ-3, the proposed project would not generate population growth beyond AQMP forecasts. As discussed above, the proposed project would be consistent with the Ventura County AQMP and thus impacts would be less than significant.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. The impact is less than significant without mitigation.

Impact AQ-2 Project construction would generate temporary air pollutant emissions of ozone precursors ROG and NO_X above 25 pounds per day. However, VCAPCD does not have thresholds for construction and recommends that lead agencies include mitigation measures to reduce ROG and NO_X for all construction activity. Operational emissions of ROG and NO_X would not exceed VCAPCD's daily thresholds. Therefore, the impact would be Class III, *less than significant*.

A significant impact to air quality would occur if the proposed project would conflict with or obstruct implementation of the Ventura County AQMP or City of Oxnard EAP. Although any development project would represent an incremental negative change on air quality in the basin, of primary concern is that project-related effects have been properly anticipated in the regional air quality planning process and reduced whenever feasible.

The proposed project would involve the development of a range from 50 to a maximum of 65 residential dwelling units on 8.75 acres of undeveloped land. On 15 lots, the project would construct either 15 single family residences or 15 duplex units (30 total residences). On two lots, the project would construct 35 condominium units. A private roadway would also be built with gated entry off of Dunes Street to the west and a second security gate at Canal Street to the south (see Section 2.0, *Project Description*).

CalEEMod was used to estimate emissions from grading, building construction, and operational use. For the purposes of this analysis, it was assumed that the land uses would include 15 single family residences on Lots 1-15, 18 condominiums on Lot 16, and 17 condominiums on Lot 17. As noted in Section 2.0, *Project Description*, the 15 single family residences would range in size from 3,000 to 4,500 square feet (sf). For a conservative estimate, the 15 single family residences were estimated to be 4,500 sf. Similarly, the 35 condominiums would range in size from 1,500 to 2,800 sf each. For a conservative estimate, the condominiums were estimated to be 2,800 sf each. The private roadway has a width of 36 feet and a length approximately 1,528 feet.

When the air quality modeling was prepared, site preparation and grading was expected to begin in June 2017 and take six months. Building construction would begin in December 2017, and the project would be expected to finish in September 2018. As noted in Section 2.4.3 in the Project Description, the project timing is now anticipated to occur two years after the earlier assumptions. While this might result in slight reductions for estimated grading and construction emissions, the difference would not be substantial and the conclusions related to construction emissions discussed below remain accurate.

Construction activity and associated emissions of ozone precursors (ROG and NO_X) and dust (PM_{10}) would occur periodically during construction. However, the VCAPCD does not classify short-term construction impacts as significant because of their temporary nature, nor does the VCAPCD have thresholds for construction emissions. Nevertheless, because the air pollutant levels in Ventura County exceed state and federal ozone standards and the state PM_{10} standard, VCAPCD recommends that lead agencies include measures to reduce fugitive dust, ROG, and NO_X for all construction activity to minimize emissions of ozone precursors and fugitive dust.

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. For the purposes of construction emissions modeling, it was assumed that the project would comply with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the South Coast Air Basin. Therefore, the following conditions, which are required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for the site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including

unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day.

3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

Table 4.2-3 summarizes the estimated maximum daily emissions of pollutants during the construction period with compliance with the above described requirements, but without any additional mitigation.

Table 4.2-3
Estimated Maximum Daily Construction-Related Air Pollutant Emissions (lbs/day)

Construction Emissions	Emissions Estimate (lbs/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	29.0	51.8	40.1	11.0	7.0
VCAPCD Significance Threshold	*25*	*25*	*N/A*	*N/A*	*N/A*
Exceeds Threshold?	**Yes**	**Yes**	**N/A**	**N/A**	**N/A**

Source: Calculations using CalEEMod 2013.2.2. Winter emissions were used for ROG, CO, PM_{10}, and $PM_{2.5}$ and summer emissions were used for NO_X to provide a conservative estimate of project emissions. See Appendix B for calculations.

The VCAPCD does not classify short-term construction impacts as significant because of their temporary nature, nor does the VCAPCD have thresholds for construction emissions. Nevertheless, because the air pollutant levels in Ventura County exceed state and federal ozone standards and the state PM_{10} standard, VCAPCD recommends that lead agencies include measures to reduce fugitive dust, and ROG and NO_X for all construction activity to minimize emissions of ozone precursors and fugitive dust. VCAPCD Rule 55 on Fugitive Dust includes the following:

- *Emissions of fugitive dust from any applicable source shall remain visible beyond the midpoint (width) of a public street or road adjacent to the property line of the emission source or beyond 50*

feet from the property line if there is not an adjacent public street or road;

- *Emissions of fugitive dust from any applicable source shall not cause 20 percent opacity or greater during each observation, and the total duration of such observations is a cumulative three minutes or more in any one hour; and*
- *Track-out shall not be extended out 25 feet or more in length unless track-out area improvement, track-out prevention, or track-out removal is utilized.*

In addition to Rule 55, the Ventura County Air Quality Assessment Guidelines (October 2003) recommend mitigation measures to reduce construction-related emissions (see Mitigation Measures AQ-1(a), AQ-1(b), and AQ-1(c) below).

Full buildout of the proposed residences were modeled using CalEEMod. Emissions include area sources, energy sources, and mobile emissions. Area sources include use of consumer products, use of gas powered landscaping equipment, and re-application of architectural coating (re-painting). Energy sources include natural gas for uses such as heating/air conditioning, appliances, lighting, and water heating. Mobile emissions include vehicle trips from new residents, deliveries, and visitors. The majority of project-related operational emissions would result from vehicle trips to and from the site.

For the operational phase of the project, after it is developed and occupied, maximum daily emissions of ROG, NO_X, CO, PM_{10} and $PM_{2.5}$ were estimated based on the proposed uses, as well as the estimated number of project-generated vehicle trips. Vehicle trips are discussed in detail in Section 4.11, *Traffic, Circulation, and Access,* which is based on the Traffic and Circulation study in Appendix I. This estimate of trip generation is based on the maximum development potential, where lots 1-15 each would have two dwelling units, and the remaining lots would have 35 condominium units. Table 4.2-4 shows estimates of operational emissions of ROG, NO_X, CO, and particulate matter.

Table 4.2-4
Estimated Operational Emissions

Emission Source	Emissions Estimate (lbs/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	*5.7*	*<0.1*	*4.2*	*<0.1*	*<0.1*
Energy	*<0.1*	*0.2*	*<0.1*	*<0.1*	*<0.1*
Mobile	*1.5*	*3.7*	*15.5*	*2.9*	*0.8*
Total Proposed Project Emissions	7.2	4.0	19.8	2.9	0.8
VCAPCD Significance Threshold	*25*	*25*	*N/A*	*N/A*	*N/A*
Exceeds Threshold?	**No**	**No**	**N/A**	**N/A**	**N/A**

Source: Calculations using CalEEMod 2013.2.2. See Appendix B for calculations.
Note: Numbers may not add up due to rounding. Winter emissions were used for a more conservative estimate.

As shown in Table 4.2-4, operational emissions would not exceed 25 pounds per day for either ROG or NO_X. Therefore, the impact due to operational emissions is less than significant.

Mitigation Measures. The Ventura County Air Quality Assessment Guidelines (October 2003) recommends various techniques to reduce construction-related emissions. Mitigation

measures AQ-1(a) and (b) are recommended by the VCAPCD to minimize emissions of ozone precursors, ROG and NO_X, as well as PM_{10} during construction. Mitigation measure AQ-1(c) would further reduce construction emissions of volatile organic gases associated with off-gassing from architectural coatings.

AQ-1(a) **Dust Control Measures.** The following shall be implemented during grading and construction to control dust.

1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavating activities. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
4. All trucks shall be required to cover their loads as required by California Vehicle Code Section 23114.
5. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
6. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area within three weeks, it shall be seeded and watered until grass growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
7. Signs shall be posted on-site limiting traffic to 15 miles per hour or less.
8. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to affect adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust from being an annoyance or hazard, either off-site or on-site.
9. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
10. Personnel involved in grading operations, including contractors and subcontractors, shall wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.
11. Shaker plates shall be installed at all truck exits from the site.
12. Dust control requirements shall be shown on all grading plans.
13. Signs displaying the APCD Complaint Line Telephone number for public complaints shall be posted in a prominent location visible off the site: (805) 645-1400 during business hours and (805) 654-2797 after hours.

AQ-1(b) **Construction Equipment Controls.** The following shall be implemented during construction to minimize emissions of ozone precursors.

1. Construction contractors shall minimize equipment idling time throughout construction. Engines shall be turned off if idling would be for more than five minutes.
2. Equipment engines shall be maintained in good condition and in proper tune as per manufacturers' specifications.
3. The number of pieces of equipment operating simultaneously shall be minimized.
4. Construction contractors shall use alternatively fueled construction equipment (such as compressed natural gas, liquefied natural gas, or electric) when feasible.
5. The engine size of construction equipment shall be the minimum practical size.
6. Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated clean diesel engines) shall be utilized wherever feasible.
7. During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.

AQ-1(c) **Low Volatile Paints.** Wherever feasible, non-painted exterior surfaces and low volatile interior and exterior paints shall be used for architectural coatings.

Significance After Mitigation. Based on guidance from VCAPCD, implementation of these required mitigation measures would ensure that construction-related air emissions and impacts would remain less than significant.

Threshold 2:	*Would the project violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation?*

Impact AQ-3 **Long-term mobile emissions associated with the proposed project would incrementally increase carbon monoxide (CO) concentrations at heavily congested intersections in the area. However, the Level of Service (LOS) at affected intersections would be C or better, and the CO levels would remain within state and federal standards. Furthermore, the proposed project would pay a Circulation System Improvement Fee, which would contribute to the Transportation Demand Management (TDM) plan to mitigate development impacts. The project would not exceed or make a substantial contribution to an exceedance of an ambient air quality standard; therefore, the impact would be Class III, *less than significant*.**

The proposed project was analyzed to determine whether a carbon monoxide (CO) "hotspot" analysis was required pursuant to Caltrans' CO protocol. "Hotspots" are locations where the

federal or state ambient air quality standards could be exceeded because of the concentration of motor vehicles that are idling. Other factors contributing to a CO hotspot include the configuration of the intersection, distances to the receptors, and patterns of air circulation.

Exceedance of CO standards is most likely to occur at locations with significant traffic congestion, meaning LOS operations of E or F. Based on the LOS criteria and the results of the traffic study for the proposed project (Appendix I), there are no intersections in the project area that would require an analysis. The intersections studied were Harbor Boulevard at West Fifth Street, Beachcomber Way, and Wooley Road as well as Victoria Avenue at West Fifth Street and Wooley Road. All intersections in the project area are expected to operate at LOS C or better for existing plus pending projects plus the proposed project. Thus, the proposed project does not require a CO hotspot analysis.

Furthermore, as a new development, the project applicant would pay a Circulation System Improvement Fee, which funds the City of Oxnard's TDM Plan. The TDM efforts help mitigate development impacts, and payment to the program would mitigate emissions resulting from the proposed development. Therefore, the proposed project would not cause an exceedance and would not make a substantial contribution to an exceedance of an ambient air quality standard.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. The impact is less than significant without mitigation.

Threshold 3:	*Would the project result in a cumulatively considerable net increase of any criteria in excess of quantitative thresholds recommended by the VCAPCD?*

Impact AQ-4 The proposed project would not generate population growth beyond AQMP forecasts. It would not inhibit the City's ability to meet the goals of its EAP with implementation of energy efficiency measures. Impacts relating to AQMP and EAP consistency are, therefore, considered Class III, *less than significant*.

A significant impact to air quality would occur if the proposed project would conflict with or obstruct implementation of the Ventura County AQMP or City of Oxnard EAP. Although any development project would represent an incremental negative impact on air quality in the basin, of primary concern is that project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible.

Per the Ventura County AQMD Assessment Guidelines project consistency with the AQMP can be determined by comparing the actual population growth in the county with the projected growth rates used in the AQMP. However, if there are more recent population forecasts that have been adopted by the Ventura Council of Governments (VCOG), where the total county population is lower than that included in the most recently adopted AQMP population forecasts, lead agencies may use the more recent VCOG forecasts for determining AQMP consistency.

The current City population is estimated at 206,997 (California Department of Finance [DOF], 2016). According to data provided by the California DOF, the current average number of persons per household in the City of Oxnard as of January 1, 2016 is 4.01 (DOF 2016). Based on this average, the development of a maximum of 65 new single family residences would add approximately 260 new residents for a total population of 207,257. Therefore, the development of the project would not add population beyond that anticipated in the 2030 General Plan growth forecasts. The addition of 260 new residents to the City would equal 0.1 percent of the total projected cumulative population growth through 2030. The level of population growth associated with the project was anticipated in City of Oxnard's long-term population forecasts and would not cumulatively exceed official regional population projections. Thus, impacts from population growth would be less than significant.

The EAP encourages energy efficiency, use of renewable energy sources, and a reduction of 10 percent in emissions below the 2005 baseline for electricity and natural gas consumption. The following mitigation measures would support the EAP goals and ensure that impacts related to consistency with the EAP would be less than significant.

Mitigation Measures. Increased energy efficiency and the use of renewable energy are EAP goals that would be achieved with the following measures.

AQ-3(a) **Increased Efficiency.** The application would include the following energy savings requirements in construction and building management contracts.

- Residential and commercial land use shall increase efficiency 15 percent beyond Title 24 to achieve a Tier 1 "green building" designation within the California Green Building Code.
- Use of solar or low-emission water heaters in new buildings.
- Require that commercial landscapers providing services use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced in Ventura County (meaning that the equipment can be easily purchased in stores in Ventura County and the cost of the equipment is not more than 20 percent greater than the cost of standard equipment).

AQ-3(b) **Renewable Energy.** The proposed project would install solar panels and/or similar equipment that generates electricity from sunlight and/or wind. The owner/tenant of the building may elect to install such equipment to service the building and/or enter into a commercially reasonable public or private utility agreement for purposes of generating energy or transmission, if requested by the City and economically feasible.

AQ-3(c) **Passive Energy Conservation Design.** The proposed project would include passive energy conservation design elements, including building material massing, orientation, landscape shading, recycled or low-impact materials, window glazing to increase insulation, water circulation pumps to reduce water use, and/or similar measures shown to be equally effective.

AQ-3(d) **Natural Ventilation.** The applicant shall include natural ventilation in building design plans whenever feasible.

Significance After Mitigation. Implementation of the recommended energy efficiency measures would meet the goals of the EAP and be consistent with the AQMP; therefore, the impact would be less than significant.

Threshold 4:	*Would the project expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?*

Impact AQ-5 **Single family residences adjacent to the project site would be potentially exposed to toxic air emissions from construction of the proposed project. However, the temporary nature of construction emissions would be Class III, *less than significant*.**

Existing single family residences immediately to the west and south of the project site would be susceptible sensitive receptors and would be potentially exposed to substantial pollutant concentrations during construction. However, construction emissions are short-term and temporary. Operational use would be consistent, as new residences would be built adjacent to the existing single family residences. Moreover, as discussed an Impact AQ-2, there would be no carbon monoxide hotspot as a result of the project. Therefore, while construction emissions may expose sensitive receptors to toxic air emissions, the temporary nature of construction emissions would make the impact less than significant.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. The impact is less than significant without mitigation.

Threshold 5:	*Would the project create objectionable odors affecting a substantial number of people?*

Impact AQ-6 **The project would not create objectionable odors that would affect neighboring properties. Impacts related to odors would be Class III, *less than significant*.**

Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed residential project does not include any uses that would be associated with objectionable odors. Existing residences adjacent to the project site would not be significantly affected, as any proposed development would be required to adhere to General Plan Policy CD-5.2, which requires adequate separation between sensitive land uses to minimize land use incompatibility due to odors. If an odor producing industrial use could not adhere to this requirement, it would not be approved by the City. Other odor emissions from the proposed project would be limited to odors associated with vehicle and engine exhaust and idling. The project does not include any known sources of objectionable odors for the long-term operations phase.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would be short-term, and would cease upon completion. Therefore, the project is not expected to result in significant impacts related to objectionable odors during construction and operation.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. The impact is less than significant without mitigation.

c. Cumulative Impacts. Cumulative development is not expected to result in a significant impact in terms of conflicting with, or obstructing implementation of, the AQMP. Cumulative development within the City would continue to implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the City is not expected to cause a significant impact associated with construction activities. As described in Impact AQ-1, the project applicant would implement all appropriate mitigation measures during construction; therefore, the contribution of the project to any cumulative air quality impacts would not be cumulatively considerable.

Because Ventura County is currently in nonattainment under the federal 2008 standard for 8-hour ozone (AQMP, 2007) and under the state standards for ozone, $PM_{2.5}$, and PM_{10}, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. With regard to determining the significance of the proposed project's contribution, the VCAPCD neither recommends quantified analyses of cumulative operational emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the VCAPCD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project specific impacts. Therefore, this EIR assumes that individual development projects that generate operational emissions that exceed the VCAPCD recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

As discussed above, the proposed project would not generate emissions exceeding VCAPCD thresholds or conflict with the AQMP. Therefore, although cumulative development will continue to contribute emissions that would have the potential to adversely affect local air quality, the project's contribution to regional impacts would not be significant and would not be cumulatively considerable.

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4.3 BIOLOGICAL RESOURCES

This section assesses potential impacts to biological resources onsite and within the site vicinity. The discussion is based on review of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), U.S. Geological Survey (USGS) topographic maps, a Biological Assessment for the Avalon Homes Project prepared in January 2014 by Impact Sciences, Inc. on behalf of the project proponent. Additional fieldwork was also performed by Rincon biologists in the preparation of this section.

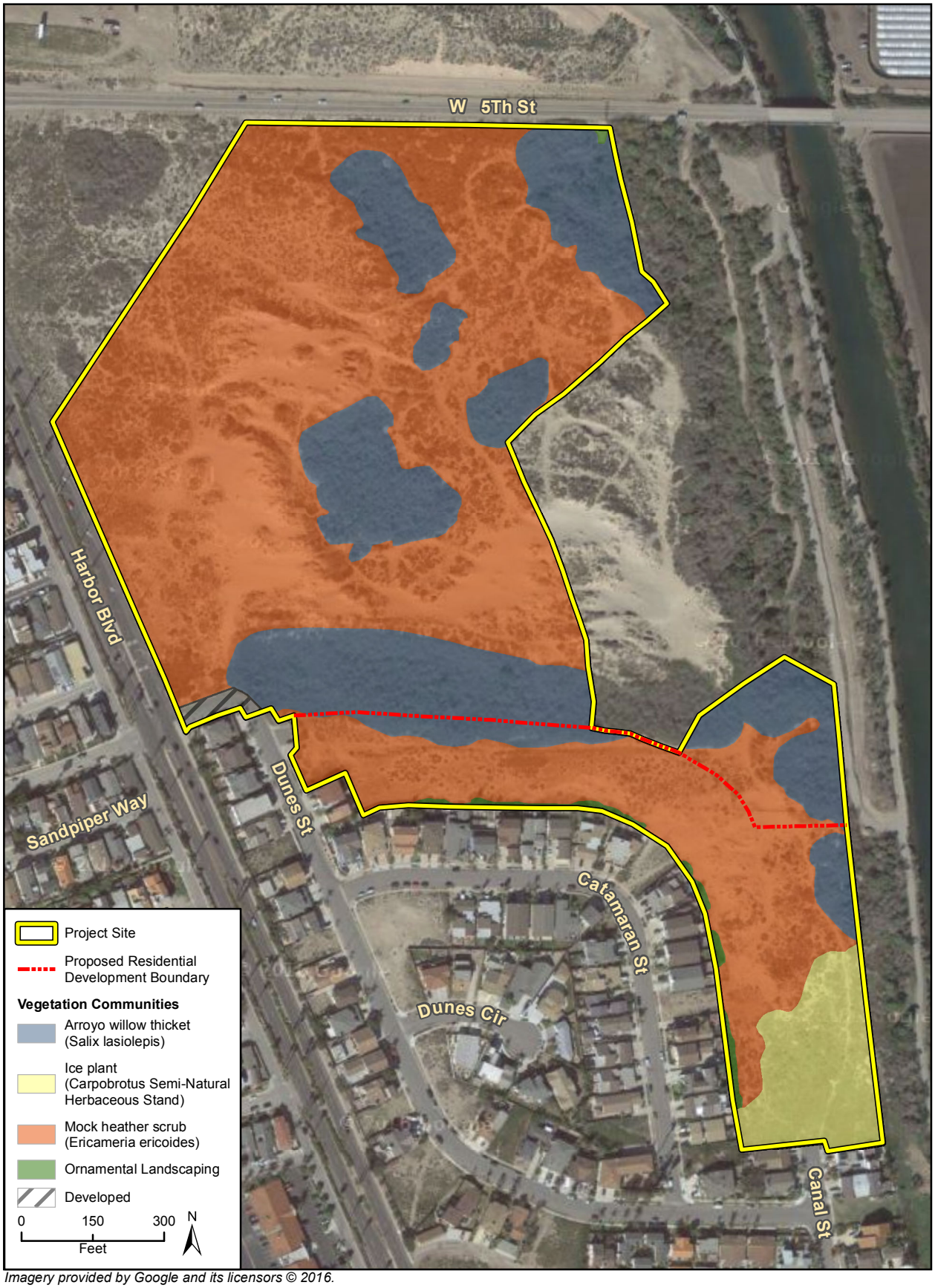
4.3.1 Setting

The Avalon Homes project site is surrounded by a mixture of residential and commercial development, the Southern California Edison Canal (Canal), the existing Oxnard Dunes Subdivision to the south, and the approved beachwalk on Mandalay Coast residential development (formerly North Shore at Mandalay Bay) located at the northeast corner of Harbor Boulevard and West Fifth Street (visible as the graded area north of the project site in Figure 2-2). East of the Canal are large, active agricultural areas. The southern portion of the project site is generally level, while the northern portion contains larger sandy dunes and associated back dune depressions. The project site elevations range from approximately 11 to 24 feet above mean sea level. As mentioned previously, the northern portion of the project site is designated and zoned Resource Protection and encompasses approximately 29.58 acres, while the southern portion of the project site (designated existing residential (REX) is proposed for development and is approximately 8.78 acres in size. Several sensitive biological resources have been mapped in the vicinity of the project site and are described in greater detail below.

a. Vegetation. Existing vegetation throughout the entirety of the project site consists predominantly of previously disturbed coastal dune scrub. Four vegetation associations were recorded during the 2014 Biological Assessment of the project site. These include the *Ericameria ericoides* Shrubland Alliance, *Salix lasiolepis* Shrubland Alliance, *Carpobrotus* Semi-Natural Herbaceous Stand, and ornamental landscaping. A map of the on-site vegetation is provided in Figure 4.3-1, and the following paragraphs describe these four vegetation associations.

The vegetation over most of the proposed development area is dominated by mock heather (*Ericameria ericoides*). The Biological Assessment Report prepared by Impact Sciences (October 2014) describes this vegetation as follows:

> Ericameria ericoides Shrubland Alliance (California goldenbush/dune scrub) - 5.5 acres
>
> The project site is dominated by one plant community, the *Ericameria ericoides* Shrubland Alliance. This is a variant of the *Lupinus chamissonis-Ericameria ericoides* Shrubland Alliance defined in the standard classification system for California vegetation [Sawyer, Keeler-Wolf and Evans. 2009:584] and defined by earlier classification systems as Dune Scrub. Mock heather (*Ericameria ericoides*) is common in the shrub canopy but silver dune lupine (*Lupinus chamissonis*) appears to be absent. Other common species include natives such as deerweed (*Acmispon glaber*) and California croton (*Croton californicus*). Non-native species such as filaree (*Erodium cicutarium*), and annual grasses (*Avena* sp., *Bromus* sp.) dominate the herbaceous understory.



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Vegetation Communities

Figure 4.3-1

Vegetation cover in this community is patchy and typical of coastal dunes, ranging from open sand with zero cover to 100 percent cover on shrub-dominated low dunes. Dense development west and south of the site has reduced the extent to which onshore winds affect natural processes of dune formation and vegetation growth.

The Biological Assessment Report by Impact Sciences did not survey the northern portion of the property, but subsequent field visits confirmed the vegetation pattern is similar to the description above for *Ericameria ericoides* Shrubland Alliance, with interspersed areas of arroyo willow thickets (described below). The area of *Ericameria ericoides* Shrubland Alliance in this northern portion of the property is 20.66 acres, making the total area of this vegetation association on the property 26.16 acres.

Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) make up approximately 9.66 acres of the project site and occur within swales throughout the project site, sometimes continuous with larger areas of the same alliance offsite. The willows form part of an upland dune/riparian swale complex that is typical of the region and canopy cover is 100 percent. Non-native vegetation, particularly lollipop tree (*Myoporum laetum*), has invaded the Alliance where the vegetation extends off site to the Southern California Edison Canal. Poison oak (*Toxicodendron diversilobum*) and rushes occupy the understory. One rush species, dune rush (*Juncus lescurii*), occurs in the willow understory. According to the Biological Assessment for the project (Impact Sciences, 2014), this species is locally uncommon and presence of this species located on the northern portion of the parcel outside of the proposed development, represents a new, southern range extension into Ventura County from Santa Barbara County.

Ice plant mats (*Carpobrotus* Semi-Natural Herbaceous Stand) cover approximately 2.02 acres in the southern portion of the project site, which is proposed for development. Hottentot fig ice plant occurs throughout the project site in isolated small patches, however it forms a large continuous stand in the southeast corner of the project site where public access is not restricted. Ice plant is an aggressive non-native species that competes with native vegetation, and eventually dominates a dune community if not removed. Vegetation cover is 80 to 100 percent.

Ornamental landscaping, occupying approximately 0.32 acre, occurs in the southern portion of the project site in localized areas that are adjacent to an existing residential development. Species identified in this group include various non-native agave species, and are associated with intentional planting on the adjacent property.

b. Wildlife. The majority of the project site comprises relatively undisturbed sand surface with the northern portion of the project site containing relatively high quality habitat due to less human disturbance and a smaller concentration of non-native species. Wildlife species (primarily birds) observed during the January 2014 (Impact Sciences, Inc.) and April 2016 (Rincon) site surveys included: yellow warbler (*Setophaga petechia,* Species of Special Concern; SSC), house finch (*Haemorhous mexicanus*), song sparrow (*Melospiza melodia)*, mourning dove (*Zenaida macroura*), American crow (*Corvus americanus*), common raven (*C. corax*), Allen's hummingbird (*Selasphorus sasin*), Anna's hummingbird (*Calypte anna*), long-billed curlew (*Numenius americanus*), bushtit (*Psaltriparus minimus*), wrentit (*Chamaea faciata*), Say's phoebe (*Saynoris saya*), black phoebe (*S. nigricans*), yellow-rumped warbler (*Setophaga coronata*), orange-crowned warbler (*Oreothlypis celata*), common yellowthroat (*Geothlypis trichas*), dark-eyed junco

(*Junco hyemalis*), Bewick's wren (*Thryomanes bewickii*), American goldfinch (*Spinus tristis*), lesser goldfinch (*Spinus psaltria*), western gull (*Larus occidentalis*), California towhee (*Melozone crissalis*), spotted towhee (*Pipilo maculatus*), California thrasher (*Toxostoma redivivum*), rock pigeon (*Columba livia*), and European starling (*Sturnus vulgaris*). Other wildlife observed include western fence lizard (*Sceloporus occidentalis*) and side-blotch lizard (*Uta stansburiana elegans*). Several medium-sized mammal and invertebrate tracks were also observed during the surveys including coyote (*Canis latrans*), domestic dog (*C. familiaris*), and Audubon's cottontail (*Sylvilagus audubonii*). Additional mammal tracks were not identified to species, however the size and shape suggest a probable striped skunk (*Mephitis mephitis*). These tracks were not observed in patterns suggesting specific wildlife movement routes, but were present throughout the site.

c. Regulatory Setting. Regulatory authority over biological resources is shared by Federal, State, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City of Oxnard). The CDFW is the State's trustee agency for biological resources under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the State and Federal Endangered Species Act, the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered.

The USFWS implements the Migratory Bird Treaty Act (16 United States Code (USC) Section 703-711), the Bald and Golden Eagle Protection Act (16 USC Section 668), and the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.*). Projects that would result in a "take" of any federally listed threatened or endangered species are required to obtain authorization from the USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of the FESA, depending on involvement by the federal government in permitting or funding the project. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect an individual, or to attempt to engage in any such conduct. Except in very limited circumstances, the FESA prohibits the USFWS from authorizing incidental take if a project would jeopardize the continued existence of a listed species.

Wetland and riparian habitats are protected on a federal, state, and local level. Wetlands may be subject to U.S. Army Corps of Engineers (USACE) jurisdiction as waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA). Protection for streambeds and riparian habitat is also afforded through CDFW, pursuant to Section 1600 *et seq.* of the California Fish and Game Code (CFGC). The Los Angeles Regional Water Quality Control Board (RWQCB) has dual authority over aquatic resources, and has a role in administering Sections 401 and 402 of the federal Clean Water Act as well as asserting State-level jurisdiction over waters of the State under the Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code). Any activity that would remove or otherwise alter wetland and riparian habitats is subject to scrutiny by the regulatory agencies through the CEQA review process and through the CDFW, USACE, and RWQCB permitting processes.

At the local level, wetlands and riparian habitats (Environmentally Sensitive Habitat Areas [ESHA]) in Oxnard's coastal zone are protected through various policies in the City's Coastal

Land Use Plan (CLUP; City of Oxnard 1982). Section 3.2.2 of the CLUP describe and map the lands considered to be Habitat Areas within the plan, and the policies applicable to these areas. Protections for wetlands include restrictions on dredging, diking, and filling, as well as buffer requirements. Protections for non-wetland ESHAs include buffer requirements and a prohibition against development that significantly disrupts habitat values. City-level approvals for coastal development permits within 300 feet of the inland extent of the mean high tide line of the sea may be appealed to the California Coastal Commission (Oxnard Coastal Zoning Ordinance Section 37.1.2.1(1)). Since the Edison Canal is less than this distance from the proposed development, City approval of the project would be appealable. Currently, the City of Oxnard is in the process of working with the California Coastal Commission to update the City's certified Local Coastal Program, of which the CLUP is a key element. While the revised plan has not yet been adopted or made public, it is likely to contain updates and refinements to the CLUP's policies, designations, and/or mapping. For purposes of this EIR, the policies and standards of the adopted CLUP (City of Oxnard February, 1982, amended through 2002) have been applied.

Sensitive species are classified at federal, state, and local levels in a variety of ways, and the classifications can be both protective and advisory. Protective designations confer statutory or regulatory protection, while advisory designations serve to identify resources that should be considered during project planning and environmental review. Examples of protective designations include listing as Threatened or Endangered by the CDFW or USFWS, designation of plants as Rare by CDFW, and statutory protection as California Fully Protected (CFP) under Sections 3511, 4700, 5050, and 5515 of the CFGC, as well as other specific legal protection. (For instance, Section 3503.5 of the CFGC protects birds of prey and their nests and eggs against take, possession, or destruction.) Advisory designations include CDFW California Species of Special Concern (SSC) (a broad database category applied to certain species, roost sites, or nests because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction); or the USFWS' list of Candidate taxa. CDFW and local governmental agencies may also recognize special listings developed by focal groups (i.e., Audubon Society Blue List, California Native Plant Society [CNPS] Rare and Endangered Plants, and U.S. Forest Service regional lists and Ventura County Rare Plant lists). These designations are treated as advisory in most cases.

Vegetation in California is accorded sensitivity ranking by the CDFW using the community classification system of Holland (1986, 1990), and the more recently accepted series concepts of Sawyer et al. (2009).

d. Special-Status Species and Habitats. Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under FESA; those considered "species of concern" by the USFWS; those listed or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by CDFW; and CDFW Special Plants, specifically those with a California Rare Plant Rank of 1A, 1B and 2 as assigned by the CNPS's *Inventory of Rare and Endangered Vascular Plants of California*, *Seventh Edition*. During the USFWS listing process for federal species, "critical habitat" may also be designated. A number of special-status wildlife species are also considered to be of "local concern." Animals in this category are of concern because they have limited distributions, are

experiencing local or regional population declines, are vulnerable to current or future threats to their preferred habitat, and/or are of unusual scientific, recreational, or educational value.

A target list of special-status plant and animal species that could potentially occur on-site was developed based on a review of the Biological Assessment for the project (Impact Sciences 2014), the most recent version of the CNDDB (CDFW 2018), and general knowledge of the regional flora and fauna. A Rincon Consultants biologist conducted a site visit on April 29, 2016 to identify habitat types, refine the target list of species and assess the actual or potential for occurrence of special-status species on the project area. A single sensitive animal, the yellow warbler (*Setophaga petechia*) was observed on the project area at that time. Special-status plants and wildlife potentially occurring within the project site are discussed below, and listed in Tables 4.3-1 and 4.3-2.

Special-Status Plants. Review of the CNDDB and other relevant data sources identified 24 special-status plant species in the project vicinity (the radius in data sources reviewed varied from 5 to 10 miles). Table 4.3-1 lists the sensitive plant species identified during literature review, and describes their potential for occurrence within the project site based on ecological requirements and documented occurrence history. For each species, potential for occurrence on-site was assigned one of the following five categories:

- **Not Present.** Either: 1) Habitat on and adjacent to the site is clearly incompatible with the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime); or, 2) Appropriate surveys were conducted and the species was not detected, and the species is so conspicuous (large, perennial, etc.) that it could not reasonably have been missed. The species does not occur on site.
- **Low Potential.** Either: 1) Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality; or, 2) Appropriate surveys were conducted and the species was not detected. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

Table 4.3-1
Special-Status Plant Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global /State CNPS CRPR	Habitat Requirements	Potential for Occurrence
Abronia villosa var. *aurita*	chaparral sand-verbena	-/- G5T2T3/S2 1B.1	Chaparral, coastal scrub, desert dunes; sandy. 240 - 5280 ft.	Not present. Site is outside species' elevation range.
Aphanisma blitoides	aphanisma	-/- G3G4/S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy soils. 3 - 1000 ft.	Low Potential. Limited suitable habitat present on-site but no records of occurrence within the Oxnard quadrangle.
Astragalus pycnostachyus var. *lanosissimus*	Ventura marsh milk-vetch	FE/SE G2T1/S1 1B.1	Coastal salt marsh. Within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. 1 -115 ft.	High Potential. During April 2016 survey, species was not observed; however, the interface between the dune scrub and arroyo willow thickets provides suitable habitat for the species. Critical habitat is located within 100 feet of the project site to the North.
Atriplex coulteri	Coulter's saltbrush	-/- G3/S1S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. 10 - 1520 ft.	Moderate Potential. Suitable habitat present but no record of occurrence in the Oxnard quadrangle.
Atriplex pacifica	south coast saltscale	-/- G4/S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas. 0 - 470 ft.	Moderate Potential. Suitable habitat present but no record of occurrence in the Oxnard quadrangle.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	-/- G5T1/S1 1B.2	Coastal bluff scrub, coastal scrub. Alkaline soil. 10 - 820 ft.	Moderate Potential. Suitable habitat on-site, but no records of occurrence in Oxnard quadrangle.
Calochortus fimbriatus	late-flowered mariposa-lily	-/- G3/S3 1B.2	Chaparral, cismontane woodland, riparian woodland; often serpentinite. 900 – 6290 ft.	Not Present. Typical habitat for this species is not present on-site
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	-/- G5T1/S1 1B.1	Coastal bluff scrub, coastal dunes. Sandy sites. 9 -330 ft.	Moderate Potential. Record of occurrence within 5 miles of site in similar dune habitat.

Table 4.3-1
Special-Status Plant Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global /State CNPS CRPR	Habitat Requirements	Potential for Occurrence
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE G4?T1/S1 1B.2	Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat. 0 – 100 ft.	High Potential. Good quality habitat for this species in northern portion of the project site. Reported occurrence within 5 miles of site.
Delphinium parryi ssp. *blochmaniae*	dune larkspur	-/- G4T2/S2 1B.2	Chaparral (maritime), coastal dunes. 0 – 660 ft.	Moderate Potential. Suitable habitat present but no record of occurrence within 5 miles of site.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	-/- G3T2/S2 1B.1	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grasslands; rocky, often clay or serpentinite soils. 16 – 1490 ft.	Low Potential. Limited habitat present on-site and no records of occurrence within the Oxnard quadrangle.
Dudleya verity	Verity's dudleya	T/- G1/S1 1B.2	Chaparral, cismontane woodland, coastal scrub; volcanic, rocky substrates. 200 - 400 ft.	Not Present. No suitable habitat present on-site.
Eleocharis parvula	small spikerush	-/- G5/S3 4.3	Marshes and swamps. In coastal salt marshes. 3 – 10,000 ft.	Not Present. No suitable habitat present on-site.
Eriogonum crocatum	conejo buckwheat	-/R G1/S1 1B.2	Chaparral, costal scrub, valley and foothill grassland; Conejo volcanic rocky outcrops. 160 – 1920 ft.	Not Present, No suitable habitat present on-site.
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	-/- G4T2T3/S1 1B.1	Chaparral (coastal), coastal dunes, coastal scrub. 0 – 4040 ft.	High Potential. Suitable habitat present and occurrence within 1 mile of site.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	-/- G5T5/S4 4.2	Salt marshes, alkaline seeps, coastal dunes (mesic sites). Moist saline places. 10 – 3000 ft.	Not Present, Highly conspicuous plant, not observed during surveys.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	-/- G4T2/S2 1B.1	Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 3 - 4,600 ft.	Low Potential. Limited suitable habitat on project site. All records in Oxnard quadrangle farther inland.
Malacothrix similis	mexican malacothrix	-/- G2G3/SH 2A	Coastal dunes. 0 - 130 ft.	Not present. Species is presumed extinct. Last recorded occurrence in the Oxnard quadrangle is from 1925.
Monardella hypoleuca ssp. *hypoleuca*	white-veined monardella	-/- G4T3/S2S3 1B.3	Chaparral, cismontane woodland; often in rich soils of shady canyon bottoms. 16 – 5040 ft.	Not Present. No suitable habitat present on-site.

Table 4.3-1
Special-Status Plant Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global /State CNPS CRPR	Habitat Requirements	Potential for Occurrence
Monardella sinuata ssp. *sinuate*	southern curly-leaved monardella	-/- G3T2/S2 1B.2	Chaparral, cismontane woodland; coastal dunes, coastal scrub (openings); sandy soils. 0 -1000 ft.	Moderate Potential. Suitable habitat present but no record of occurrence in Oxnard quadrangle.
Navarretia ojaiensis	Ojai navarretia	-/- G2/S2 1B.1	Valley and foothill grassland, openings in chaparral and coastal scrub. 900 – 2050 ft.	Low Potential. Low quality habitat present on-site. No records of occurrence in Oxnard quadrangle.
Senecio aphanactis	chaparral ragwort	-/- G3/S2 2B.2	Chaparral, coastal scrub, cismontane woodland; sometimes alkaline soil. 20- 2640 ft.	Low Potential. Low quality habitat present on-site. No records of occurrence in Oxnard quadrangle.
Suaeda esteroa	estuary seablite	-/- G3/S2 1B.2	Coastal salt marsh. 0 – 17 ft.	Not Present. No suitable habitat present on-site.
Suaeda taxifolia	woolly seablite	-/- G/S4 4.2	Coastal bluff scrub, coastal dunes, marshes and swamps. Margins of salt marshes. 0 – 170 ft.	High Potential. Suitable habitat present on-site, and species detected on nearby property in 2015.

Status Definitions
FE = Federally listed Endangered *FT = Federally listed Threatened*
SE = State-listed Endangered *ST = State-listed Threatened* *SR = State-listed Rare*

CRPR (CNPS California Rare Plant Rank):
1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common elsewhere
CRPR Threat Code Extension:
. 1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
. 2=Fairly endangered in California (20-80% occurrences threatened)
. 3=Not very endangered in California (<20% of occurrences threatened)
G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5.
G1 or S1 - Critically Imperiled Globally or Subnationally (state)
G2 or S2 - Imperiled Globally or Subnationally (state)
G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4 or S4 - Apparently secure Globally or Subnationally (state)
G5 or S5 - Secure Globally or Subnationally (state)
? - Inexact Numeric Rank
T - Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)

As summarized in Table 4.3-1 above, a total of 10 special-status plants were identified with a moderate or high potential to occur within the project site based on their ecological requirements. These plants included two federally and state-listed endangered species, the Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) and salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*). The eight additional special-status plants, Coulter's saltbush (*Atriplex coulteri*), south coast saltscale (*Atriplex pacifica*), Davidson's saltscale (*Atriplex*

serenana var. *davidsonii*), Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), dune larkspur (*Delphinium parryi* ssp. *blochmaniae*), beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*), southern curly-leaved monardella (*Monardella* sinuata ssp. *sinuata*), and woolly seablite (*Suaeda taxifolia*), lack protective designations but are included in CNPS-designated Rare Plant Ranks.

Special-Status Wildlife. Literature sources reviewed, including agency databases and the 2014 Biological Assessment of the property, prepared by Impact Sciences in 2014, identified 39 special-status wildlife species recorded within a 5-mile radius of the project area. A tabular analysis of these species' potential for occurrence within the project site has been prepared based on the availability, quantity, and quality of suitable habitat present on-site, and is presented in Table 4.3-2 below. Criteria for assessing occurrence potential were identical to those used for special status plants, described above.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Invertebrates				
Cicindela hirticollis gravida	sandy beach tiger beetle	-/- G5T2/S2 -	Moist sand along beaches of ocean, lakes, rivers and streams	Low Potential. Suitable coastal dune and sandy habitat present, but site lacks water.
Cicindela senilis frosti	senile tiger beetle	-/- G2G3T1T3/S1 -	Mud shore/flats, wetlands. castrate	Not Present. Mud shore and wetland habitat is not present on-site.
Coelus globosus	globose dune beetle	-/- G1G2/S1S2 -	Coastal sand dune habitat, from Bodega Head in Sonoma County to Ensenada, Mexico. Inhabits foredunes and sand hummocks; burrows beneath the sand surface and is most common beneath dune vegetation.	High Potential. Suitable habitat on-site and species known from the area.
Helminthoglypta traskii traskii	trask shoulderband	-/- G1G2T1/S1 -	Chaparral, coastal scrub.	Not Present. Suitable habitat not present on-site.
Tryonia imitator	mimic tryonia (CA brackish water snail)	-/- G2/S2 -	Brackish marsh, estuary, lagoon, salt marsh.	Not Present. Aquatic habitat not present on-site.
Trimerotropis occidentiloides	Santa Monica grasshopper	-/- G1G2/S1S2 -	Chaparral.	Not Present. Suitable habitat not present on-site.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Danaus plexippus	Monarch butterfly (wintering sites)	-/- G4T2T3/S2S3 S	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Present. Individual monarchs may occur, but no suitable wintering roost sites are present on the site
Panoquina errans	wandering (saltmarsh) skipper	-/- G4G5/S2 -	Coastal salt marsh.	Not Present. Suitable habitat not present on-site.
Fish				
Catostomus santaanae	Santa Ana sucker	FT/- G1/S1	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, & algae.	Not Present. Aquatic habitat is not present on-site.
Eucyclogobius newberryi	tidewater goby	FE/- G3/S3 SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Not Present. Aquatic habitat is not present on-site.
Gila orcutti	arroyo chub	-- G2/S2 SSC	Rivers and streams	Not Present. Aquatic habitat not present on-site.
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	FE/SE G5T1/S1 FP	Slow-moving or back water sections of warm to cool streams.	Not Present. Aquatic habitat not present on-site.
Oncorhynchus mykiss	southern steelhead (So. CA DPS)	FE/ G5T2Q/S2 SSC	Seasonal to perennial coastal streams with suitable gravel substrate for spawning.	Not Present. Aquatic habitat not present on-site.
Reptiles				
Anniella pulchra pulchra	silvery legless lizard	-/- G3G4T3T4Q/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with high moisture content.	Moderate Potential. Occurrence mapped adjacent to northern site border, northern portion of site contains high quality habitat. Lower potential in southern portion of site due to disturbance.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Aspidoscelis tigris stejnegeri	coastal whiptail	-/- G5T5/S3 SSC	Open areas in semiarid grasslands, scrublands, and woodlands.	Low Potential: Marginal habitat due to dune soils, ice plant cover, and isolation of habitat.
Emys marmorata	western pond turtle	-/- G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Present. Fresh water aquatic habitat is not present on or near the site.
Phrynosoma blainvillii	coast horned lizard	-/- G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial & abundant supply of ants & other insects.	Low Potential. Marginal habitat on-site due to disturbance, invasive plants, and isolation from intact habitat areas.
Thamnophis hammondii	two-striped garter snake	-/- G4/S3S4 SSC	Perennial and intermittent streams and man-made lakes and stock ponds; requires dense riparian vegetation.	Low Potential. Species may occur in Edison Canal and immediate vicinity, but site does not offer suitable habitat.
Birds				
Accipiter cooperi	Cooper's hawk	-/- G5/S4 WL	Dense stands of live oaks and riparian woodlands.	Low Potential. Species might occur as infrequent forager, and off-site trees adjacent to Southern California Edison canal provide some nesting opportunities.
Athene cunicularia	burrowing owl	-/- G4/S3 SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Present. Grasslands, dry annual scrublands with burrows were not observed during site visit.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Buteo regalis	ferruginous hawk	-/- G4/S3S4 WL	Grasslands, open scrub, pinon & juniper woodland	Low Potential. Species might occur as infrequent forager, but habitat not suitable to support over-wintering.
Charadrius alexandrinus nivosus	western snowy plover	FT/- G3T3/S2S3 SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Present. Habitat on-site disturbed and not typical of known nesting areas.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT/SE G5T2T3/S1 -	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian areas dominated by willows often mixed with cottonwoods, with understory of blackberry, nettles, or wild grape.	Low Potential. Migrating individuals could periodically utilize willow thickets on-site, but not expected to nest there.
Elanus leucurus	white-tailed kite	-/- G5/S3S4 FP	Open vegetation and uses dense woodlands for cover.	Low Potential. Species might occur as infrequent forager, and off-site trees adjacent to Southern California Edison canal provide some nesting opportunities.
Empidonax traillii extimus	southwestern willow flycatcher	FE/SE G5T2/S1 -	Dense riparian woodlands.	Not Present. No suitable habitat on-site.
Eremophila alpestris actia	California horned lark	-/- G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma Co. to San Diego Co. Also main part of San Joaquin Valley & east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Moderate Potential. Some suitable foraging and nesting habitat. Fallow fields are present on-site. Closest known occurrence was within 1 mile in an agricultural field, surrounded by other agricultural fields.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	-/SE G5T3/S3 -	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in *Salicornia* on and about margins of tidal flats.	Not Present. Salt marsh habitat is not present on-site. Closest known occurrence is in association with the coast.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Pelecanus occidentalis californicus	California brown pelican	Delisted/Delisted G4T3T4/S3 FP	Coastal shores, offshore islands.	Not Present. No suitable habitat on-site.
Polioptila californica californica	Coastal California gnatcatcher	FT/- G4G5T2Q/S2 SSC	Coastal sage scrub in areas of flat or gently sloping terrain.	Not Present. No suitable habitat on-site.
Rallus longirostris levipes	light-footed clapper rail	FE/SE, FP G5T1T2/S1 -	Marshes and swamps, salt marsh, wetland	Not Present. No suitable habitat on-site.
Riparia riparia	bank swallow	-/ST G5/ S2 -	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Present. Riparian habitat, vertical banks are not present on-site.
Setophaga petechia	yellow warbler	-/- G5/S3S4 SSC	Riparian scrub and woodlands.	Present. Observed along edges of willow thicket along northern boundary of site. Some suitable nesting habitat present, but surrounding development may preclude nesting on site.
Sternula antillarum browni	California least tern	FE/SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Not Present. Substrate, beach, alkali flat, or landfills are not present on-site. This species most commonly nests on beaches and sandy islands in and adjacent to estuaries.
Vireo bellii pusillus	least Bell's vireo	FE/SE G5T2/S2 -	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite.	Low Potential. Very limited potential to occur along edges of willow thicket along northern boundary of site.

Table 4.3-2
Special-Status Wildlife Species Reported Within 5 Miles of the Project Area

Scientific Name	Common Name	Species Status: Fed/State Listing Global/State CDFW	Habitat Requirements	Potential for Occurrence
Mammals				
Choeronycteris mexicana	Mexican long-tongued bat	-/- G4/S1 SSC	Pinon & juniper woodland, riparian scrub, Sonoran thorn woodland.	Not Present. No suitable habitat on-site.
Antrozous pallidus	pallid bat	-/- G5/S3 SSC	Deserts, grasslands, woodlands and forests; open dry habitats with rocky areas for roosting.	Not Present. No roosting habitat on-site and only very limited foraging opportunities.
Microtus californicus stephensi	south coast marsh vole	-/- G5T1T2/S1S2 SSC	Wetlands.	Low Potential. Very marginal habitat associated with edge of willow thickets at northern edge of parcel.
Chaetodipus californicus femoralis	dulzura pocket mouse	-/- G5T3/S3 SSC	Chaparral, coastal scrub, valley and foothill grassland.	Low Potential. Marginally suitable habitat present on site, but isolation from other open space habitats might preclude a sustainable population on the site.
Taxidea taxus	American badger	-/- G5/S3 SSC	Plains, prairies, open edges of woodlands, grassy hillsides.	Not Present. No suitable habitat present and no burrows observed on-site.

Status Definitions:
FT = Federally listed Endangered *SE = State-listed Endangered*
FE = Federally listed Threatened *ST = State-listed Threatened*
FC = Candidate for federal listing
FD = Federally Delisted *SD = State Delisted*
SSC = CDFW Species of Special Concern *FP = State Fully Protected*
WL: CDFW Watch List

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5:
G1 or S1 - Critically Imperiled Globally or Subnationally (state)
G2 or S2 - Imperiled Globally or Subnationally (state)
G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4 or S4 - Apparently secure Globally or Subnationally (state)
G5 or S5 - Secure Globally or Subnationally (state)
? - Inexact Numeric Rank
T - Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
Source: CNDDB RareFind 5, Department of Fish & Wildlife, Biogeographic Data Branch, Sacramento, CA

As indicated in Table 4.3-2, many of the special-status species occurring in the project vicinity are aquatic and shore-dependent animals associated with beaches and oceanside habitats, and do not have potential to occur on-site due to lack of habitat. However, four species, the yellow warbler, California horned lark (*Eremophila alpestris actia*), silvery legless lizard (*Anniella pulchra pulchra*), and globose dune beetle (*Coelus globosus*), were identified as having moderate or high potential to occur within the project site. An additional species, the least Bell's vireo (*Vireo bellii pusillus*), was identified as having low occurrence potential but maintains very high levels of federal and state regulatory protection and was documented near the site's northern parcel in the past. These species are discussed further below. Nesting birds, because they receive statutory protection, are also discussed.

Globose dune beetle: The globose dune beetle maintains no protective federal or state designation, but is tracked by the CDFW as a Special Animal in the CNDDB. This species' distribution is not well known, but the overall range extends from Sonoma County, California to Baja California, Mexico. The species occurs in sand dune habitats, living beneath the sand in association with dune vegetation. Although on-site habitat is suitable for the globose dune beetle, the site is within a narrow band of habitat that is surrounded by urban and agricultural development, and is unlikely to provide significant value to this species as a whole.

Yellow warbler: The yellow warbler, although not identified within the CNDDB record search, is a California Species of Special Concern and was observed on site. This species is migratory, and is dependent on wooded riparian habitats containing trees such as willows, cottonwoods, and alders. Suitable foraging habitat exists within the project site and suitable nesting habitat is present in the riparian area adjacent to the canal to the east of the project site. This species has been documented in the northern portion of the project site on two occasions, in 2014 and 2016.

California horned lark: This species occurs in large fields, grasslands, and other open areas where it builds its nest on the ground. This species has a high potential to occur on the site, primarily as a winter visitor.

Silvery legless lizard: The silvery legless lizard has been documented immediately north of the project site, where 11 individuals were documented during a survey in 2004 (CDFW 2016). With the exception of previously developed areas, nearly all of the site's habitat areas are suitable for this species, although ongoing disturbance from visitors and dogs may reduce the desirability of the site somewhat. Sandy soils are prevalent throughout the project site, and are preferred by this species. Soil moisture regimes may be suboptimal in some areas, as sandy soils are usually well-drained, but leaf litter and other vegetative debris may retain moisture. Overall, this species has a moderate potential to occur within the project site.

Least Bell's vireo: Least Bell's vireo is listed as Endangered by the FESA and CESA. This species breeds and forages in riparian habitats, particularly those that are in earlier successional stages. Floodplain areas supporting young willows, mule fat (*Baccharis salicifolia*) and similar species are preferred, as these habitats are maintained in the seral state by regular flooding and scouring. Within the project site, particularly the southern portion, arroyo willow thickets provide marginal habitat for the least Bell's vireo. The riparian habitats in the northern portion

of the project site along the Edison Canal are more substantial, and provide better habitat. A vireo occurrence was documented in this location in 2009.

Willow habitats within the southern portion of the project site are unsuitable to support least Bell's vireo populations due to their characteristics, surroundings, and land uses.

- **Suitable habitat within the site is fragmented.** The distribution of willow vegetation on-site is patchy, and the intervening topography between patches is sufficiently high to prevent visual connectivity of the habitat patches.
- **Habitat complexity within the site is low.** The on-site willow patches are dense and fairly homogeneous, and the intervening habitat is not suitable for vireos. The diversified habitat structure preferred by this bird, containing multiple species of differing ages and height classes, is not present.
- **The site is surrounded by agriculture and urban development.** Small patches of habitat in proximity to developed uses are not optimal for wildlife. The land uses surrounding the site do not provide least Bell's vireo foraging habitat, and may introduce adverse elements such as noise, dust, domestic cats, and other threats into the on-site environment. The site's proximity to a major roadway introduces high levels of noise, which is likely to deter vireos from using this area.
- **The site is subject to human visitation.** Particularly in the southern portion of the project site, biologists observed evidence of human visitation including unauthorized gatherings, campfires, walking of dogs, and littering. Homeless encampments were also observed, and were situated within the on-site willow thickets. Human presence is perceived by vireos as a threat, and would discourage the species from occupying the site.
- **The species was not detected during biological surveys.** Although protocol surveys were not conducted, the site was visited by biologists from Impact Sciences and Rincon Consultants in 2014 and 2016, respectively, and least Bell's vireos were not detected by sight or sound. The surveys were conducted by qualified biologists during the avian breeding season, and this highly vocal species would almost certainly have been detected if present.

Nesting birds: Nesting habitat for birds, including tree-nesting, shrub-nesting, and ground-nesting species, occurs throughout the project area. Because the majority of native, non-game birds in California are protected by the Federal Migratory Bird Treaty Act and Section 3513 of the CFGC, it is likely that protected species nest and raise their young within the project site during the avian breeding season (February 15 through September 15). Active nests of protected species represent a seasonal constraint, as removal of nests containing eggs or nestlings is prohibited by law. Conduct that may cause nest abandonment and result in mortality of eggs or nestlings is similarly prohibited. Removal of non-active nests (those without eggs or nestlings) is not prohibited unless the nest is that of a raptor (e.g. hawks and owls).

Special-Status Communities. Three special status communities were documented in the CNDDB as occurring within 5 miles of the project site: Coastal Valley Freshwater Marsh, Southern Coastal Salt Marsh, and Southern Riparian Scrub. The closest mapped Coastal and

Valley Freshwater Marsh and Southern Coastal Saltwater Marsh communities are associated with the Pacific Ocean and are located approximately 1.4 miles and three miles away, respectively. The closest mapped Southern Riparian Scrub community is associated with the Santa Clara River floodplain, and is located approximately 2.5 miles to the north of the project area.

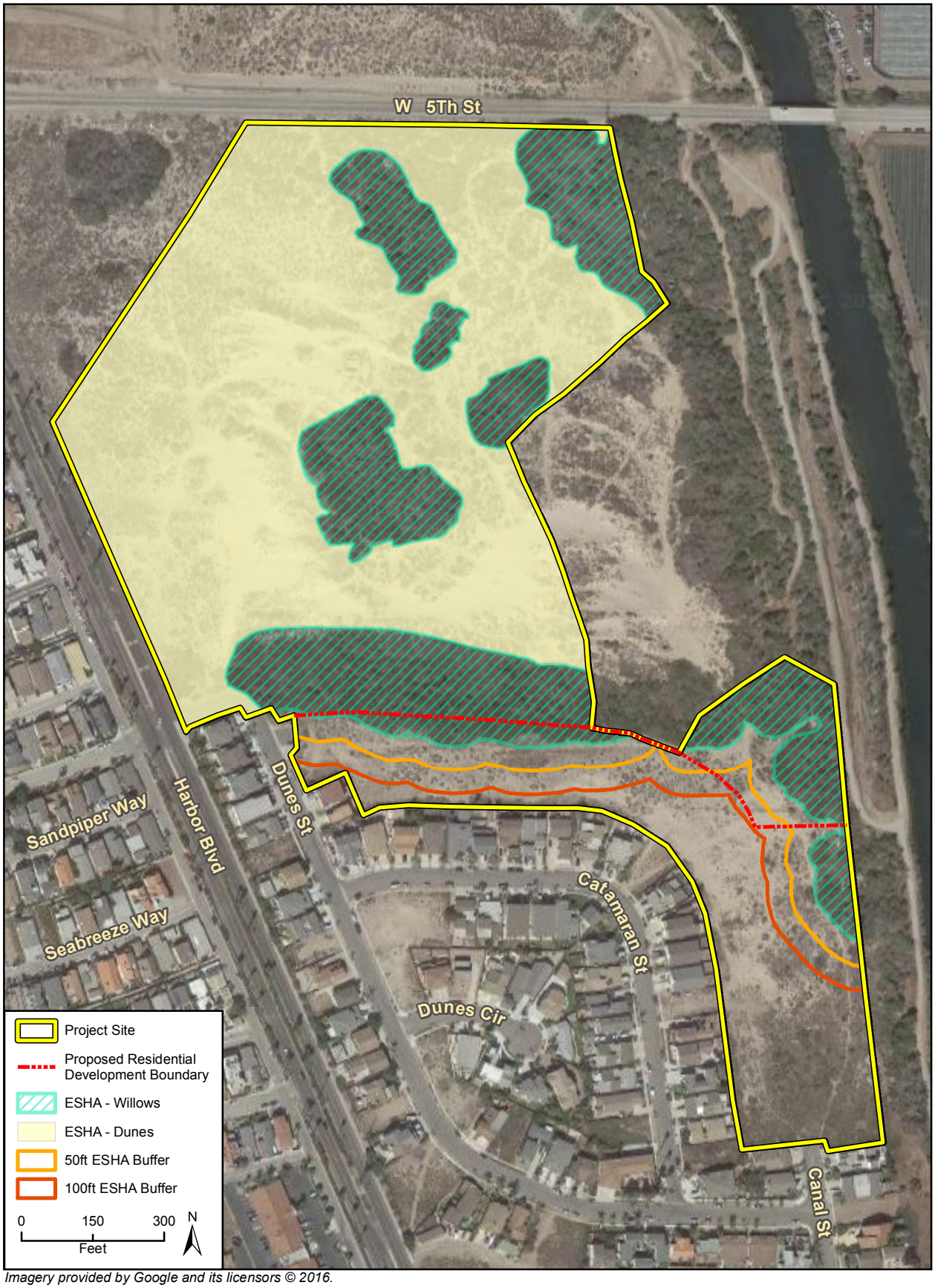
As shown on Figure 4.3-2, the site contains willow thickets that are a sensitive, riparian plant community and are identified by the Biological Assessment for the project (Impact Sciences 2014) as Environmentally Sensitive Habitat Area (ESHA). Arroyo willow thickets are a riparian scrub community.

The Avalon Homes property is referenced as the "Northern Dunes Area" of the Oxnard Shores Coastal Zone Area in the current Coastal Land Use Plan (CLUP - Oxnard 1982:Map No. 3). The Oxnard CLUP also describes sensitive habitats as including "Dunes" and "Riparian Habitat," which includes dense growths of willows (Oxnard 1982:pages III-8 through III-10). Five areas of dunes are described and mapped in the current CLUP (Oxnard 1982:page III-8 and Map 7). The northern part of the Avalon Homes property (the RP Resource Protection designation) is the first of the five mapped dune areas. Proposed project development would occur in an area of the site that does not contain this mapped dunes habitat.

More current mapping of these ESHAs is being prepared as part of the update of the City's Local Coastal Program, and is reflected in Figure 4.3-2. The Oxnard Local Coastal Program requires the protection of ESHAs against any significant disruption of habitat values. Section 30240b of the Coastal Act (incorporated into the City of Oxnard's CLUP) requires that development adjacent to ESHA be sited and designed to prevent impacts that would significantly degrade ESHA and to be compatible with the continuance of the habitat areas. For new development areas, the Oxnard CLUP requires a buffer of 100 feet to be provided adjacent to resource protection areas. The buffer may be reduced to a minimum of 50 feet only if an applicant can demonstrate the large buffer is unnecessary to protect the resources of the habitat area.

Designated Critical Habitat. The CNDDB identified, within a 5-mile radius of the project area, Final Critical Habitat (FCH) for southern California steelhead (*Oncorhynchus mykiss*), western snowy plover, Ventura marsh milk-vetch, tidewater goby (*Eucyclogobius newberryi*), and southwestern willow flycatcher (*Empidonax traillii extimus*). However, the project area is not located within any FCH. The closest FCH for southwestern willow flycatcher, Southern California steelhead, and tidewater goby is in the Santa Clara River and its estuary, approximately 2.5 miles north of the site.

Ventura marsh milk-vetch FCH is located approximately 100 feet to the north of the project area across West 5th Street, and encompasses a known population of this plant. This habitat area, which includes the Beachwalk development (formerly North Shore at Mandalay Bay) is separated by an approved residential development and by Harbor Boulevard from Mandalay County Park to the west, which is also designated FCH. Together, these two areas encompass the "Mandalay Unit" of the FCH. About 1,500 feet to the north, beyond the Mandalay Power Generating Station property, lies the "McGrath Unit" of the FCH for Ventura marsh milk vetch. There are no other FCH areas for Ventura marsh milk vetch in the vicinity. As noted, the



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Environmentally Sensitive Habitat Area Boundaries Figure 4.3-2

northern part of the Avalon Homes project area is across West Fifth Street from a portion of the "Mandalay Unit."

Western snowy plover FCH is located approximately 0.5 mile to the west, and encompasses the 5-mile portion of beach between the mouth of the Santa Clara River and the inlet to Channel Islands Harbor.

e. Regulated Aquatic Resources. The project site does not contain any bodies of surface water, such as lakes or streams. However, the Edison Canal, which conveys ocean water northward from Channel Islands Harbor to the Mandalay Generating Station for cooling purposes, is situated approximately 160 feet east of the site's eastern border. The Edison Canal exhibits perennial surface water, which likely varies in composition between saline and brackish depending on patterns of precipitation and freshwater runoff from adjacent agricultural lands. The canal would likely meet applicable criteria for federal protection as a water of the United States and state protection as a streambed and coastal wetland. The jurisdictional limits of the canal have not been formally delineated; however, the feature supports riparian vegetation, including arroyo willow (*Salix lasiolepis*) thickets, along its margin. Because willows are a riparian, hydrophytic species, the willow thickets constitute part of the water body and the outer edge of the willow canopy likely represents the edge of state jurisdiction over the canal. Federal jurisdiction would be limited to the ordinary high water mark (within the physical canal and off-site) unless the willow thickets exhibit federal wetland characteristics (a combination of hydrophytic vegetation, wetland hydrology, and hydric soils).

In addition to the willow thickets along the Edison Canal, the project site contains some patches of arroyo willow vegetation that are not contiguous with this feature. Willow patches such as these are fairly common along the coastal landscape between the Santa Clara River Estuary and Chanel Islands Harbor, and are likely supported by high groundwater in the area. The patches are sporadically distributed, and are not associated with the Edison Canal, McGrath Lake, or any other body of surface water. The thickets on-site feature a dense willow canopy, and meet the definition of a coastal wetland set forth in Coastal Act regulations (14 CCR 13577) for purposes of describing coastal development appeal jurisdiction. In addition, due to their relative proximity to the Edison Canal, even the willow thickets that are not directly contiguous with the canal may be subject to federal jurisdiction if they meet the three parameter wetlands test. Considering that they are not contiguous with surface waters, it is uncertain whether the CDFW would assert streambed jurisdiction over the on-site willow thickets that are not contiguous with Edison Canal.

In total, 9.66 acres of arroyo willow thickets occurs within the project site, including 8.76 acres in the northern portion and 0.90 acre in the southern portion. It is conservatively assumed that these features may be jurisdictional waters, streambeds, and/or coastal wetlands. Locations of arroyo willow thickets within the project site are illustrated on Figure 4.3-1, and potentially jurisdictional waters are illustrated on Figure 4.3-3.

f. Wildlife Movement. Wildlife corridors and habitat linkages are features that promote the integration of habitats within an ecosystem. In the absence of habitat linkages that allow movement of individuals to adjoining open-space areas, various studies have concluded that many wildlife and plant species would not likely persist over time in fragmented or isolated

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State Jurisdictional Waters within the Project Site Figure 4.3-3

habitat areas because they prohibit the movement of individuals and genetic information. Absent adequate connectivity, natural or anthropogenic disturbances such as disease, fire, and flood may extirpate populations due to the inability for individuals from outside the area to access and repopulate affected habitats.

From a regional perspective, the project site is isolated within narrow strip of undeveloped land between the Pacific Ocean and large-scale urban and agricultural development in the City of Oxnard. This strip is approximately 3 miles in length, but is almost completely surrounded and enclosed by adjacent development. These characteristics reduce the potential for the site to be part of a regional wildlife corridor, as the adjacent lands do not provide significant habitat and therefore would not generate wildlife populations needing to move across the site. Presence of major roadways and the Edison Canal adjacent to the site would further reduce the potential for the site to be used for wildlife movement.

g. Habitat Conservation Plans. The project site is not within the coverage area of any approved federal, state, or local Habitat Conservation Plan. While management plans have been adopted for some resource areas in the project vicinity, such as McGrath Lake, these plans do not contain any requirements that would be binding on development activities within the project site.

4.3.2 Impact Analysis

a. Significance Thresholds. Chapter 1, Section 21001(c) of the *State CEQA Guidelines* states that it is the policy of the state of California to "Prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing the *State CEQA Guidelines,* local guidelines, and federal, state, and local plans, regulations, and ordinances. Project impacts to flora and fauna may be determined to be significant even if they do not directly affect rare, threatened, or endangered species. Based on the City of Oxnard CEQA Guidelines, the project would have a significant impact if it were found to:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
3. *Have a substantial adverse effect on federally protected waters of the U.S. as defined by Section 404 of the Clean Water Act or protected waters of the state as defined by Section 1600 et seq. of the California Fish and Game Code (including, but not limited to, marshes, vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
5. *Conflict with any local policies or ordinances protecting biological resources; and/or*

6. *Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Impact BIO-1 Construction within the project area could directly or indirectly affect special-status plant species. This is a Class II, *potential impact that can be mitigated to a less than significant level.*

As described in Section 4.3.1(d) above, the project site has the potential to support special status plant species, including the endangered Ventura marsh milk-vetch and others. Project construction would involve the clearing, grading, and permanent development of approximately 8.78 acres of habitat, including willow thickets, native scrubland habitat, and non-native vegetation dominated by ice plant and ornamental species. Acreages of habitat to be removed are summarized in Table 4.3-3.

Table 4.3-3
Habitat Removed for the Project

Vegetation Community	Total Area On-site (acres)	Area to be Preserved within Northern Parcel (acres)	Area to be Impacted (acres)
Ice Plant Mats	2.02	--	2.02
Developed (portion of Beachcomber St.)	0.17	--	0.17
Mock Heather Scrub	26.16	20.77	5.39
Ornamental Landscaping	0.32	0.02	0.30
Arroyo Willow Thickets	9.66	8.76	0.90
TOTAL	**38.33 acres**	**29.55 acres**	**8.78 acres**

Note: There are slight differences in mapping units, so the total acreages in this table are slightly different from those in the Project Description.

Although no listed or sensitive plant species have been found in two previous surveys, the project site has the potential to contain Ventura marsh milk vetch and other sensitive plants. If special status plants are present in the areas to be developed, these individuals would likely be removed during construction. In areas where the proposed development is proximate to habitat areas that would not be developed, such as at the interface between the northern (preserved) and southern (proposed for development) portions of the project site, indirect effects from project construction such as excessive dust, runoff, or spread of invasive plant species could adversely affect special-status plant populations in the adjacent areas.

In the case of Ventura marsh milk-vetch and salt marsh bird's beak, which are narrowly distributed plants listed as endangered by both the FESA and the CESA, destruction of individuals of these species on the project site could have an adverse impact. Absent mitigation, this impact would be potentially significant.

The project would preserve the northern area of dune scrub habitat, which includes several isolated willow thickets as well as most of the willow thicket that would form the northerly edge of the proposed development. This preserve area is over 29 acres and would be contiguous with the Ventura marsh milk vetch preserve and critical habitat to the north, separated only by the existing roadway of West Fifth Street. Proposed development would not occur in an area that is known to contain sensitive habitats.

Mitigation Measures. Impacts to rare plants would be reduced to a less than significant level through implantation of Mitigation Measures BIO-1(a) and BIO-1(b), which would require seasonally-timed surveys to ascertain the presence of special status plants prior to construction, and avoidance of or compensation for any affected plants.

BIO-1(a) **Pre-construction Botanical Survey.** Prior to issuance of a grading permit for the project, spring and summer seasonal botanical surveys for special status plants, including but not limited to Ventura marsh milk-vetch, shall be conducted within the impact area by a qualified botanist satisfactory to the City. A summary of the survey findings shall be provided to the City for approval. If any special status species are observed, avoidance, minimization, and/or mitigation shall be performed to reduce effects. If the species cannot be fully avoided, then the Applicant shall draft a plan to offset impacts to the species as discussed in Mitigation Measure BIO-1(b). If state-listed endangered, threatened, or rare plants are detected in areas proposed for development, the Applicant shall contact the CDFW to secure incidental take authorization or develop an avoidance strategy.

BIO-1(b) **Mitigation Plan.** In the event that Ventura marsh milk-vetch or any other special status plant populations cannot be fully avoided, restoration, management, maintenance, and monitoring plans shall be developed by a qualified biologist and/or resource specialist and shall be reviewed and approved by CDFW and the City of Oxnard prior to issuance of a grading permit. The mitigation therein shall be implemented within one (1) year following completion of project construction. The Applicant shall secure a bond for an amount equal to the cost of the mitigation effort prior to issuance of the grading permit. The bond shall be released by the City upon satisfaction of the approved performance criteria after the monitoring period has expired.

The restoration, management, maintenance, and monitoring plans shall include one or more of the following methods, to be implemented either individually or in conjunction with each other:

Onsite or Offsite Restoration (Salvage and Replanting). Restoration shall involve the collection of seed from within the development footprint or nearby areas, if

necessary, and replanting the seed in a suitable area in a portion of the project site that is set aside for preservation. (Collection of seed from state-listed endangered, threatened, or rare plants shall not occur without appropriate authorization from CDFW). If infeasible, an offsite location as close to the impact area as possible, but within the local watershed, may be used. The Restoration Plan, prepared by a qualified plant ecologist satisfactory to the City, shall include, but not be limited to, the following to achieve a performance standard of a 2:1 replacement, or as dictated by a regulatory agency with permitting authority over the species:

- Location of the mitigation/restoration and map;
- Success criteria (e.g., acceptable survivorship, percent cover, or other appropriate metric);
- Identification of the party responsible for achieving the success criteria;
- Plant species, container sizes, and seeding rates;
- Planting schedule;
- Monitoring frequency, methods, and duration;
- Means to control exotic vegetation;
- Contingency planning (i.e., if the effort fails to reach the performance criteria, what remediation steps need to be taken);
- Irrigation methods and schedule; and,
- Identification of a protection instrument providing for conservation of the mitigation site in perpetuity.

The Applicant shall maintain and monitor the plants for a minimum of five years.

Offsite Preservation. Offsite preservation shall consist of locating a population of the impacted special status plant species containing at least two times the number of individuals impacted by the project, and preserving the population in perpetuity via placement of a permanent conservation easement or purchase of the land and dedication to the City or an approved conservation organization acceptable to the City. The preserved population shall be located on an area of sufficient size to create a preserve core and be located, as feasible, at least 350 feet away from existing or proposed development, paved roads, v-ditches and irrigated areas. Additionally, the preserved population shall exhibit connectivity to other protected open space or hillside areas. The Preservation Plan shall at least identify the specific location of the preservation site and size; number of individuals preserved; ownership of the land; parties involved; and the preservation methodology (i.e., permanent conservation easement or dedication to an approved conservation organization, etc.).

Significance After Mitigation. With implementation of the above measures, potential impacts to special-status plants would be compensated through preservation and establishment of any such species discovered within the project in a suitable habitat area. This measure would reduce the potential significant impact to a less than significant level.

Impact BIO-2 Construction during the bird nesting season could directly or indirectly affect nesting birds protected under the Migratory Bird Treaty Act and the CFGC 3503. This is a Class II, *potential impact that can be mitigated to a less than significant level.*

Development on the project site would include the removal of existing trees within small areas of the willow thicket and other vegetation that may be used by native resident or migratory birds as nesting habitat. Riparian nesting species, as well as raptors and larger species dependent on trees for nesting, may occupy the site's willow thickets. In addition, shrub-nesting and ground-nesting species may utilize open habitats within the portions of the site dominated by mock heather. Although unlikely due to the degraded nature of the habitat, it is also possible for certain birds to nest in the disturbed sand areas in the eastern portion of the site. Because birds are mobile, avian species and are able to move out of harm's way, construction-related injury or mortality of adult birds that are not tending nests is not expected.

The nests of most native, non-game birds are protected by the federal Migratory Bird Treaty Act, and Section 3513 of the California Fish and Game Code provides equivalent state-level protection. Construction activity during the breeding season (February 15 through September 15), including vegetation and tree removal, could potentially destroy or disturb active bird nests. Even if nests themselves are not removed, impacts such as noise and sustained human presence in close proximity to active bird nests can disrupt natural behavior cycles and cause nest abandonment and failure. Impacts of this nature are prohibited by federal and state law, and must be avoided. Absent mitigation, disturbance or destruction of active bird nests (if present), would result in a potentially significant impact.

Mitigation Measures. The following measures are intended to mitigate potentially significant impacts relating to the presence of nesting birds and/or migratory birds and to ensure compliance with the Migratory Bird Treaty Act and CFGC. These measures would apply to all phases of project construction.

BIO-2(a) **Nesting Bird Survey.** If tree removal is to occur during the bird-breeding season (February 15 through September 15), at a minimum one (1) survey shall be conducted prior to tree removal by a qualified biologist (a person with a biology degree and/or established skills in bird recognition). The survey shall occur no more than one (1) week prior to tree removal. The work limits plus a 250-foot buffer, as feasible, shall be surveyed to accommodate potential active raptor nests, as well as other birds nesting nearby. A copy of the biologist contract for these services shall be submitted to the Planning Department for review and approval prior to issuance of grading permits. A report summarizing the findings of the survey and the recommended buffers shall be provided to the Planning Department prior to vegetation removal activities.

BIO-2(b) **Establishment of Appropriate Buffers During Grading and Construction.** In the event that nesting birds are observed within 250 feet of the disturbance/construction area, species-specific exclusionary buffers shall be determined by the qualified biologist, and construction timing and location shall be adjusted accordingly until the nestlings have fledged and are no longer dependent upon the nest. The active nests and exclusionary buffers shall be

monitored by a qualified biologist (at least initially) to determine if the active nests are being adversely affected by construction activities and to determine if a buffer would need to be increased to reduce such effects.

Significance After Mitigation. With implementation of the above measures, potential impacts to nesting birds and raptors would be avoided by restricting tree removal during nesting periods, and by providing appropriate buffer distances from any active nests. These measures would reduce the potential impact to a less than significant level.

Impact BIO-3 The yellow warbler could be impacted through losses of nesting and foraging habitat. This is a Class III, *less than significant*, impact.

The yellow warbler, a California Species of Special Concern, was observed using riparian habitat on the site's northern parcel by biologists from Impact Sciences in 2014, and again by Rincon biologists in 2016. The species was observed during the nesting season, and the on-site habitat is suitable for nesting and foraging by this species. As summarized in Table 4.3-3, construction of the project would involve the clearing, grading, and permanent development of up to approximately 8.78 acres of habitat, including willow thickets, native scrub communities, and non-native and ornamental vegetation. This acreage includes 0.90 acre of willow thickets, which are suitable yellow warbler nesting habitat, as well as 7.71 acres of adjacent upland habitats which may provide foraging habitat for the species. Because the habitat to be removed by the project represents less than one-tenth of the habitat available to this species within the project site, and a much smaller proportion of the suitable habitat within the region, the loss of 0.90 acre of nesting habitat would not affect the stability or reproductive capacity of yellow warbler populations. This impact is less than significant, and no mitigation is required. The preservation of over 29 acres of habitat, including 8.76 acres of arroyo thickets, within the northern portion of the project site would benefit the yellow warbler, and would further reduce this impact. Direct impacts to individual yellow warblers, eggs, or nestlings are prohibited by federal and state law, and would be avoided through the protective measures described for Impact BIO-2.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact BIO-4 The California horned lark could be impacted through losses of nesting and foraging habitat. This is a Class III, *less than significant*, impact.

Although not observed on-site, the California horned lark, a "Special Animal" (tracked in the CNDDB), could potentially use the site's scrub habitat for nesting and foraging. As summarized in Table 4.3-3, construction of the project would involve the clearing, grading, and permanent development of up to approximately 5.39 acres of mock heather scrub habitat, and all of this acreage could potentially be used by the species. This area of mock heather scrub represents about one-fifth of this habitat present on the property, and the remaining portion of over 26 acres would be preserved. In addition, the CLUP describes an additional 54 acres of similar habitat in the Southern Dunes Area of Oxnard Shores, and additional areas of similar habitat

found between the Santa Clara River mouth to the north and Ormond Beach to the south (Oxnard 1982:Map No. 3 and page III-8). Including similar habitat in Mandalay County park, these dune scrub areas amount to over 200 acres. In this context, the loss of 5.39 acres of dune scrub habitat would not affect the stability or reproductive capacity of California horned lark populations in this region. This impact is less than significant, and no mitigation is required. The preservation of over 29 acres of habitat, including over 20 acres of mock heather scrub, within the northern portion of the project site would benefit the horned lark, and would further reduce this impact. Direct impacts to individual California horned larks, eggs, or nestlings are prohibited by federal and state law and would be avoided through the protective measures described for Impact BIO-2.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact BIO-5 The globose dune beetle could be impacted through direct mortality and loss of habitat. This is a Class III, *less than significant*, impact.

The globose dune beetle could potentially occur in sandy portions of the site (all areas are presumed suitable except for the site's arroyo willow thickets), and a total of 5.39 acres of these habitats would be removed. Because the species is cryptic and inhabits areas beneath the soil surface, it is likely that any globose dune beetles present in areas to be graded would be crushed and eliminated during construction. However, because the habitat to be removed by the project represents a small portion of the habitat available to this species in the region, and because this species is broadly distributed, the proposed habitat removal would not have a substantial effect on the numbers or distribution of the globose dune beetle. This impact is less than significant, and no mitigation is required. The preservation of over 29 acres of habitat within the northern portion of the project site, including over 20 acres of sandy habitats that may support this species, would further reduce this impact.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact BIO-6 The silvery legless lizard could be impacted through direct mortality and loss of habitat. This is a Class III, *less than significant*, impact.

The silvery legless lizard, a California Species of Special Concern, has been documented in proximity to the project site, and the site's northern and southern portions contain suitable habitat for this species. As summarized in Table 4.3-3, construction of the project would involve the clearing, grading, and permanent development of up to approximately 5.39 acres of habitat, including willow thickets, native scrub communities, and non-native and ornamental vegetation. Any of the areas to be affected could potentially support the silvery legless lizard. Grading and site preparation would be likely to crush legless lizards occupying habitats beneath soil or vegetative litter within the grading footprint. The ecological consequences of this effect on the species would be relatively minor, as the impacted area is fairly localized and does

not comprise a substantial portion of the species' range. Further, the preservation of over 29 acres of suitable habitat within the site's northern parcel is expected to result in a long-term benefit the silvery legless lizard, such that on balance, the project's impact on silvery legless lizard habitat would be less than significant. No mitigation is required.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Impact BIO-7 **The project would develop active land uses (private street and residences) adjacent to willow thicket and near dune habitat, both of which are identified as Environmentally Sensitive Habitat Areas by the Coastal Land Use Plan, and the project would not provide a minimum 100-foot buffer from these areas. This is a Class II, *potential impact that can be mitigated to a level less than significant.***

As discussed near the end of Section 4.3.1(d) above, both the willow thicket and the mock heather scrub vegetated dunes north of the willow thicket in the RP designated portion of the property, are considered Environmentally Sensitive Habitat Areas (ESHAs) in the Oxnard Coastal Land Use Plan (CLUP). Potential direct effects related to encroachment into the willow thicket are discussed in Impact BIO-8 below, since this area might also be considered jurisdictional waters subject to review and permitting by other agencies. The residential portion of the project would be developed primarily in areas vegetated with mock heather scrub and ice plant. While these latter areas are also dune habitat, they are more disturbed and are not mapped or considered ESHA in the CLUP. The discussion in Impact BIO-10 below describes effects related to local coastal policies in the Oxnard CLUP. The remaining issue relative to this impact criterion is the potential for the development to result in indirect impacts to the preserved ESHAs through the proximity of road improvements and residential uses to the preserved areas.

The project design does not provide a 100-foot buffer from the preserved ESHAs. As designed, the interface between the development and the preserved ESHAs would be of two types: (1) along the northern side of development (Lots 1-15), with single loaded private street, and (2) along the eastern side of development (Lot E and Lot 17).

Along the northern portion of the development, the proposed private street would occupy a width of 46 feet between the nearest residential lots and the boundary of the RP designated land. The private street is designed with two 10-foot travel lanes, 8-foot parking lanes that would have permeable pavement, rolled curbs, and a sidewalk only on its southern side adjacent to the residences. A narrow (2-foot wide) strip along its northern edge would have a split rail fence, and a retaining wall would be used to minimize the extent of fill necessary along the northern edge. This design is proposed to help minimize the extent of encroachment into the

willow thickets that occur north of the road. The residential lots on the southern side of the street would have front yard setbacks of 10 feet for houses and 20-feet for garages. Thus, the total horizontal distance from structures to the edge of the RP boundary and preserved ESHA would range from 56 to 66 feet. Automobile traffic, front yard activities such as landscape maintenance, and pedestrian activity would all occur within 100 feet of the boundary of the RP designated area and the preserved portion of willow thicket. The noise and human activity within this area would have some effect on wildlife within the preserved areas.

Along the eastern portion of the residential development, the project design would provide a 2-foot high masonry wall topped with a 4-foot high wire fence. The adjacent residential structures would have a 20-foot rear yard setback. Thus, some barrier and separation would be provided between the developed areas and the ESHA to the east, but again the proximity of human uses would be expected to have some indirect effects on wildlife behavior.

In summary, the project design provides some buffer features within the constraints of the shape and narrow width of the area to be developed. These features consist of the single-loaded private street across the northern boundary of the development area, and a combination wall-fence to separate yards from the preserved areas where residential uses would be juxtaposed to the Resource Protection designated areas. These buffer features are less than prescribed by the CLUP, and some adverse effect on wildlife behavior and the quality of habitat within the preserved areas could occur.

Mitigation Measures. The following measures would reduce potential impacts related to the development of active land uses in close proximity to preserved environmentally sensitive resources.

BIO-7(a) **Protection and Enhancement of RP designated area.** Prior to recordation of the final map for the project, the applicant shall prepare a protection and enhancement plan for the area to be preserved within the RP land use designation (approximately 29.58 acres in Parcels A and B shown on the tentative map). The plan shall be prepared by a qualified biologist and/or resource specialist and shall be reviewed and approved by the City of Oxnard. The plan shall address and incorporate the following features, which may be modified through consultation with other agencies and the City prior to finalization:

- Timing and procedures for establishing a conservation easement or similar protection mechanism for the RP designated land to be preserved
- Incorporation of Ventura marsh milk vetch or any other sensitive plant species, if required as part of mitigation measure BIO-1
- Revegetation or enlargement of the willow thicket area, if required as part of mitigation measure BIO-5.
- Removal and control of invasive species such as ice plant
- Modifications to and maintenance of perimeter fencing to prohibit or control public access
- Inclusion of limited public access, with prohibitions or controls addressing pets, no entry areas, and other aspects of potential public use

- Funding mechanism, which may include provision of performance bonds to the City to ensure installation of all improvements and completion of restoration and protection measures or alternative implementation guarantees

BIO-7(b) **Management of Residential Landscaping**. The applicant shall accomplish the following measures, to the satisfaction of the Planning Division:

1) Preparation, review, and implementation of landscaping plans for the project shall include provisions for the control of invasive plant species to address the potential impacts of non-native plants colonizing adjacent native habitats. Covenants, Conditions and Restrictions shall be recorded specifying that landscaping for individual housing lots shall not include any exotic invasive plant species. The Covenants, Conditions and Restrictions shall be binding on each of the lots in the subdivision, shall run with the land affected by the subdivision, and shall be included or incorporated by reference in every deed transferring one or more of the lots in the subdivision.

2) The project applicant shall also provide, in connection with the sale of each housing unit, an information packet that explains the sensitivity of the natural habitats onsite and nearby and the need to minimize impacts on the identified sensitive species, designated resource protection areas, the limits on public access within or adjacent to such areas, the prohibition on landscaping that includes exotic invasive plant species, and the limits on exterior residential lighting. Interpretive signs shall also be placed in appropriate locations along the edges of resource protection areas explaining the sensitivity of certain species and natural habitats and the need to minimize impacts on these adjacent areas.

Significance After Mitigation. With implementation of the above measures, potential impacts to sensitive resource areas due to the proximity of developed areas within 100 feet would be minimized and would be offset through improved habitat value within the preserved areas. These measures would reduce the potential impact to a less than significant level.

Threshold 3:	*Would the project have a substantial adverse effect on federally protected waters of the U.S. as defined by Section 404 of the Clean Water Act or protected waters of the state as defined by Section 1600 et seq. of the California Fish and Game Code (including, but not limited to, marshes, vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means?*

Impact BIO-8 **Removal of on-site willow thickets resulting from the project could adversely affect wetlands and riparian habitat. This would be a Class II, *potential impact that can be mitigated to a less than significant level.***

As described in Section 4.3.1(e) above, and described in the Biological Assessment for the project (Impact Sciences 2014), the project site contains arroyo willow thickets that are riparian habitat and may qualify for protection as federal wetlands, coastal wetlands, and potentially streambeds. The proposed project would permanently remove 0.90 acres of willow thickets from the site to accommodate the proposed development. This impact would be confined to the southern portion of the site. However, willow habitats in the site's northern parcels would not be removed.

Alterations to areas generally identified as CDFW jurisdictional area would require a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the CFGC. Final jurisdictional determination over the drainages on-site will need to be performed by USACE and CDFW upon review or verification of a submitted delineation and/or application. RWQCB may issue Waste Discharge Requirements if USACE does not take jurisdiction, or will require Certification, pursuant to Section 401 of the CWA, if USACE does take jurisdiction.

Regardless of the final determination of jurisdictional boundaries by other state and federal agencies, the willow thicket is part of the ESHA mapped on the property within the City's Coastal Land Use Plan, and development of the project would encroach approximately 0.90 acres into this portion of the ESHA.

Mitigation Measures. The following measures would reduce impacts related to jurisdictional waters.

BIO-8(a) **Consultation with Regulatory Agencies.** Prior to issuance of any grading permits for the project, and prior to clearing of any vegetation from the site, the applicant shall provide the Oxnard Planning Division with proof of consultation with CDFW, the U.S. Army Corps of Engineers, and the Los Angeles RWQCB. This consultation might result in the applicant being required to provide these agencies with a completed delineation of jurisdictional aquatic resources within the project footprint, or to apply for permits authorizing impacts to streams or wetlands. If federal or State permits are obtained, the applicant shall provide a copy of the approved permits to the Planning Division for review and approval prior to issuance of grading permits. The applicant shall comply with all permit conditions when implementing the proposed activities, including any seasonal timing restrictions, impact avoidance measures, limitations on construction means and methods, site restoration, compensatory mitigation, and reporting requirements.

BIO-8(b) **Re-vegetation Plan.** If jurisdictional waters are not avoided, areas of permanent disturbance shall be compensated for by creation, restoration, or enhancement of similar habitat at a 2:1 ratio, or as required by the regulatory agencies having permitting jurisdiction over the resources. Areas of temporary disturbance, if any, shall be restored to pre-existing or superior conditions through restoration of pre-existing contours and revegetation. Compensation for impacts to willow thickets shall consist of native and appropriate willow scrub species, unless otherwise specified by the regulatory agencies.

Re-vegetation shall occur as close to the impact area as possible, and shall be within the same watershed. For this project, a likely revegetation area, should one be necessary, could be in the preservation area immediately north of the willow thicket, within the larger project boundaries. Payment of an in-lieu fee to a conservation organization approved by the City (and acceptable to the regulatory agencies, as appropriate) to conduct the mitigation may be accepted if no other locations are feasible, as confirmed by the City. The project Applicant shall submit a re-vegetation plan prepared by a qualified restoration biologist for review and approval by the City prior to issuance of a grading permit. The plan shall include, but not be limited to, the following components:

- Location of the mitigation/restoration and map;
- Success criteria (e.g., acceptable survivorship, percent cover, or other appropriate metric);
- Identification of the party responsible for achieving the success criteria;
- Plant species, container sizes, and seeding rates;
- Planting schedule;
- Monitoring frequency, methods, and duration;
- Means to control exotic vegetation;
- Contingency planning (i.e., if the effort fails to reach the performance criteria, what remediation steps need to be taken);
- Irrigation methods and schedule; and,
- Identification of a protection instrument providing for conservation of the mitigation site in perpetuity.

The revegetation shall be initiated within one (1) year of completion of project construction. The Applicant shall maintain and monitor the restored areas for a minimum of five years.

BIO-8(c) **Protection Measures During Construction.** The grading and improvement plans for the project shall indicate measures to minimize encroachment into the willow thicket habitat. These shall include the use of a retaining wall or walls, minimum improvements along the north side of the private extension of Canal Street through the project (i.e. no sidewalks on north side and minimum improvements to meet City standards for this roadway). The plans shall also indicate through drawing or notes that equipment and vehicle parking and staging areas are to be separated from the preserved areas by 100 feet or more, and shall prohibit vehicle and equipment from crossing or entering the willow thicket areas from the north (except as necessary for any approved revegetation work). The stormwater management plan shall ensure that runoff from construction areas is diverted away from the willow thicket areas as much as feasible.

Significance After Mitigation. By ensuring that permanently impacted waters are compensated for a ratio of 2:1, requiring monitoring and maintenance to ensure that success criteria are attained, and protecting the preserved willow thicket area during construction, the

mitigation measures above would reduce the project's impacts to waters and streambeds to a less than significant level.

Threshold 4:	*Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Impact BIO-9 Development of the project is not expected to disrupt wildlife movement or substantially reduce habitat connectivity. This is a Class III, *less than significant*, impact.

As described in Section 4.3.1(f) above, the area of the project site proposed for development is not conducive to use as a wildlife movement corridor due to its position within a developed landscape and relative isolation from larger, regionally significant habitat areas. Although the development area contains mapped dunes habitat, the site has been disturbed through periodic off-road vehicle use, regular use by neighbors, and the establishment of large areas of invasive ice plant. Thus, while the proposed project would develop this portion of the site, this development would not substantially disrupt wildlife movement or habitat connectivity between similar areas to the north and south. This impact would be less than significant, and no mitigation is required. The preservation of 29.72 acres of habitat within the northern portion of the project site is expected to benefit wildlife generally, and would be in proximity to the smaller similar area preserved in the Beachwalk project north of Fifth Street (previously known as Mandalay North Shore) and the larger area preserved as part of Mandalay County Park to the northwest. For these reasons, no additional mitigation is necessary relative to the effects on wildlife movement and habitat connectivity.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 5:	*Would the project conflict with any local policies or ordinances protecting biological resources?*

Impact BIO-10 The project may conflict with coastal policies to preserve Environmentally Sensitive Habitat Areas and to provide a 100-foot buffer between development and such areas. This is a Class II, *potential impact that can be mitigated to a less than significant level.*

The biological concerns associated with direct encroachment into the willow thicket areas are addressed above in Impact BIO-8, and the issue of adequate buffering from the preserved sensitive resource areas is addressed in Impact BIO-7. In both respects, the potential biological impacts can be reduced to a level less than significant. The proposed project's consistency with the related policies and ordinances protecting biological resources, including policies of the City's General Plan, CLUP, and Code of Ordinances, are described in Section 4.9, *Land Use and Planning*, of this EIR. That discussion concludes that the project is consistent with applicable coastal policies, and that the non-compliance with the 100-foot buffer distance in Local Coastal

Policy 6.d. would not represent a significant impact given the other habitat protection measures incorporated within the project and required through the biological mitigation measures presented.

Mitigation Measures. Implementation of Mitigation Measures BIO-1(a), BIO-1(b) if necessary, BIO-7(a) and BIO-7(b), BIO-8(a), BIO-8(b) if necessary, and BIO-8(c), would address the biological issues associated with the applicable coastal policies and ordinance. No additional mitigation measures are necessary.

Significance After Mitigation. Impacts would be less than significant with the above referenced mitigation.

Threshold 6:	*Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Impact BIO-11 Development of the project would not conflict with an adopted Habitat Conservation Plan or similar plan for conservation. This is a Class III, *less than significant*, impact.

The project site is not within the coverage area of any adopted federal, state, or local Habitat Conservation Plan. Accordingly, the project would result in no impacts related to consistency with such plans.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Section 15130 of the *State CEQA Guidelines* provides guidance on the discussion of cumulative impacts. Two conditions apply to determine the cumulative effect of a project: first, the overall effect on biological resources caused by existing and known or forecasted projects must be considered significant under the significance thresholds discussed above; and second, the project must have a "cumulatively considerable" contribution to that effect. The following are considered with respect to analyzing cumulative impacts to biological resources:

- The cumulative contribution of other approved and proposed projects to fragmentation of open space in the project vicinity;
- The loss of sensitive habitats and species;
- Contribution of the project to urban expansion into natural areas; and
- Isolation of open space within the vicinity by proposed/future projects.

The cumulative effect of impacts resulting from the proposed project depends on the proximity of subsequent approved or proposed projects, as well as impacts from past projects in the vicinity. Most of the areas surrounding the project site are already built out with residential, industrial, or agricultural uses. Those areas that are not built out are designated RP resource protection by the City's CLUP, which is a land use category and zoning applied to sensitive

habitat areas and in order to preserve those resources. As such, no additional loss of habitats or sensitive species is expected.

The project site and vicinity contain aquatic and riparian habitats, which have been substantially reduced statewide from historic levels due to human settlement and development. As described previously the project would remove approximately 0.90 acre of willow riparian habitat from the site. However, project-level mitigation measures would ensure that this removal is permitted by appropriate federal and/or state agencies, and it is foreseeable that these permits would require compensation for the removed riparian habitat. Further, while the proposed project would remove up to 8.78 acres of habitat, a total of 29.55 acres would be preserved and protected from future development within the site's northern parcel. Considering this information, the project would not contribute considerably to a cumulatively significant loss of habitat.

4.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

4.4.1 Setting

This section analyzes potential impacts to archaeological and historical resources. The cultural resources study included a records search with the South Central Coastal Information Center (SCCIC), Native American scoping, a field survey and evaluation of the site. The project site is located on 38.33 acres and is currently vacant, undeveloped land.

a. Regional Setting. The project site is located within an area historically occupied by the Ventureño Chumash, so called after their historic period association with Mission San Buenaventura (Grant 1978a). The Chumash occupied the region from San Luis Obispo County to Malibu Canyon on the coast, and inland as far as the western edge of the San Joaquin Valley, as well as the four northern Channel Islands. The Ventureño were the southernmost Chumash group, occupying most of the area of present day Ventura County and the southwest corner of Los Angeles County. Groups neighboring Chumash territory included the Salinan to the north, the Southern Valley Yokuts and Tataviam to the east, and the Gabrielino (Tongva) to the south. Chumash place names in the project vicinity include Wenemu (Hueneme), Awhay (Ojai), Stuk (La Jolla Basin), and Kayiwis (Calleguas Creek) (Applegate 1974).

Based on the results of the archaeological records search, outlined below, there is no evidence that any of the known Chumash places are located within or adjacent to the project site. A summary of the prehistory and history of the general project area is provided below.

Prehistory. By far the most common hazardous materials are those found or used in the home. Waste oil is a common hazardous material that is often improperly disposed of and can contaminate surface water through runoff. Other household hazardous wastes (used paint, pesticides, cleaning products, and other chemicals) are common and often improperly stored in garages and homes throughout the community. The nearest residences to the project site are the Oxnard Dunes subdivision, immediately adjacent to the project site. These residences are likely to contain these chemicals and hazardous materials.

Early Man Horizon (ca. 10,000 – 6000 B.C.). Numerous pre-8000 B.C. sites have been identified along the mainland coast and Channel Islands of southern California (c.f., Erlandson 1991; Johnson et al. 2002; Jones and Klar 2007; Moratto 1984; Rick et al. 2001:609). One of them, the Arlington Springs site on Santa Rosa Island, produced human femurs dating to approximately 13,000 years ago (Arnold et al. 2004; Johnson et al. 2002). On nearby San Miguel Island, human occupation at Daisy Cave (SMI-261) has been dated to nearly 13,000 years ago. This site also included some of the earliest examples of basketry on the Pacific Coast, dating to over 12,000 years old (Arnold et al. 2004).

Although few Clovis or Folsom style fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al. 1987), Early Man Horizon sites are generally associated with a greater emphasis on hunting than later horizons. Recent data indicate that the Early Man economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas (e.g., Johnson et al. 2002) and on inland Pleistocene lakeshores (Moratto 1984). A warm and dry 3,000-year period called the Altithermal began around 6000

B.C. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

Milling Stone Horizon (6000 – 3000 B.C.). Wallace (1955:219) defined the Milling Stone Horizon as "marked by extensive use of milling stones and mullers, a general lack of well[-]made projectile points, and burials with rock cairns." The dominance of such artifact types indicate a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources were consumed including small and large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes, yucca, agave, and seeds and other plant products (Kowta 1969; Reinman 1964). Variability in artifact collections over time and from the coast to inland sites indicates that Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007:220). The Topanga Canyon site in the Santa Monica Mountains is considered one of the definitive Milling Stone Horizon sites in southern California.

Lithic artifacts associated with Milling Stone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools such as manos and metates, chopping, scraping, and cutting tools are very common. Kowta (1969) attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Intermediate Horizon (3000 B.C. – A.D. 500). Wallace's Intermediate Horizon dates from approximately 3000 B.C.-A.D. 500 and is characterized by a shift toward a hunting and maritime subsistence strategy, as well as greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (e.g., Glassow et al. 1988; True 1993). Mortuary practices during the Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968:2-3).

Late Prehistoric Horizon (A.D. 500 – Historic Contact). During Wallace's (1955, 1978) Late Prehistoric Horizon the diversity of plant food resources and land and sea mammal hunting increased even further than during the Intermediate Horizon. More classes of artifacts were observed during this period and high quality exotic lithic materials were used for small finely worked projectile points associated with the bow and arrow. Steatite bowls were carved from stone and made for cooking and storage. An increased use of asphalt for waterproofing is noted within this period. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955:223).

Ethnographic Background. Early Spanish accounts describe the Santa Barbara Channel as heavily populated at the time of contact. Estimates of the total Chumash population range from 8,000-10,000 (Kroeber 1925:551) to 18,000-22,000 (Cook and Heizer 1965: 21). Coastal Chumash lived in hemispherical dwellings made of tule reed mats, or animal skins in rainy weather. These houses could usually lodge as many as 60 people (Brown 2001). The village of šukuw, (or shuku), at Rincon Point, was encountered by Gaspar de Portola in 1769. This village had 60 houses and seven canoes, with an estimated population of 300 (Grant 1978b).

The tomol, or wooden plank canoe, was an especially important tool for the procurement of marine resources and for maintaining trade networks between Coastal and Island Chumash. Sea mammals were hunted with harpoons, while deep-sea fish were caught using nets and hooks and lines. Shellfish were gathered from beach sands using digging sticks, and mussels and abalone were pried from rocks using wood or bone wedges.

The acorn was an especially important resource. Acorn procurement and processing involved the manufacture of baskets for gathering, winnowing, and cooking and the production of mortars and milling stones for grinding. Bow and arrow, spears, traps and other various methods were used for hunting (Hudson and Blackburn 1979). The Chumash also manufactured various other utilitarian and non-utilitarian items. Eating utensils, ornaments, fishhooks, harpoons, and other items were made using bone and shell. Olivella shell beads were especially important for trade.

The Chumash were heavily affected by the arrival of Europeans. The Spanish missions and later Mexican and American settlers dramatically altered traditional Chumash lifeways. Chumash population was drastically reduced by the introduction of European diseases. However, many Chumash descendants still inhabit the region.

History. Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

Spanish Period (1769-1822). Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement in what was then known as Alta (upper) California at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. Mission San Buenaventura was founded in 1782. It was during this time that initial Spanish settlement in the vicinity of the project site began.

Mexican Period (1822-1848). The Mexican Period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period saw the privatization of mission lands in California with the passage of the Secularization Act of 1833. This Act enabled Mexican governors in California to distribute mission lands to individuals in the form of land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the state's lands into private

ownership for the first time (Shumway 2007). About 20 land grants (ranchos) were located in Ventura County.

The Mexican Period for Ventura County and adjacent areas ended in early January 1847. Mexican forces fought combined US Army and Navy forces in the Battle of the San Gabriel River on January 8 and in the Battle of La Mesa on January 9 (Nevin 1978). American victory in both of these battles confirmed the capture of Los Angeles by American forces (Rolle 2003). On January 10, leaders of the Pueblo of Los Angeles surrendered peacefully after Mexican General Jose Maria Flores withdrew his forces. Shortly thereafter, newly appointed Mexican Military Commander of California Andrés Pico surrendered all of Alta California to US Army Lieutenant Colonel John C. Fremont in the Treaty of Cahuenga (Nevin 1978).

American Period (1848- Present). The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for the conquered territory, which included California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of southern California continued to increase during the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush (Guinn 1977; Workman 1935:26). The presence of commercial grade oil in what later became Ventura County was discovered in 1852 at Rancho Ojai (Franks and Lambert 1985). By 1853, the population of California exceeded 300,000. Ventura County was officially divided from Santa Barbara County on January 1, 1873. Thousands of settlers and immigrants continued to move into the state, particularly after the completion of the transcontinental railroad in 1869 and the real estate boom of the 1880s (Dumke 1944). The Saugus to Santa Barbara Branch (or Santa Paula Branch) of the Southern Pacific Railroad was constructed in the mid-1880s, encouraging travel through and settlement of the Santa Clara River Valley, as well as a large distribution network for its citrus and other products (Sperry 2006).

b. Project Site Setting. The project site is located on 38.33 acres and is currently vacant, undeveloped land. The site was formerly operated as an oil field waste disposal site and currently consists of disturbed sand surfaces and willows in both the northern preserve area and in the southern portion proposed for development. The site is bounded by Edison Canal, the residential Oxnard Dunes Subdivision, Harbor Boulevard, and Fifth Street to the East, South, West, and North, respectively (refer to Figure 2-2 in Section 2.0, *Project Description*).

City of Oxnard. The City of Oxnard obtained its name from Henry T. Oxnard, the owner of a sugar beet factory in Chino, California. Mr. Oxnard was invited to the Ventura County area to teach local farmers how to successfully grow sugar beets. He constructed a beet processing factory near Oxnard, which became operational in 1899. In 1903, the City of Oxnard was officially incorporated. During the 1930s, the Oxnard Harbor District formed, and initiated the construction of a commercial and yacht harbor, thus making shipping an important industry for the City.

After the start of World War II, the Naval Construction Battalion Center was established at the Channel Islands Harbor (Port Hueneme), and the Naval Air Missiles Test Center was built at

Point Mugu. Later, in 1952, the Oxnard Air Force Base was established, sparking further growth. Today, the City of Oxnard is the known as the largest city in Ventura County (Oxnard Public Library 2010).

c. Cultural Resources Records Search. On July 14, 2016, Rincon conducted a search of the California Historical Resources Information Systems (CHRIS) at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton (Appendix C). The search was conducted to identify all previously recorded cultural resources and previously conducted cultural resources work within the project site and a 0.5-mile radius around it. The CHRIS search included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The SCCIC records search did not identify any previously recorded cultural resources within the project site. Two previously recorded sites, a prehistoric hearth site and a modern ethnographic basketry material collection site, were identified within the 0.5-mile buffer surrounding the project site. The SCCIC records search additionally identified a total of thirteen previously conducted cultural resources studies: one of these was within the project site, four were located adjacent to the project site, and eight were outside of the project site.

d. Native American Scoping. As part of the process of identifying cultural resources issues for this project within or near the project site, Rincon contacted the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands Files (SLF) (Appendix D). Rincon submitted the request to the NAHC on July 11, 2016. The NAHC faxed a response on July 13, 2016, stating that the SLF search came back with "negative results." The NAHC additionally provided a contact list of five Native American individuals or tribal organizations that may have knowledge of cultural resources in or near the project site. Rincon contacted each of the NAHC individuals and tribal organizations via email on July 13, 2016 requesting information regarding their knowledge of the presence of cultural resources that may be impacted by this project. On July 20, 2016, Rincon followed up with requests for consultation on this project. As of July 21, 2016, Rincon has not received any responses expressing concern for cultural resources within or near the project site.

e. Field Visit and Site Evaluation. Rincon Cultural Resources Specialist Meagan Szromba, M.A., conducted a field survey of the project site on July 21, 2016. Ms. Szromba surveyed the area in three sections (1, 2, and 3); this was necessary due to the terrain type, vegetation, and fencing boundaries. The first section surveyed, Section 1 was the parcel at the Dune Street entrance. Ms. Szromba surveyed the area from west to east, beginning at the southwestern corner of the site, in 15 meter transects. This section was bounded on the north by a trees, heavy vegetation, and fence line. To the south was a fence with private residences behind it. To the west was the entry point at Dune Street, and to the east was more heavy vegetation, including trees and poison oak. Section 1 contained trash scattered throughout, including glass bottles, cans, animal bones, and various other debris. Visibility in Section 1 was good, at about 90 percent.

Photograph 1. Section 1, facing east.

Section 2 was the area to the north of Section 1; this area was accessed by a trail leading from Section 1 into Section 2. Section 2 was extremely difficult to systematically survey, due to the large sand dunes and dense shrubbery including poison oak. Ms. Szromba attempted to walk this section from north to south in approximately 30 meter transects. Section 2 was bounded on the north by Fifth Street, to the west by Harbor Boulevard, to the east by dense vegetation and the project fence line, and to the south by Section 1. Section 2 had less trash, although some refuse, including glass bottles, cans, and golf balls were noted. Visibility in Section 2 was between 50 and 80 percent.

Photograph 2. Section 2, facing southwest.

Section 3 was the lot to the south of Section 1 behind its southern fence line. This area was relatively flat; however, visibility was poor here due to low growing thick shrubbery. Ms.

Szromba surveyed this section beginning at the southeastern corner of the lot, and walked the parcel in 15 meter transects from south to north. Very little trash or debris was found in Section 3.

Photograph 3. Section 3, facing north.

The survey of the project site was negative for cultural resources. Based on the results of the records search, Native American scoping, and field survey and site evaluation, Rincon recommends a finding of *no impact to historical resources* for the current undertaking.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. The significance of a cultural resource and impacts to the resource is determined by whether or not that resource can increase the collective knowledge regarding the past. The primary determining factors are site content and degree of preservation.

For the purpose of this analysis, a significant impact would occur if physical changes that could be facilitated by buildout of the proposed project would result in the following conditions, listed in Appendix G of the *State CEQA Guidelines*.

1. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5;*
2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5;*
3. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and/or*
4. *Disturb any human remains, including those interred outside of formal cemeteries.*

A "substantial adverse change" in the significance of a historical resource is defined as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." *State CEQA Guidelines* Section 15064.5(b) states that the significance of an historical resource is "materially impaired" when a project does any of the following:

- *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the California Register of Historical Resources*
- *Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources... or its identification in an historical resources survey..., unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or*
- *Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA*

State CEQA Guidelines Section 15064.5 also states that the term "historical resources" shall include the following:

1. *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in, the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4850 et.seq.).*
2. *A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.*
3. *Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) as follows:*

   (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

   (B) Is associated with the lives of persons important in our past;

   (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history. (Guidelines Section 15064.5)

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?*

Impact CR-1 The proposed project is located on a vacant site and would not disturb any recorded historical resources. There are no historic resources present on the project site. Impacts would be considered Class IV, *of no impact*.

Development of the proposed project would occur on an undeveloped site at the southeast corner of South Harbor Boulevard and West Fifth Street, north of the existing Oxnard Dunes subdivision. The National Register of Historic Places, California Register of Historical Resources, and the Ventura County Cultural Heritage Program do not list any historic resources on the project site (NRHP, 2016 and VCCHP, 2016). There are no structures or significant sites on the project site and therefore there are no historic resources as defined in S*tate CEQA Guidelines* §15064.5. Therefore, there would be no impacts to historic resources from implementation of the proposed project.

Mitigation Measures. There would be no impacts to historic resources and no mitigation is required.

Significance After Mitigation. There would be no impacts to historic resources without mitigation.

Threshold 2:	*Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064?*

Impact CR-2 There are no known archeological resources on the project site. However, ground-disturbing activates associated with development carried out under the proposed project could result in damage to or destruction of archaeological and/or Native American cultural resources. Impacts would be Class II, *significant but mitigable*.

The City of Oxnard has a long cultural history and is known to have been home to the Chumash tribe prior to settlement by Euro-Americans. Archaeological materials associated with their occupation may exist on the project site and have the potential to provide important scientific information regarding history and prehistory.

The Native American Heritage Commission (NAHC) was provided the Notice of Preparation (NOP) for the proposed project. On February 22, 2016 the NAHC replied with a comment letter recommending tribal consultation for the proposed project. However, the comment letter did not include a mailing list of Native American tribes and there are no Native American tribes included on the City's standard mailing NOP mailing list, indicating that there have not been

past requests from Native American tribes requesting notice of any projects carried out in the City.

As discussed in the Setting, no recorded prehistoric or historic archeological sites are present on or adjacent to the project site. Therefore, project implementation would not affect any known cultural resources. Ground-disturbing activities associated with the proposed project have the potential to damage or destroy undiscovered historic or prehistoric archaeological resources that may be present below the ground surface, particularly during project excavation because the project site is currently undeveloped. Consequently, damage to or destruction of sub-surface cultural resources could occur as a result of development under the proposed project, and mitigation is necessary to ensure that potential impacts to subsurface cultural resources are reduced to a less than significant level.

Mitigation Measures. The following mitigation measure is incorporated in accordance with the City of Oxnard's standard condition of approval for all new development projects. The measure is intended to mitigate potentially significant impacts relating to the possible discovery of intact cultural resources during site grading. These measures would apply to all phases of project construction.

CR-2(a) **Procedures for Discovery of Intact Cultural Resources.** In the event that archaeological/paleontological resources are unearthed during project construction, all earth disturbing work within the vicinity of the find must be temporarily suspended or redirected until an archaeologist and/or paleontologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation work associated with Native American cultural material.

CR-2(b) **Procedures for Discovery of Human Remains.** If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the California Native American Heritage Commission.

Significance After Mitigation. Impacts to archaeological and/or Native American resources would be less than significant after mitigation for discovered archaeological resources, and procedures for discover of human remains.

Threshold 3:	*Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Impact CR-3 Ground-disturbing activities associated with development under the proposed project could result in damage to or destruction of unique paleontological resources within rock units or geologic features. Impacts would be Class II, *significant but mitigable*.

Paleontological resources may be present in fossil-bearing soils and rock formations below the ground surface. Ground-disturbing activities in fossil-bearing soils and rock formations have the potential to damage or destroy paleontological resources that may be present below the ground surface. Therefore, activities resulting from implementation of the proposed project, including construction-related and earth-disturbing actions, could damage or destroy fossils in these rock units resulting in a significant impact. Therefore, impacts to paleontological resources are significant but mitigable.

Mitigation Measures. Compliance with Mitigation Measure CR–3 would reduce impacts to paleontological resources to a less than significant level.

Significance After Mitigation. Impacts to paleontological resources would be less than significant with mitigation requiring a qualified paleontologist to evaluate and mitigate a paleontological find.

Threshold 4:	*Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Impact CR-4 Ground-disturbing activities associated with development under the proposed project have the potential to disturb unidentified human remains. Impacts would be Class II, *significant but mitigable*.

Human burials outside of formal cemeteries often occur in prehistoric archeological contexts. The project site is undeveloped and therefore has the potential to contain human burial grounds. Excavation during construction activities would have the potential to disturb these resources, including Native American burials.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction. Public Resources Code §5097.98 also addresses the disposition of Native American burials, protects such remains, and established the Native American Heritage Commission to resolve any related disputes.

Implementation of these regulations would help ensure that development of the propose project would have a less that significant impact from potential disturbance of human remains, including those interred outside of formal cemeteries. However, mitigation is necessary to make sure that these regulations are followed in accordance with the City's standard conditions of

approval. Mitigation Measure CR–1(b) would ensure compliance with the necessary regulations.

Mitigation Measures. Compliance with Mitigation Measure CR–1(b) would reduce impacts to human remains and burial grounds to a less than significant level.

Significance After Mitigation. Impacts to human burial grounds would be less than significant after mitigation requiring compliance with the Public Resources Code Section 5097.98.

c. Cumulative Impacts. The proposed project, in conjunction with other nearby planned, pending, and potential future projects in the City of Oxnard as discussed in Section 3.0, Environmental Setting, would have the potential to adversely impact additional cultural resources. With the proposed mitigation measures identified in this section of the EIR, such impacts to cultural resources would be less than significant at the project level, and these impacts are site-specific, not cumulative in nature. The proposed project would therefore not make a contribution to any cumulative impact on cultural resources outside the project site. Individual development proposals are reviewed separately by the appropriate jurisdiction and undergo environmental review when it is determined that the potential for significant impacts exist. In the event that future cumulative development would result in impacts to known or unknown historical resources, impacts to such resources would be addressed on a case-by-case basis. Therefore, cumulative impacts related to the incremental loss of cultural resources would not be significant.

4.5 GEOLOGY AND SOILS

4.5.1 Setting

a. Regional Geologic Setting. California is divided geologically into several physiographic or geomorphic provinces, including the Sierra Nevada range, the Central (Great) Valley, the Transverse Ranges, the Coast Ranges, and others. The City of Oxnard and the project site are within the Transverse Range geomorphic province of California. The Transverse Range includes Ventura County and portions of Los Angeles, San Bernardino, and Riverside counties.

The Transverse Range was formed at the intersection of two tectonic plates: the Pacific and the North American plates. The compressive and shearing motions between the tectonic plates resulted in a complex system of active strike-slip faults, reverse faults, thrust faults, and related folds (bends in rock layers). Locally, the Transverse Ranges are characterized by east-west trending mountains and faults. Major basins and ranges in the Transverse Ranges include the Ventura basin and the San Gabriel and San Bernardino Mountains.

b. Seismic Setting. The project area is located in a highly active earthquake region of Southern California and thus is subject to various seismic and geologic hazards, including ground shaking, surface rupture, and landslides.

Seismic Hazards. Faults generally produce damage in two ways: ground shaking and surface rupture. Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of a site to the seismic source, soil conditions, and depth to groundwater. Surface rupture is limited to very near the fault. Other hazards associated with seismically induced ground shaking include earthquake-triggered landslides, liquefaction, and settlement. As with any location in Southern California, in the event of a strong earthquake (6.0 to 7.5) originating near the site or a major earthquake (8.0 magnitude) along the San Andreas Fault, damage to onsite structures could be sever and loss of life could occur.

Faulting. A fault is a plane or surface in the earth along which failure has occurred and materials on opposite sides have moved relative to one another in response to the accumulation and release of stress. The U.S. Geological Survey defines active faults as those that have had surface displacement within Holocene time (about the last 11,000 years). Holocene surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and aligned saddles, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during Quaternary time, within the last 1.6 million years. Inactive faults have not had surface displacement within the last 1.6 million years. Ground surface displacement along a fault, although more limited in area than the ground shaking associated with it, can have disastrous consequences when structures are located across or near the fault zone.

Alquist-Priolo Earthquake Fault Zones encompass surface traces of active faults that have potential for future surface fault rupture. Alquist-Priolo Fault Zones are designated within 500 feet from a known fault trace. Pursuant to the Alquist-Priolo legislation, no structure for human occupancy is permitted on the trace of an active fault. The term "structure for human occupancy" is defined as any structure used or intended for supporting or sheltering any use or

occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year. If development is proposed within an Alquist-Priolo Fault Zone, a geologic study must be conducted for developments of four units or more to determine the location of the fault trace. Based on the findings in geologic study, all structures for human occupancy must be set back a minimum of 50 feet from the fault trace because, unless proven otherwise, an area within 50 feet of an active fault is presumed to be underlain by active traces of the fault. The project site is not within an Alquist-Priolo Fault Zone (or Earthquake Fault Zone) and does not contain any known active or potentially active faults.

Seismically Induced Ground Shaking. Seismically induced ground acceleration is the shaking motion that is produced by an earthquake. Seismically induced ground shaking covers a wide area and is greatly influenced by the distance from the site to the seismic source, soil conditions, and depth to groundwater. Amounts of movement during an earthquake can reach up to tens of feet. Fault displacement may also occur gradually, not as a result of earthquakes, but as the nearly imperceptible continual movement known as creep. Creep can produce the rupture or bending of buildings, fences, railroads, streets, pipelines, curbs, and other linear structures.

Based on California Department of Conservation earthquake regulatory maps, there are no known earthquake faults in the City of Oxnard. There are several active or potentially active faults that may affect Oxnard, including the San Andreas Fault, northeast of the project site, and onshore and offshore segments of the Oak Ridge Fault, which is the nearest potentially active fault to the site. The most likely active faults to seismically affect the City and the project site are the Oak Ridge, Ventura, Simi, and San Andreas faults.

Ground Rupture. Ground surface rupture results when the movement along a fault is sufficient to cause a gap or rupture along the upper edge of the fault zone on the surface. Since there are no known active faults on or adjacent to the project area, the potential for ground rupture is considered remote.

<u>Other Geologic and Soil Related Hazards.</u> Secondary seismic and soil related hazards include liquefaction, hydroconsolidation, expansive soils, settlement, subsidence, and hydrocompaction.

Landslides. A landslide is a perceptible downslope movement of earth mass. It is part of the continuous, natural, gravity-induced movement of soil, rock, and debris. Landslides can range from downslope creep of soil and rock material to sudden failure of entire hillsides. Landslides include rockfalls, slumps, block glides, mudslides, debris flows, and mud flows. Landslides or slope instability may be caused by natural factors such as fractured or weak bedrock, heavy rainfall, erosion, earthquake activity, and fire, as well as by human alteration of topography and water content in the soil.

The project site does not contain any steep slopes or potential earthquake-induced landslide areas. Sand dunes are present in the northern portion of the site. However, these do not present a landslide hazard.

Liquefaction. Liquefaction is a temporary, but substantial, loss of shear strength in granular solids, such as sand, silt, and gravel, usually occurring during or after a major

earthquake. This occurs when the seismic waves from an earthquake of sufficient magnitude and duration shear a soil deposit that has a tendency to decrease in volume. If drainage cannot occur, this reduction in soil volume will increase the pressure exerted on the water contained in the soil. This process can transform stable granular material into a fluid-like state. The potential for liquefaction to occur is greatest is areas with loose, granular, low-density soil, where the water table is within the upper 40 to 50 feet of the ground surface. Liquefaction can result in slope and/or foundation failure, and also post-liquefaction settlement.

In April 2011 SubSurface Designs, Inc. prepared the Preliminary Soils Engineering Investigation (Soils Report; Appendix E) for the project site. The Soils Report found that groundwater at the project site has been encountered at a depth of nine-to fourteen feet (9'-14') below the existing round surface and the historic high groundwater level is five (5) feet below the ground surface. As part of the Soils Report SubSurface Designs Inc. performed a liquefaction analysis on the project site and found potential for liquefaction at the project site, particularly within the upper 25' of soil.

Lateral Spreading. Lateral spreading is caused by liquefaction and typically associated in areas of gently sloping ground that undergo liquefaction. As a result, the ground surface moves in the direction of the slope. Lateral spreading can cause the elongation of, or creation of, cracks in the ground surface perpendicular to the direction of the slope. These cracks, if situated below or adjacent to structures, can result in settlement, lateral movement, and damage to the structure. Based on the relatively low topography of the project site, the potential for lateral spreading is low (Soils Report, Appendix E).

Hydrocompression. Hydrocompression of soils is a phenomenon when loosely to medium dense and/or soft to firm soils "collapse" with moisture inundation. Infiltration of moisture into the subsurface may be attributed to various conditions or occurrences (i.e., either a rise in groundwater levels, excessive surface water percolating through the surficial sediments or by broken or leaking utility lines, etc.). The project site has a potential for hydrocompression to occur (Soils Report, Appendix E).

Expansive Soils. Expansive soils are generally clayey and swell when wetted and shrink when dried. In hillside areas, as expansive soils expand and contract, gradual downslope creep may occur, eventually causing landslides. Clay soils also retain water and may act as lubricated slippage planes between over soil/rock strata, also producing landslides, often during earthquakes or by unusually moist conditions. The Geotechnical Investigation found that the near surface earth materials at the project site consist of silty sands, sandy silts, and sands, and that the expansion potential of the underlying earth material is very low (Soils Report, Appendix E).

c. Soil Characteristics. The City is located on the Oxnard Plain that covers over 200 square miles in the southern portion of Ventura County. The Oxnard Plain is comprised of alluvial deposits of sands, silts, and clays, which extend approximately 500 feet below the City. Historical deposition on the plain is related to Santa Clara River flood patterns. The San Pedro geologic formation is predominant in the region and underlies alluvium to a depth of 4,500 feet. The San Pedro formation is comprised of moderately indurated sandstones and conglomerates.

The Oxnard region is relatively flat, with elevations ranging from sea level to about 40 feet above mean sea level. Drainage is generally to the south toward the Pacific Ocean.

Earth materials within the project site were found to consist of alluvial deposits. Site alluvium consists of medium brown to dark brown silty sand to silty clay.

At the time of subsurface exploration for the geological investigation (Soils Report, Appendix E), groundwater was encountered at a depth of approximately nine to fourteen feet below the existing ground surface. According to California Geological Survey (CGS) Seismic Hazard Evaluation of the Oxnard Quadrangle, the historic high groundwater level is approximately five feet below the ground surface in the project area.

d. Regulatory Setting.

Federal.

National Pollutant Discharge Elimination System. Stormwater-related erosion is one major source of soil-related impacts. Stormwater discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb one or more acres, or smaller sites that are part of a larger common plan of development or sale, are regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. Prior to discharging stormwater, construction operators must obtain coverage under an NPDES permit. In California, the General Permit for Discharges of Stormwater Associated with Construction Activity are regulated by the State Water Resources Control Board and administered through the local Regional Water Quality Control Board.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect storm water runoff and the placement of those 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. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

International Building Code. The International Building Code (IBC) (2000 and later editions) is the model building code that provides the basis for the California Building Code (CBC). The IBC replaced the 1997 Uniform Building Code (UBC). The UBC defined different regions of the United States and ranked them according to their seismic hazard potential (Seismic Zones 1 through 4). Zone 1 has the least seismic potential and Zone 4 has the highest. The project area was located in Seismic Zone 4. The IBC no longer uses seismic zones. The IBC derives seismic design forces from two ground motion parameters (SS and S1), site class, and long-period transition period (TL). Thus, current building codes use seismic design parameters that vary across a geographic area, as opposed to zones with distinct geographic boundaries (USGS, 2013).

State.

California Building Code. California law provides a minimum standard for building design through the California Building Code (CBC). Chapter 23 contains specific requirements for seismic safety. Chapter 29 regulates excavation, foundations, and retaining walls. Chapter 33 contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Division of Occupational Safety and Health (Cal/OSHA) regulations (Title 8 of the California Code of Regulations [CCR]) and in Section A33 of the CBC.

California Residential Code. Similar to the CBC, the California Residential Code (CRC) provides a minimum standard for building design. However, the CRC applies only to detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height. These types of structures are not required to comply with the more restrictive requirements contained in the CBC unless the proposed structure(s) exceed the design limitations established in the CRC and the code user is specifically directed to use the CBC. Chapter 4 of the CRC provides specific seismic design standards for foundations and Chapter 6 provides specific seismic design standards for walls.

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act was signed into law in 1972. The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. Under the Act, the State Geologist is required to delineate "Earthquake Fault Zones" along known active faults in California. Cities and counties affected by the zones must regulate certain development projects within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

Seismic Hazards Mapping Act. The California Geologic Survey, formerly the California Department of Conservation, Division of Mines and Geology (CDMG), provides guidance with regard to seismic hazards. Under CDMG's Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, Section 2690- 2699.6), seismic hazard zones are to be identified and mapped to assist local governments in land use planning. The intent of this publication is to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes. In addition, CDMG's Special Publications 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations.

Local.

City of Oxnard 2030 General Plan. The Oxnard 2030 General Plan contains policies intended to reduce the potential for geologic hazards to adversely affect people and property.

SH-1.3 ***Building Code Standards.*** *Require that all new buildings and alterations to existing buildings be built according to seismic requirements adopted within the most current City of Oxnard Building Code, or its adopted equivalent.*

SH-1.4 ***Soil, Geologic, and Structural Evaluation Reports.*** *Require that adequate soils, and geologic and structural evaluation reports be prepared by registered soils engineers, engineering geologists, and/or structural engineers, as appropriate, for applicable development.*

SH-1.5 ***Required Geologic Reports.*** *Continue to require the submission of a geologic report for proposed development located in a liquefaction area.*

SH-1.7 ***Soil Investigations.*** *Continue to require a complete site-specific soils investigation that addresses liquefaction and compressible soil characteristics and identifies construction techniques or other mitigation measures to prevent significant impacts on the proposed development.*

SH-1.8 ***Mitigation Seismic Hazards.*** *Where necessary, utilize the expert mitigation measures such as those identified in Special Publication 117: Guidelines for Analyzing and Mitigation Seismic Hazards in California (prepared by the Southern California Earthquake Center) to minimize risk associated with seismic activity.*

City of Oxnard Municipal Code. The Oxnard Municipal Code (OMC) adopts the most recent CBC and contains additional requirements for construction in the City (OMC Chapter 14, Building Regulations). The City's building codes set procedures and limitations for design of structures based on seismic risk.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology. The following impact analysis is based on the Preliminary Soils Engineering Investigation prepared by SubSurface Designs Inc. (Soils Report; 2011). Specific issues and thresholds used are from the City of Oxnard *CEQA Guidelines, Attachment A, CEQA Initial Study Checklist* (Oxnard 2017) and other City or agency documents as noted.

Significance Thresholds. According to Appendix G of the *State CEQA Guidelines* and the City's *2017 CEQA Guidelines*, development within the project area would result in potentially significant impacts if it would create any of the following:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
    i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;*
    ii. *Strong seismic shaking that cannot be addressed through compliance with standard Code requirements?*

2. *Be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that cannot be addressed through compliance with standard Code; and/or*
3. *The project be located on expansive soil, creating substantial risks to life or property that cannot be addressed through compliance with standard Code requirements.*
4. *Expose people or structures to inundation by seiche or tsunami?*
5. *Rely on dredging or other maintenance activity by another agency that is not guaranteed to continue?*

The Initial Study for the project determined that the project was not located in an areas subject to landslides or dredging and maintenance activity controlled by other agencies. These impacts will not be further discussed, see the Initial Study in Appendix A for additional information.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:* *i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault.* *ii. Strong seismic shaking that cannot be addressed through compliance with standard Code requirements?*

Impact GEO-1 **Seismically-induced ground failure or shaking could result in the exposure of people and structures in the project area to the risk of loss, injury, or death. However, mandatory compliance with applicable City of Oxnard and California Building Code or California Residential Code requirements would reduce impacts to Class III, *less than significant.***

The project site contains no known active or potentially active faults, nor is the site within an Alquist-Priolo Fault Hazard Zone (Department of Conservation, 2016). As no fault zones extend through the site or are in close proximity to the site, the potential for ground rupture is low (Soils Report, Appendix E).

Southern California is located within a tectonically active portion of the earth's crust. The potential for strong ground motion exists in the region. Nearby active and potentially active faults can generate groundshaking that could adversely affect the project site. Nearby fault zones include the San Andreas Fault Zone, the Newport-Inglewood Fault Zone, and the San Fernando-Sierra Madre Fault Zone. The San Andreas Fault Zone is approximately forty-six miles north of the project site and has a maximum probably event magnitude of 7.4. The San Fernando-Sierra Madre Fault Zone is approximately forty-four miles northeast of the project site and has a maximum probable event magnitude of 6.3. The Newport-Inglewood Fault Zone is located more than fifty miles south of the project site. SubSurface Designs Inc. modeled the maximum probable event magnitudes using EQFAULT, more information is available in the Preliminary Soils Engineering Investigation, Appendix E.

While the project site does not lie within a seismic hazard zone, the site is not free of seismic or geologic hazards. The most recent large earthquake in the vicinity of the project site was the Northridge Earthquake in 1994. The epicenter of the Northridge Earthquake was approximately forty miles east of the project site and produced an estimated repeatable high ground acceleration of 0.087g on the project site.

Development on the project site could potentially be at risk for seismic related groundshaking, however development would be subject to the requirements of the IBC and the CRC, which includes site preparation and construction measures to ensure that the design and construction of new structures are engineered to withstand the expected ground acceleration that may occur in the project area. The Preliminary Soils Engineering Investigation (Appendix E) determined that compliance with standard IBC and CRC construction methods would minimize impacts to structure development from potential groundshaking.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that cannot be addressed through compliance with standard Code requirements?*

Impact GEO-2 **The project site is within a State designated Liquefaction Hazard Zone. The Preliminary Soils Engineering Investigation determined that the project site has the potential for earthquake induced liquefaction, predominately within soil layers in the upper twenty five feet. Impacts would be Class II, *significant but mitigable*.**

Liquefaction refers to the momentary loss of shear strength, occurring when soil undergoes a deformation due to the build-up of high porewater pressures. The necessary components for liquefaction include shallow groundwater, relatively loose soils, fine grained sands and silty sands, and repeated cyclic loading. During an earthquake cyclic loading occurs, allowing pore pressures to increase as a result of individual soil grain particles realigning. The realignment allows the water to completely separate and surround the grains. As cyclic loading continues, the shear resistance of the soil decreases until the pore pressure equals the confining pressures. The result of the increases in the pore pressure and the decrease in the shear resistance is liquefaction.

The project site is located within a State designated Liquefaction Hazard Study Zone, as delineated by the California Geological Survey Seismic Hazard Zones Oxnard Quadrangle Map (2002). Additionally, SubSurface Designs, Inc. performed a liquefaction analysis at the project site and determined that there is a potential for earthquake induced liquefaction at the site. The near-surface soil deposits are not considered suitable for foundation support. The analysis recommends the consideration of a potential differential settlement of one two inches for design.

Because the Preliminary Soils Engineering Investigation concluded that the near surface soils are not considered suitable for foundation support, impacts are potentially significant.

Mitigation Measures. Mitigation Measure GEO-2 would be required to reduce impacts from liquefaction.

GEO-2 **Geotechnical Recommendations.** All recommendations contained within the Preliminary Soils Engineering Investigation conducted by SubSurface Designs, Inc. (Appendix E of this EIR) shall be followed for future development within the project site. These recommendations include the following:

- Grading for the proposed development shall include the removal and re-compaction of the upper six feet (6′) of the existing alluvium for support of the proposed foundation system. The grading shall extend outside of the footprint of the proposed structure ten feet (10′). A minimum of four feet (4′) of compacted fill shall be maintained below the bottom of all foundations. A layer of bi-directional geogrid shall be placed within the bottom of the grading limits prior to the placement of compacted fill. Portions of the bottom excavation for the recommended removals are anticipated to require stabilization prior to the placement of compacted fill. In areas where excessive pumping is encountered, the geogrid shall be covered with one foot (1′) of six inch (6″) minus rock then covered with a geofabric. The earth material outside of the grading limits for the proposed structure shall be removed and re-compacted down two feet (2′) for support in all areas to receive concrete slab, decking, or paving.
- Grading shall be carried forth as described in the Grading and Earthwork section. Based on the granular nature of the upper alluvium, each layer shall be compacted to 95percent of the maximum density as determined by the latest version of ASTM D 1557.
- Structures shall be supported by a mat foundation.
- Foundations shall be designed as outlined in the Foundations section.

Significance After Mitigation. With mitigation, impacts would be less than significant.

Impact GEO-3 **The project site is located on soil that could potentially become unstable as a result of the project. Impacts would be Class II, *significant but mitigable.***

The project site is susceptible to seismically induced liquefaction. Additionally, the alluvial deposits are susceptible to hydro-compression, a phenomenon where loosely to medium dense and/or soft to firm soils "collapse" with moisture inundation. However, following the recommendations included in the Preliminary Soils Engineering Investigation (Mitigation Measure GEO-2) would reduce the impacts to less than significant.

Mitigation Measure. Mitigation GEO-2 would reduce impact to less than significant.

Significance After Mitigation. Impacts would be less than significant after mitigation.

Threshold 3:	*Would the project be located on expansive soils, creating substantial risks to life or property that cannot be addressed through compliance with standard Code requirements?*

Impact GEO-4 The near surface soils have the potential for expansion if consistent moisture content is not maintained. Impacts would be Class II, *significant but mitigable.*

The Preliminary Soils Engineering Investigation identified the near surface soils at the project site to be susceptible to expansion. Expansive soils are influenced by changes in moisture content and can lead to damage when the moisture content changes significantly over short durations of time (i.e. seasonal). These changes can result from many factors, including the initial moisture content of the soil, climate, groundwater, drainage conditions, irrigation, and vegetation. If the soil is allowed to become saturated, then dry out, then foundation movement and distress can occur. Therefore, the soils underlying the project site should be maintained at a consistent moisture content to reduce the potential damage caused by expansive soils. Mitigation is required to reduce impacts from expansive soils to less than significant.

Mitigation Measures. The following mitigation is required to reduce impacts to less than significant.

GEO-5 **Drainage and Maintenance.** Drainage and maintenance recommendations included in the Preliminary Soils Engineering Investigation shall be incorporated into the design of the project. These recommendations include, but are not limited to:

- A comprehensive drainage system shall be designed and incorporated into the final plans.
- Pad areas shall be maintained and planted in a way that will allow the drainage system to function as intended.
- Positive pad drainage shall be incorporated into the final plans. All drainage from the roof and pad shall be directed so that water does not pond adjacent to the foundations or flow toward them. All drainage shall be collected and directed via no-erosive devices to a location approved by the building official.

Significance After Mitigation. With mitigation Measure GEO-5, impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant after mitigation.

Threshold 4:	*Would the project expose people or structures to inundation by seiche or tsunami?*

Impact GEO-5 **All of the coastal areas in Ventura County are susceptible to tsunamis. The tsunami hazard zone extends to all areas within one mile of the shoreline. Emergency Alert and Disaster Preparedness programs within the City reduce this potential impact to Class III, *less than significant*.**

A tsunami is a series of waves generated by an undersea disturbance such as an earthquake. The proposed project would construct new residences approximately 2,000 feet inland from the Pacific Ocean and a half mile north of the Channel Island Harbor. In general, within Oxnard properties within one mile of the coastline are within the tsunami inundation zone (City of Oxnard 2016).

The County of Ventura has an Emergency Alert System (EAS) that includes every radio and TV station as well as all cable companies in Ventura County. These are networked together to provide emergency related information in times of severe weather or other disasters such as tsunamis. Given the time it would take for a tsunami to reach the site and the EAS that is in place, areas subject to inundation could be evacuated. Due to the project site's location and elevation, the site is within the emergency alert and evacuation area in the event of a tsunami. This potential hazard is not unique to the project area, and the alert and evacuation programs implemented by the City of Oxnard Fire Department, County of Ventura, and other agencies, would reduce the potential for harm from tsunamis to a less than significant level. Thus, the project would not expose people to significant risk of loss, injury, or death. Project structures and facilities could potentially be damaged in the event of inundation due to tsunami, but the proposed project would not alter existing risks associated with tsunami inundation in the project area. Impacts associated with tsunamis would be less than significant.

A seiche can be considered very similar to a tsunami with the difference being that the water waves are generated in a closed or restricted body of water, such as a lake or within a harbor. The project site is located approximately half a mile from the Channel Island Harbor. However, the risk of seiche in Ventura County harbors has been identified to be low (Ventura County 2011). Impacts associated with seiche would be less than significant.

The project site and surrounding area is generally flat and there are no significant slopes. Therefore, impacts associated with mudflows are unlikely. Impacts would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 5:	*Would the project rely on dredging or other maintenance activity by another agency?*

Impact GEO-6 The proposed project is located approximately a half-mile north of the Channel Island Harbor and approximately 200 feet from the Edison Canal. However, the project would not alter existing risks associated with tsunami inundation in the project area. Impacts would be Class III, *less than significant*.

The proposed project would construct new residences approximately 2,000 feet inland from the Pacific Ocean and a half mile north of the Channel Island Harbor. In general, within Oxnard properties within one mile of the coastline are within the tsunami inundation zone (City of Oxnard ND). The Army Corps of Engineers completes maintenance dredging in the Channel Island Harbor every two years. According to the Local Coastal Plan, the Edison Canal is periodically dredged to maintain water flows to Mandalay Beach Generating Station. The proposed project does not require dredging or other maintenance activity by another agency.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Geology and soils impacts would be cumulatively considerable if the proposed project, in conjunction with other past, present, and reasonably foreseeable projects, would trigger the above referenced significance thresholds. The City of Oxnard 2030 General Plan estimates that the population of the City of Oxnard will grow to 285,521 persons by year 2030. New development would expose new residents and properties to seismic and other geologic hazards related to soils conditions or potential instability. However, these seismic and soil issues are specific to each project and therefore, for the purposes of this cumulative analysis, the geographic context is more narrow as well.

It is expected that because of the site-specific nature of these issues, each development would be required to address said issues on a case-by-case basis through preparation of required soils and geotechnical engineering studies and adherence to the recommendations therein, in addition to adherence to existing local and state laws and regulations including the applicable CBC standards and requirements. Thus, the combination of the project with other cumulative developments would not have a significant cumulative impact. Furthermore, with adherence to the applicable laws and regulations and mitigation measures, the project's contribution to any cumulative geology and soils impacts would be less than significant.

Development at the project site would be subject to regional hazards, such as widespread ground shaking or tsunamis. The project itself would not alter or affect the extent of these hazards, and residents within the development would be within the emergency response and evacuation programs as discussed above. For these reasons, the project contribution to these regional cumulative effects would be less than significant.

4.6 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

This section includes a discussion of climate change, its causes, and the contribution of human activities, as well as a summary of existing greenhouse gas (GHG) emissions. The section describes the criteria for determining the significance of climate change impacts and estimates the likely GHG emissions that would result from vehicular traffic and other emission sources. Traffic projections used in emissions estimates are based on the traffic study prepared for the project (Appendix I to this EIR). GHG emissions modeling results and calculations are included in Appendix B.

4.6.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC, 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34°C cooler (CalEPA, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA], 2014). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the second half of the 20th century. Concentrations of CO_2 in the atmosphere have risen approximately 40 percent since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; National Oceanic and Atmospheric Administration [NOAA], 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO_2 represents an estimated 74 percent of total GHG emissions (IPCC, 2007). The largest source of CO_2 emissions, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 25 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148 percent (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (U.S. EPA, 2014).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N_2O is produced by microbial processes in soil and water, including those reactions that

occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 298 times that of CO_2 (IPCC, 2007).

Fluorinated Gases (HFCS, PFCS, and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and have been phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) of CO_2e in 2010 (IPCC, 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases account for 6 percent and 2 percent respectively (IPCC, 2014).

Total U.S. GHG emissions were 6,525.6 MMT CO_2e in 2012 (U.S. EPA, 2014). Total U.S. emissions have increased by 4.7 percent since 1990; emissions decreased by 3.4 percent from 2011 to 2012 (U.S. EPA, 2014). The decrease from 2011 to 2012 was due to a decrease in the carbon intensity of fuels consumed to generate electricity due to a decrease in coal consumption, with increased natural gas consumption. Additionally, relatively mild winter conditions, especially in regions of the United States where electricity is important for heating, resulted in an overall decrease in electricity demand in most sectors. Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2012, the transportation and industrial end-use sectors accounted for 28.2 percent and 27.9 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16.3 percent and 16.4 percent of CO_2 emissions, respectively (U.S. EPA, 2014).

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2013, California produced 459.3 MMT CO_2e in 2013 (ARB, 2015). The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions (CARB, 2015). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO_2e (ARB, 2014). These

projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

Potential Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all of the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC, 2013).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC], 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling, DWR projects that the Sierra snowpack will experience a 25 percent to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology and Sea Level Rise. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain, or snow events; coincidental high tide; and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to The Impacts of Sea-Level Rise on the California Coast, prepared by the California Climate Change Center (CCCC) (CCCC, 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys, and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO], 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO, 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea level rise of 11 to 38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7 to 23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2006).

b. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced in 1992. The UNFCCC is an international environmental treaty with the objective of "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC, 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCCC brought nations together again to draft the *Kyoto Protocol* (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013 and ending either on December 31, 2017 or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC, 2011).

In Durban (17th session of the Conference of the Parties in Durban, South Africa, 2011), governments decided to adopt a universal legal agreement on climate change. Work began on that task immediately under a new group called the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Progress was also made regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted (UNFCCC, 2011; United Nations, 2011).

In December 2015, the 21st session of the Conference of the Parties (COP21) adopted the Paris Agreement. The deal requires all countries that ratify it to commit to cutting greenhouse gas emissions, with the goal of peaking greenhouse gas emissions "as soon as possible" (Worland, 2015). The agreement includes commitments to (1) achieve a balance between sources and sinks of greenhouse gases in the second half of this century; (2) to keep global temperature increase "well below" 2°C or 3.6°F and to pursue efforts to limit it to 1.5°C; (3) to review progress every five years; and (4) to spend $100 billion a year in climate finance for developing countries by 2020 (UNFCCC, 2015). The agreement includes both legally binding measures, like reporting requirements, as well as voluntary or non-binding measures while, such as the setting of emissions targets for any individual country (Worland, 2015).

Federal Regulations. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons of CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons of CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time, new sources were subject to GHG Title V permitting if the source emits 100,000 tons of CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons of CO_2e per year.

On July 3, 2012 the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

Local Regulations. The Southern California Association of Governments (SCAG) adopted a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in April 2012, which applies to the County of Ventura. The following implementation strategies are included in the SCS:

- Promoting a land use pattern that accommodates future employment and housing needs;
- Using land in ways that make developments more compact and improve linkages among jobs, housing, and major activity centers;
- Protecting natural habitats and resource areas;
- Implementing a transportation network of public transit, managed lanes and highways, local streets, bikeways, and walkways built and maintained with available funds;
- Managing demands on the transportation system (TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand;
- Managing the transportation system (TSM) through measures that maximize the efficiency of the transportation network; and

- Utilizing innovative pricing policies to reduce vehicle miles traveled and traffic congestion during peak periods of demand

The County of Ventura has established a Climate Protection Plan (CPP), which includes six action areas and fifteen "Commitments to Climate Protection" (Commitments) with the goal of meeting a GHG reduction target of 15 percent over a 2005 baseline inventory. The Commitments include items such as integrating full-cost financial analysis and GHG consideration into the County's Capital Planning and Budgeting process, reviewing the County's building policies to ensure use of latest environmental standards for materials and systems, capturing and storing carbon on County property, and implementing a comprehensive energy action plan (Ventura County Climate Protection Plan, 2012). No specific GHG emission thresholds are included in the CPP.

The City of Oxnard 2030 General Plan Sustainable Community Chapter (2011) includes strategies such as emphasizing pedestrian- and bicycle-friendly environments, shifting toward renewable energy sources, strategic landscaping to increase air filtration by plants, and increasing project design efficiency to reduce GHG emissions. The City of Oxnard Energy Action Plan (EAP) includes similar strategies and a more complete list of goals to reduce energy use and associated GHG emissions (Energy Action Plan, 2013). No specific GHG emission thresholds are included in the Sustainable Community Chapter or the EAP.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds. Based on Appendix G of the *State CEQA Guidelines* and the City of Oxnard's 2017 *Threshold Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, either directly or indirectly, that may have a significant impact on the environment; and/or*
2. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with the state goal or reducing greenhouse gas emissions in California; and/or*
3. *Contribute or be subject to potential secondary effects of climate change (e.g. sea level rise, increase fire hazard).*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*State CEQA Guidelines*, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither VCAPCD nor the City of Oxnard has adopted GHG emissions thresholds. The VCAPCD staff has, however, examined options for GHG thresholds for CEQA

documents. Among the approaches discussed, VCAPCD prefers consistency with the South Coast AQMD (SCAQMD) (VCAPCD, 2011). The SCAQMD is considering a tiered approach with locally adopted GHG reduction plans followed by GHG threshold values set to capture 90 percent of project GHG emissions by project type. SCAQMD's proposed threshold is 3,000 metric tons per year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1," September 2010).

Methodology. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project is a residential development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (CO_2e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (CAPCOA, 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR, 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix B for calculations).

Operational Emissions. CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide, 2013). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating, were calculated in CalEEMod and utilized standard emission rates from ARB, U.S. EPA, and emission factor values provided by the local air district (CalEEMod User Guide, 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

For mobile sources, CO_2 and CH_4 emissions were quantified in CalEEMod. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA, 2009) direct emissions factors for mobile combustion (see Appendix B for calculations). The estimate of total daily trips associated with the proposed project was based on the traffic study (see Appendix I) and was calculated and extrapolated to derive total annual mileage in CalEEMod. Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually "new" emissions, specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles; however, the quantity of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the project may include trips relocated from other existing locations, as people begin to use the proposed project. Therefore, because the proportion of "new" versus relocated trips is unknown, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the project site and heavy trucks to export earth materials offsite. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment used during construction.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Impact GHG-1 **Development of the proposed Avalon Homes project would generate additional GHG emissions beyond existing conditions. However, GHG emissions would not exceed the applicable threshold of significance. Impacts would therefore be Class III, *less than significant*.**

As stated in Section 4.6.2(a), GHG emissions for proposed buildout of the project area were calculated using the SCAQMD's CalEEMod software based on the construction and operation of 65 dwelling units. The following summarizes the project's overall GHG emissions (see Appendix B for full CalEEMod worksheets).

Construction Emissions. As described in Section 2.0, *Project Description*, construction is estimated to occur over 15 months. Based on the CalEEMod results, construction activity facilitated by the proposed project would generate an estimated total of 526 metric tons of CO_2e (see Table 4.6-1). Amortized over a 30-year period (the assumed life of the project), construction facilitated by the project would generate an estimated 18 metric tons of CO_2e per year.

Table 4.6-1
Estimated Construction-Related GHG Emissions

Emission Source	Emissions CO_2e
Construction Total	526 metric tons
Amortized over 30 years	18 metric tons per year

[1] *See Appendix B for CalEEMod worksheets.*

Operational Indirect and Stationary Direct Emissions.

Area Source Emissions. Operational emissions include area sources, such as consumer products, landscape maintenance equipment, and painting. CalEEMod was used to calculate direct sources of air emissions located at the project site, which would cause GHG emissions of approximately 1 metric ton of CO_2e per year.

Energy Use. Operation of the proposed residences would consume both electricity and natural gas (see Appendix B for calculations). The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. As discussed above, annual electricity and natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies that are built into the CalEEMod model. As shown in Table 4.6-2, electricity consumption associated with the project would result in approximately 73 metric tons of CO_2e per year. Natural gas use would generate approximately 42 metric tons of CO_2e per year. Thus, overall energy use at the project site would result in approximately 115 metric tons of CO_2e per year.

Table 4.6-2
Estimated Annual Energy-Related GHG Emissions

Emission Source	Annual Emissions CO_2e
Electricity	73 metric tons
Natural Gas	42 metric tons
Total	**115 metric tons**

See Appendix B for CalEEMod worksheets.

Solid Waste Emissions. It is anticipated that the development facilitated by the proposed project would generate approximately 35 tons of solid waste per year according to the CalEEMod output. As shown in Table 4.6-3, based on this estimate, this aspect of the project would result in approximately 16 metric tons of CO2e per year.

Table 4.6-3
Estimated Annual Solid Waste GHG Emissions

Emission Source	Annual Emissions CO_2e
Solid Waste	16 metric tons

See Appendix B for CalEEMod worksheets.

Water Use Emissions. The project would use approximately 5 million gallons of water per year based on the CalEEMod output. Based on the amount of electricity generated in order to supply this amount of water, as shown in Table 4.6-4, this aspect of the project would result in approximately 23 metric tons of CO_2e per year.

Table 4.6-4
Estimated Annual GHG Emissions from Water Use

Emission Source	Annual Emissions CO_2e
Water Use	23 metric tons

See Appendix B for CalEEMod worksheets.

Transportation Emissions. Mobile source GHG emissions were estimated using the project traffic study and by the total vehicle miles traveled (VMT) estimated in CalEEMod. Based on the CalEEMod estimate, the annual VMT would be 1,233,830. Table 4.6-5 shows the estimated mobile emissions of GHGs for the project based on the estimated annual VMT. As noted above, the CalEEMod model does not calculate N_2O emissions related to mobile sources. As such, N_2O emissions were calculated based on the project's VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009). As shown in Table 4.6-5 below, the project would result in approximately 501 metric tons of CO_2e associated with mobile emissions.

Table 4.6-5
Estimated Annual Mobile GHG Emissions

Emission Source	Annual Emissions CO_2e
Mobile Emissions (CO_2 & CH_4)[1]	474 metric tons
Mobile Emissions (N_2O)[2]	27 metric tons
Total	**501 metric tons**

[1] *See Appendix B for CalEEMod worksheets.*
[2] *See Appendix B for calculations according to California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009, page 30-35.*

Combined Construction, Stationary, and Mobile Source Emissions. Table 4.6-6 combines the construction, operational, and mobile GHG emissions associated with the proposed project. Construction emissions associated with construction activity are amortized over 30 years (the anticipated life of the project). For the proposed project, the combined annual emissions would total approximately 674 metric tons of CO_2e per year.

Table 4.6-6
Combined Annual GHG Emissions

Emission Source	**Annual Emissions CO_2e**
Construction	18 metric tons
Operational Area Energy Solid Waste Water	 1 metric tons 115 metric tons 16 metric tons 23 metric tons
Mobile	501 metric tons
Total	**674 metric tons**
SCAQMD Threshold	3,000 metric tons
Threshold Exceeded?	**No**

See Appendix B for calculations and for GHG emission factor assumptions.

As noted above, neither the VCAPCD nor the City of Oxnard have adopted formal GHG emissions thresholds that apply to land use projects and no GHG emissions reduction plan have been adopted in Oxnard. Therefore, the proposed project is evaluated based on the SCAQMD's recommendation of 3,000 metric tons CO_2e per year. Since the total combined annual GHG emissions are 674 metric tons of CO_2e per year, emissions due to the proposed project would not exceed SCAQMD's threshold and the impacts from GHG emissions would thus be less than significant.

Mitigation Measures. As specified above, the proposed project would result in less than 3,000 metric tons per year CO_2e; therefore, no mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would the project conflict with an applicable plan, policy, or regulation for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with the state goal or reducing greenhouse gas emissions in California?*

Impact GHG-2 **With adherence to the mitigation measures included in this EIR, the proposed Avalon Homes project would be consistent with the statewide goals for GHG emissions reduction, as embodied in AB 32 and SB 375, as well as the Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), the City of Oxnard Sustainable Community Element, and the City of Oxnard Energy Action Plan. Impacts would therefore be Class III, *less than significant*.**

AB-32. As discussed in impact GHG-1(a), the GHG emissions from the proposed project would not exceed 6.6 MT/year CO2e per SP. This efficiency threshold has been proposed by SCAQMD to ensure that new development would be in compliance with the State's emissions reduction goals, as embodied in AB 32's goal of reducing GHG emissions to 1990 levels by 2020 and the Scoping Plan's strategies for achieving this reduction. The threshold has been applied to projects and programs by several Air Quality Districts in California.

SB 375 & SCAG. SCAG developed a RTP/SCS that was adopted in April 2012. The SCAG RTP/SCS is intended to inform and assist in the implementation of the emissions reduction goals set forth in SB 375 by meeting the requirement for a "sustainable communities strategy" outlined in SB 375. The Avalon Homes project includes components that would align with RTP/SCS goals, such as energy efficiency measures that would be implemented, as discussed in Section 4.2, *Air Quality*.

The City of Oxnard 2030 General Plan. The 2030 General Plan outlines goals and policies related to land use and development within the city. The General Plan Land Use Map identifies the land use designations of the Avalon Homes project site as Residential Existing and Resource Protection. Resource Protection is an open space designation defined as sensitive habitats such as wetlands, areas with endangered species activity, and riparian areas found primarily in the Coastal Zone and along the Santa Clara River. Many allow agricultural and related uses that do not negatively impact sensitive habitats in areas not in the Coastal Zone.

The goals and policies associated with these designations are discussed in Table 4.6-7 below. The project would be consistent with these goals and policies.

Table 4.6-7
2030 General Plan Policy Consistency for GHG Emissions

2030 General Plan Policy	Discussion
Sustainable Community	
SC-3.1. New Residential Development. Encourage incorporation of passive and active energy and resources conservation design and devices in new residential development and substantial remodels and/or expansions.	Consistent. Mitigation measures AQ-3(a) and AQ-3(b) require that construction and building management contracts for residential development on the Avalon Homes site include energy saving requirements, such as exceeding Title 24 requirements and use of solar or low-emission water heaters. It would also be required that all structures with flat roofs be designed to support the installation of solar panels or similar renewable energy equipment; this is a requirement of Title 24 for all newly constructed single family residences and low-rise multifamily residential buildings.
SC-3.8. Require Use of Passive Energy Conservation Design. As part of the City and Community EAP's, require the use of passive energy conservation by building material massing, orientation, landscape shading, materials, and other techniques as part of the design of local buildings, where feasible.	Consistent. Mitigation Measure AQ-3(c) requires that the Avalon Homes project include passive energy conservation elements in building design plans.
SC-3.12. Encourage Natural Ventilation Review and revise applicable planning and building policies and regulations to promote use of natural ventilation in new construction and major additions or remodeling consistent with Oxnard's temperate climate.	Consistent. Mitigation Measure AQ-3(d) requires that the project include natural ventilation in building design plans whenever feasible.
Community Development	
CD 1.4. Transportation Choices. Promote the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices (pedestrian, bicycle, transit, automobile).	Consistent. The Avalon Homes project consists of traditional neighborhood design components that encourage walking and interaction between residents. Proposed street width is 36 feet with monolithic sidewalks and rolled curbs. Street design would encourage a variety of transportation choices.
CD 1.5. Housing Variety. Promote the development of a variety of housing types throughout the City including apartments, condominiums, lofts, townhouses, and attached and detached single family units.	Consistent. The Avalon Homes project would result in the construction of varied housing types. The project proposes to construct 50-65 single family and duplex residences. The site would be subdivided into 17 residential lots, 15 for single family or duplex residences and two lots for 35 single family cluster condominium units.
CD 8.5. Impact Mitigation. Ensure that new development avoids or mitigates impacts on air quality, traffic congestion, noise, and environmental resources to the maximum extent feasible.	Consistent. See Section 4.2, *Air Quality;* Section 4.10*, Noise;* Section 4.11, *Traffic, Circulation, and Access*.

Table 4.6-7
2030 General Plan Policy Consistency for GHG Emissions

2030 General Plan Policy	Discussion
Infrastructure and Community Services	
ICS 1.2. Development Impacts to Existing Infrastructure. Review development proposals for their impacts on infrastructure (e.g., sewer, water, fire stations, libraries, streets) and require appropriate mitigation measures to ensure that proposed developments do not create substantial adverse impacts on existing infrastructure and that the necessary infrastructure will be in place to support the development.	Consistent. See Section 4.12, *Utilities* and Section 6.0, *Impacts Found to be Less Than Significant,* for a thorough discussion of existing and proposed infrastructure.
Environmental Resources	
ER 14.2. Transportation Demand Management (TDM). Employ best traffic management practices such as bus turnouts and traffic signal synchronization in order to reduce traffic-related air emissions impacts; require commercial developers to improve public transit service between residential and employment uses or shopping centers, bike lanes and protected bicycle parking areas, and other project features that would reduce the need for automobile trips related to the development; and require Transportation Management Associations (TMA) for projects that may have adverse air quality impacts related to mobile sources and contributions to off-site TDM funds to reduce residual impacts that cannot be mitigated on a project-specific basis.	Consistent. As discussed in Section 4.2, *Air Quality,* the project applicant would pay a Circulation System Improvement Fee, which funds the TDM plan and helps mitigate emissions resulting from the new development. Transportation reduction measures to reduce traffic and congestion are discussed in Section 4.11, *Traffic, Circulation, and Access*.
ER 14.3. Reducing Carbon Monoxide Exposure at Congested Intersections. Require mitigation measures that consider prohibiting the construction of residences or buildings lacking ventilation systems at congested intersections with the potential for excessive Carbon Monoxide "hot spot" exposure to sensitive receptors.	Consistent. See Section 4.2, *Air Quality,* for discussion of carbon monoxide "hot spot" risks. It was determined that future traffic combined with project traffic would not cause an exceedance of either the state or federal CO standards in 2020 or 2025 and project-related CO impacts would be less than significant.

The City of Oxnard EAP, adopted in April 2013, is the City's guiding document for reducing energy consumption and reducing renewable energy production within City Government and the community relative to planned growth. The purpose of the document is to establish a net energy consumption reduction target and to identify and scope programs to achieve the target over time. It builds upon existing energy conservation efforts and identifies energy conservation and reduction programs consistent with 2030 General Plan goals and policies, utility company programs, and State and Federal legislation and initiatives. As the project has been shown not to exceed the SCAQMD's GHG emissions threshold, the project would also be consistent with the overall EAP goal of efficient energy use.

The Avalon Homes project would be consistent with the goals in AB 32, SB 375, the SCAG RTP/SCS, the City of Oxnard 2030 General Plan, and the City of Oxnard EAP. Therefore, the project would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts associated with GHG emissions would be less than significant.

Mitigation Measures. As specified above, the proposed project would result in emissions of less than 3,000 metric tons of CO_2e per year would be consistent with applicable plans, policies, and regulations; therefore, no mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Greenhouse gases and climate change are, by definition, cumulative impacts. Refer to Impact GHG-1 and Impact GHG-2 for a detailed discussion of climate change and GHG emissions. As indicated above in Impact GHG-1 and Impact GHG-2, GHG emissions associated with the proposed project would be less than significant, and the project's impacts are therefore also cumulatively less than significant.

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4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 Setting

The project site is located on 38.33 acres and is currently vacant, undeveloped land. The site was formerly operated as an oil field waste disposal site and currently consists of sand dunes, disturbed sand areas, and willows. The site is bounded by Edison Canal, the residential Oxnard Dunes Subdivision, Harbor Boulevard, and West Fifth Street to the East, South, West, and North, respectively, see Figure 2-2 in Section 2.0, *Project Description.*

Appendix F of this EIR contains the *Phase I Environmental Site Assessment Report* prepared for this project by Converse Consultants, which provides additional information

a. Hazardous Materials. The federal government defines a hazardous material as a substance that is toxic, flammable/ignitable, reactive, or corrosive. Extremely hazardous materials are substances that show high or chronic toxicity, carcinogenic, bioaccumulative properties, persistence in the environment, or that are water reactive. Improper use, storage, transport, and disposal of hazardous materials and waste may result in harm to humans, surface and groundwater degradation materials and waste may result in harm to humans, surface and groundwater degradation, air pollution, fire, and explosion. The risk of hazardous material exposure can come from a range of sources; these may include household uses, agricultural/commercial/industrial uses, transportation of hazardous materials, and abandoned industrial sites known as brownfields.

Household Products. By far the most common hazardous materials are those found or used in the home. Waste oil is a common hazardous material that is often improperly disposed of and can contaminate surface water through runoff. Other household hazardous wastes (used paint, pesticides, cleaning products, and other chemicals) are common and often improperly stored in garages and homes throughout the community. The nearest residences to the project site are the Oxnard Dunes subdivision, immediately adjacent to the project site. These residences are likely to contain these chemicals and hazardous materials.

Commercial and Industrial Uses. Users of hazardous materials include commercial manufacturing, petroleum exploration, industrial fabrication, biotechnology, and agribusinesses. Potentially hazardous materials used by businesses may include petroleum based fuels, chlorinated fertilizers, pesticides, and herbicides. The majority of current users of hazardous materials include gas stations and other automotive service-related business, utilities, agribusinesses, and other commercial and industrial uses.

Gas stations and industrials activities located next to roadways in the vicinity of the project site may have released hazardous materials to the environment in the past. The nearest gas station to the project site is located approximately 0.9 mile to the east of the project site. There is no industrial zoned land within a one mile vicinity of the project site.

Hazardous Materials Transportation. Access to the project site is provided via West Fifth Street, Harbor Boulevard, and West Wooley Road. Both the U.S. Environmental Protection Agency (USEPA) and the United States Department of Transportation (DOT) regulate the overall transportation of hazardous waste and material. The USEPA administers permitting,

tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act (RCRA). DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. This Act administers container design, and labeling and driver training requirements. These established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste.

Transportation of hazardous materials on highways falls under federal legislations; however, authority is delegated to various state and local agencies that are focused on specific aspects of hazardous materials and transportation. The Hazardous Waste Control Act establishes the California Department of Health Services (DHS) as the lead agency in charge of the implementation of the RCRA program. State and local agencies such as the California Highway Patrol (CHP), State of California Department of Transportation (CalTrans), and the City and County Fire Departments are responsible for the enforcement of state and federal regulations and responding to hazardous materials transporting emergencies. CHP establishes state and federal hazardous material truck routes and has lead responsibility over hazardous material spills on State highways. The nearest highway to the project site is Highway 1, located approximately 3.3 miles to the east.

In addition, an existing two-inch natural gas utility line, owned and managed by Southern California Gas Company (SoCal Gas), extends within the right-of-way of Canal Street to its current terminus at the southern boundary of the project area. This line can be extended into the project area to serve the project, consistent with SoCal Gas procedures. As with any work in the public right-of-way, the project proponent would be required to notify the proper authorities prior to any excavation to ensure that all utility-owned lines, including the natural gas utility line, are properly identified and avoided. Installation of new gas line to serve to project would also be in accordance with all applicable safety regulations such that it does not result in release of hazardous materials into the environment.

Poison Oak. Section 4.3, *Biological Resources*, of this EIR notes the presence of poison oak (*Toxicodendron diversilobum*) as part of the understory associated with willow thickets on the property. Isolated occurrences of this plant have also been reported in vegetation along residential lots on Catamaran Drive adjacent to the project site. Although contact with oils from poison oak may cause an itching blistering rash, particularly for sensitive individuals, poison oak is not a regulated hazardous material and is not ordinarily considered in Environmental Site Assessments such as the *Phase I Environmental Site Assessment Report* prepared for the project and included in Appendix F.

b. Hazardous Materials Sites. The following databases were searched in June 2016 for records relating to any known hazardous materials contamination at the project site:

- *The State Water Resources Control Board (SWRCB) GeoTracker database*
- *The Department of Toxic Substances Control (DTSC) EnviroStor database*
- *The Cortese List*

Based on a search of the above databases, eight hazardous sites were identified within one half mile of the project site. GeoTracker identified Humacid – Oxnard Sump, J.N.J. – Carney Landfill, Oxnard Shores Exxon, and Wooley Road South Parcel. Each of these sites is classified

as Completed – Case Closed, meaning that the land disposal site ceased accepting waste, was closed in accordance with all applicable statutes, regulations, and local ordinances in effect at time of closure, and was monitored for at least 30 years. The SWRCB has determined that these waste sites no longer pose a threat to water quality (SWRCB, 2016).

EnviroStor identified the Dunes Subdivision – Oxnard site within the central-northern portion of the project site. EnviroStor also identified the Oxnard Seacoast Battery site, North Shore at Mandalay Bay site, and Southwest Elementary School Site #4 near the project site. The project site was historically operated as an oil field waste disposal site. Between 1955 and 1961, wastes consisting of oil well drilling muds with small quantities of crude oil were disposed into three unlined sumps on the project site. In 1962 the sumps were closed and the waste material removed, then spread and mixed with native soil, dried, returned to the sumps, compacted, and covered with a layer of clean soil. Since 1988, the site has been screened and remediated, with the DTSC determining that the waste posed no risk. As a result, a Final Remedial Action Plan (RAP) was adopted and the site was delisted in 1991 (DTSC, 2016).

The Oxnard Seacoast Battery site, which is located approximately 0.25 mile to the northwest of the project site, was identified in the EnviroStor database due to the potential presence of explosives. The Oxnard Seacoast Battery site is a 19 acre site that previously consisted of two 155 millimeter (mm) guns on "Panama" mounts and the assorted support structures in the Ordnance Area of the Navy Military Training Area; the site is currently developed with single family residential housing. A 1996 site inspection discovered no evidence of ordnance or explosive hazards in the area.

North Shore at Mandalay Bay is located approximately 200 feet from the northern edge of the project site and 0.28 mile from the residential portion of the project site. The North Shore at Mandalay Bay site was listed as a cleanup site due to potential contamination of Benzene, Dioxin, Petroleum, Polychlorinated Biphenyls (PCBs), and Polynuclear Aromatic Hydrocarbons (PAHS) from previous operation as the former JNJ Disposal Landfill, Carney and Son Landfill, and a permitted oil field waste disposal facility. Additionally, Volatile Organic Compounds (VOC) and PCB's have been detected in the groundwater. The site is an active, voluntary cleanup site and a Soil Vapor Extraction system was approved in May 2016 after a successful Soil Vapor Extraction pilot program. A subsurface investigation was performed at the northern edge of the project site in 2009 to determine the effect of the North Shore at Mandalay Bay cleanup site on groundwater at the project site (Converse Consultants, 2014). The results of the investigation indicated that trace levels of methyl ethyl ketone and acetone were detected in some of the groundwater samples; however levels were below published regulatory levels for tap water.

The Southwest Elementary School Site #4 is a nine acre parcel located approximately 0.5 mile from the southeastern edge of the project site. The school site is a vacant parcel previously utilized for agricultural purposes from 1945 to 2004. Additionally, approximately half of the project site lies within the mapped boundary of the West Montalvo Oilfield. In 2010, a Preliminary Environmental Assessment (PEA) was performed to determine if residual agricultural and oil field related constituents may pose a threat to human health or the environment. The PEA sampled soil for organochlorine pesticides, metals, total petroleum hydrocarbons, and semi-volatile organic compounds and sampled soil gas for methane and

hydrogen sulfide. After submittal of the PEA to the DTSC, the DTSC determined that there was neither a release of hazardous material nor the presence of a naturally occurring hazardous material which would pose a threat to public health or the environment under unrestricted land use. The PEA was approved with a No Further Action determination.

c. Environmental Site Assessment. Converse Consultants completed a Phase I Environmental Site Assessment (ESA), see Appendix F, in 2014 for the project site that included interviews with the property owner representatives, property and vicinity reconnaissance, review of regulatory agency records, description of physical setting, historical review, and interviews with public agency personnel (Converse Consultants, 2014). The ESA revealed no evidence of recognized environmental conditions in connection with the project site.

d. Wildfire Hazards. Wildfires are large-scale brush and grass fires in undeveloped areas. Dense urban areas do not contain large amounts of continuous surface fuels to feed a wildfire. Therefore, these areas are generally more resistant to the spread of wildfires than other areas. The City of Oxnard is Ventura County's largest urban community and has limited exposure to the wildfire hazard. The Multi-Jurisdiction Hazard Mitigation Plan for Ventura County, California notes that no commercial buildings and only five residential buildings have potential exposure to high and very high wildfire hazards.

e. Airport Safety Hazards. The Oxnard Airport is located approximately 1 mile to the northeast of the project site. The Federal Aviation Administration (FAA) requires runway protection zones and height limits on structures near airports to reduce risks to the public. As shown in Exhibit 6B of the Airport Comprehensive Land Use Plan Update for Ventura County (2000), the project site is not identified as being located within any safety protection zones for the Oxnard Airport. The Plan identifies the project site for future residential use (County of Ventura, 2000).

f. Regulatory Setting. The management of hazardous materials and hazardous wastes is regulated at federal, state, and local levels, including, among others, through programs administered by USEPA, DTSC, federal and state occupational and safety agencies, and Ventura County Environmental Health Services.

Federal. The Federal Toxic Substances Control Act (1976) and RCRA (1976) established a program administered by the EPA for the regulations of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was enacted in 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled revision of the National Contingency Plan (NCP), which

provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL).

State. DTSC is the primary agency in California that regulates hazardous waste and cleanup of existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code.

The California Hazardous Waste Control Law (HWCL) regulates hazardous wastes more stringently than RCRA. HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; proscribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 6596.2 requires DTSC, the State Department of Health Services, SWRCB, and CalRecycle to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for any development as complete, the applicant must consult these lists to determine if the project site is included.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the California Code of Regulations. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed; it may also be required if certain other activities are proposed. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Local. The Oxnard General Plan identifies the following policies related to hazards and hazardous materials.

CD1.12 ***Avoiding Encroaching the Oxnard Airport.*** *Retain land within the airport hazard area as permanent open space as shown on the Land Use Map or otherwise recommended by the County of Airports.*

ICS-16.3 ***Recycling of Hazardous Materials.*** *Continue to require the proper disposal and recycling of hazardous materials.*

SH-3.1 ***Location of New Development.*** *Encourage new development to avoid areas with high geologic, tsunami, flood, beach erosion, and fire or airport hazards.*

SH-4.1 ***Coordination of Disaster Services.*** *Coordinate with the County Office of Emergency Services, other cities, US Navy, State Office of Emergency Services,*

State Emergency Operations Center (EOC), and FEMA to coordinate emergency preparedness training.

SH-4.2 ***Continued Evaluation of Emergency Response Plans.*** *Continue to evaluate, develop, and practice emergency response plans in light of changing natural and manmade risks and hazards, and in coordination with County, State, and Federal emergency planning.*

SH-4.6 ***Access and Evacuation Corridors.*** *Ensure that access and evacuation corridors are identified in the event of various types of minor and major emergencies.*

SH-7.2 ***Handling of Hazardous Materials.*** *Require that hazardous materials are used, stored, transported and disposed of within the City in a safe manner and in compliance with local, state, and federal standards.*

SH-7.3 ***Designated Hazardous Materials Routes.*** *Avoid, wherever possible, the routing of hazardous materials near residential, tourist, and recreational areas and maintain a hazardous material truck route in the office of the Traffic Engineer.*

SH-7.5 ***Implementing Ventura County Hazardous Waste Management Plan.*** *Implement the policies of the Ventura County Hazardous Waste Management Plan as they pertain to the Oxnard Planning Area.*

SH-7.12 ***Hazardous Materials Studies.*** *Ensure that proponents of new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Recommendations required to satisfy federal or State cleanup standards outlined in the studies will be implemented as part of the construction phase for each project.*

SH-9.1 ***Airport Land Use Compatibility Plans.*** *Require development around the Oxnard and Camarillo Airports to be consistent with the safety policies and land use compatibility guidelines contained within the Ventura County Airport Land Use Plan.*

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds. Assessment of impacts is based on the Phase I ESA performed by Converse Consultants (2014), included as Appendix F, and review of records contained in the SWRCB GeoTracker database and DTSC EnviroStor database.

For the purpose of this analysis, a significant impact would occur if physical changes that could be facilitated by buildout of the proposed project would result in the following conditions, listed in Appendix G of the *State CEQA Guidelines* and the City of Oxnard's 2017 *Guideline Thresholds.*

1. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*

2. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
3. *Emit hazardous emissions or involve handling hazardous or acutely hazardous substances, or waste within one-quarter mile of an existing or proposed school in quantities or a manner that would create a substantial hazard;*
4. *Be located on a site included on a list of hazardous material sites compiled pursuant to State Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;*
5. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or*

The Initial Study determined that the project would not result in significant impacts relative to Thresholds 1, 2, 3, and 5 due to the residential nature and location of the project. Development of the project as proposed would not disturb most of the areas where poison oak is located on the property—in the understory of the willow thickets. Where isolated poison oak plants may be located within the development footprint, they will be removed entirely as part of the development and their removal would not result in any substantial increase in potential exposure to neighboring or future residents. For this reason, these impacts will not be further discussed. Refer to the Initial Study in Appendix A for more information relative to these issues.

b. Project Impacts and Mitigation Measures

Threshold 4:	*Would the project be located on a site included on a list of hazardous materials sites compiled pursuant to State Government Code Section 65962.5 and, as a result, would it create substantial hazard to the public or the environment?*

Impact HAZ-1 The project site is located on a site listed as a hazardous waste site by the Department of Toxic Substances EnviroStor Database. However, the site was delisted in 1991 after DTSC determined the waste posed no risk. Therefore, the impact from the hazardous waste site would be Class III, *less than significant.*

As discussed in Section 4.7.1(a) the project site contains a hazardous waste site as identified on the DTSC EnviroStor Database. The site is located in the portion of the project site, north of the proposed residential development, in the area zoned for Resource Protection which would remain undeveloped under the project. The project site was operated as an oil field waste disposal site between 1955 and 1961. Waste consisting of oil well drilling muds, with small quantities of crude oil, was disposed into three unlined sumps on the project site. The sumps were closed in 1962, with the waste material being removed, spread and mixed with the native soil on site, dried, and returned to the sumps, compacted, and covered with a layer of clean soil. Since 1988, the site has been screened and remediated, with the DTSC determining that the waste posed no risk. As a result, a Final Remedial Action Plan (RAP) was adopted and the site was delisted in 1991 (DTSC, 2016).

Mitigation Measures. No mitigation would be necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

4.8 HYDROLOGY AND WATER QUALITY

This section assesses potential impacts relating to hydrology and water quality. The discussion below is based on the Preliminary Hydrology and Hydraulic Report prepared by Jensen Design and Survey, Inc. in 2016 (Appendix G) and other sources referenced herein.

4.8.1 Setting

a. Regional Setting. The project site is located at the northern end of the South Coast Hydrologic Region (HR). The South Coast HR covers approximately 10,600 square miles of southern California and includes all of Orange County, most of San Diego and Los Angeles Counties, parts of Riverside, San Bernardino, and Ventura counties, and a small amount of Kern and Santa Barbara Counties. Seventy-three groundwater basins and subbasins underlie approximately 3,500 square miles, or 32 percent, of the hydrologic region. Most of the groundwater in the South Coast HR is stored in alluvial aquifers (Department of Water Resources [DWR], 2015).

Within the South Coast HR, the project site is located in the Santa Clara River Valley Groundwater Basin. The Santa Clara River Valley Groundwater Basin is composed of six groundwater subbasins that underlie approximately 299 square miles. Collectively, the Santa Clara River Valley Groundwater Basin is bound on the west by the Topatopa Mountains and the Pacific Ocean; on the north by the San Cayetano fault and the Santa Ynez, Topatopa, and Piru mountains; on the east by the Pleasant Valley and Las Posas Valley groundwater basins and the San Gabriel Mountains; and on the south by the Oak Ridge, Santa Susana, San Gabriel, and Santa Monica mountains, the Oak Ridge and Saticoy faults, and the Pacific Ocean. The major river draining the watershed is the Santa Clara River, which drains west into the Pacific Ocean. The Santa Clara River tributaries include the Bouquet, Castaic, Piru, Sespe, Santa Paula, and Calleguas creeks.

Primary water-bearing deposits within the Santa Clara Valley Groundwater Basin include Quaternary alluvium, Pleistocene terrace deposits, the Pleistocene San Pedro Formation, and the Pliocene-to Pleistocene Saugus Formation (DWR, 2015).

The climate in the region ranges from Mediterranean to subtropical steppe. Annual precipitation in the region ranges from more than 40 inches in the mountains to less than 10 inches in some valleys, with an overall average of 17.6 inches for the region (DWR, 2015).

b. Project Setting. The project is located in the City of Oxnard in Ventura County, approximately 2,000 feet inland from the Pacific Ocean. The project site is approximately two miles south of the outlet of the Santa Clara River and just west of the Edison Canal, which provided cooling water to the no longer operating Mandalay Generation Station, north of the project. The project site consists of undeveloped land and remnant dunes and does not contain any drainages or wetlands subject to U.S. Army Corps of Engineers (USACE) jurisdiction under the Clean Water Act.

The project site is comprised of varying topography, ranging from fully formed dunes in the north to flatter disturbed sandy areas in the south. The project site generally drains through

either natural channels directly to the Edison Canal to the east or through existing storm drains to the Edison Canal.

Surface Water Resources. The project site does not contain any bodies of surface water, such as lakes or streams. However, the Edison Canal, which conveys ocean water northward from Channel Islands Harbor to the Mandalay Generating Station, is situated immediately east of the site's eastern border. The canal would likely meet applicable criteria for federal protection as a water of the United States and state protection as a streambed and coastal wetland. Additionally, dense willow vegetation in the project site suggests freshwater connection via groundwater to the Edison Canal, east of the project site. However, no surface water is present in this area.

The project site is approximately two miles from the outlet of the Santa Clara River. Due to the projects proximity to the coastline, however, the project is outside of the Santa Clara River watershed. Water quality within the Channel Island Harbor is monitored at Hobie Beach roughly two miles south of the project site. The County of Ventura Environmental Health Department measures water quality at all public beaches. As of July 5, 2016, Hobie Beach was within all State standards for fecal coliform, total coliform, and enterococcus. Table 4.8-1 shows the measured contaminant concentrations at Hobie Beach and the State standards.

Table 4.8-1
Channel Island Harbor Water Quality and State Standards

Contaminant	Concentrations (MPN/100ml)[1]	State Standard (MPN/100ml)
Fecal Coliform	<10	400
Total Coliform	10	10,000
Enterococcus	<10	104

[1] Water quality measurements taken at Hobie Beach
MPN/100 ml = most probable concentration (MPN) per 100 milliliters (ml)
Source: Ventura County Environmental Health 2016

Groundwater Resources. As described above, the project site overlies the Santa Clara River Valley Groundwater Basin. Specifically, the project site overlies the Oxnard Subbasin. The Oxnard Groundwater Subbasin is located in the lower reaches of the Santa Clara River and Calleguas Creek. The groundwater system in the Oxnard Subbasin includes a main recharge area termed the forebay and a confined aquifer system that extends throughout the main part of the subbasin and under the Pacific Ocean. The Oxnard Groundwater Subbasin contains five locally defined aquifers with the Oxnard Aquifer and Fox Canyon Aquifer as the two primary freshwater-bearing units (DWR, 2003). The Oxnard Aquifer is composed of late Pleistocene-to-Holocene sands and gravels that are coarser-grained in the forebay area and become finer-grained toward the coast. The Oxnard Aquifer is generally located 100 to 220 feet below the ground surface, overlain by a 150-foot-thick confining sequence of silt and clay. A 50- to 100-foot-thick zone of sand and gravel forms a semi-perched aquifer of poor quality water above the confining silt and clay (DWR, 2003). The semi-perched aquifer is generally not used for water supply (Fox Canyon Groundwater Management Agency 2007). The Oxnard Aquifer comprises the upper unit of the upper aquifer system. The Mugu Aquifer underlies the Oxnard Aquifer. The Mugu Aquifer is a 170-feet-thick Pleistocene coarse-grained deposit and is considered the basic unit of the upper aquifer system.

The lower aquifer system is composed of the Hueneme and Fox Canyon aquifers, and both are located within the San Pedro Formation. Both of these aquifers are important suppliers of groundwater. The Hueneme Aquifer is deposited in most coastal areas of the Oxnard Subbasin and is an important groundwater producer in the Oxnard Subbasin and the adjacent Las Posas Valley and Pleasant Valley groundwater basins (Fox Canyon Groundwater Management Agency, 2007). The Hueneme Aquifer consists of relatively thin sand and gravel deposits and is underlain by a silt-and-clay sequence as much as 1,000 feet thick. Below the thick silt-and-clay sequence is the Fox Canyon Aquifer. The Fox Canyon Aquifer is a 100- to 300-foot-thick permeable gravel sequence that is also the base of the San Pedro Formation (California Department of Water Resources, 2003). The Fox Canyon Aquifer underlies the Oxnard Subbasin, the Mound Subbasin, and the adjacent Las Posas Valley and Pleasant Valley groundwater basins.

The upper and lower aquifer systems extend several miles offshore and are in direct contact with sea water (Fox Canyon Groundwater Management Agency, 2007). Seawater intrusion has been observed in the Port Hueneme and Point Mugu areas (DWR, 2003).

Recharge to the subbasin is provided by percolation of surface flow from the Santa Clara River into the Oxnard Forebay. Precipitation and floodwater from the Calleguas Creek drainage percolate into the unconfined gravels near Mugu Lagoon. Subsurface flow from Santa Paula Subbasin makes its way over or across the Oak Ridge fault, and some underflow may come from the Las Posas and Pleasant Valley Basins to the east. Some amount of irrigation and septic system return also occurs.

The Oxnard Subbasin has been identified as a high priority basin under the California Statewide Groundwater Elevation Monitoring (CASGEM) program. Implications of being a high priority basin, in regards to the Sustainable Groundwater Management Act, are discussed in more detail below in section 4.8.1 (c), *Regulatory Setting*.

Groundwater resources to the City of Oxnard are provided through City owned and operated wells, as well as United Water Conservation District (UWCD) owned and operated wells, drawing from the Oxnard Subbasin. UWCD provides groundwater to their Oxnard Hueneme System from 12 wells that draw water from the Oxnard Forebay, northwest of the project site. The City of Oxnard currently has ten active wells drawing groundwater from both the upper and lower aquifer systems. The City provides for reliable water supply, primarily through the Groundwater Recovery Enhancement and Treatment (GREAT) Program, a water resources project that combines wastewater recycling and reuse, groundwater injection, storage and recovery, and groundwater desalination to provide regional water supply solutions to water users in the Oxnard Plain (City of Oxnard 2004). The Fox Canyon Groundwater Management Agency (FCGMA) manages and protects both confined and unconfined aquifers within several groundwater basins underlying the southern portion of Ventura County, including the Oxnard Subbasin. The FCGMA is an independent special district, separate from the County of Ventura or any city government. It was created by the California Legislature in 1983 to oversee Ventura County's vital groundwater resources.

Drainage. The project site currently consists of undeveloped land and remnant sand surfaces. Throughout the majority of the project site, stormwater generally drains through

natural channels east to the Edison Canal. The southernmost portion of the project site is described as drainage G in the Preliminary Hydrology and Hydraulic Report by Jensen Design and Survey Inc. (Appendix G). This drainage is part of a larger approximately 30 acre watershed that drains runoff towards three existing catch basins, two located along Dunes Street and one along Canal Street. Drainage G drains north to south to the existing catch basin along Canal Street. Runoff entering this structure is routed through a series of existing storm drain lines and ultimately discharged directly into the Edison Canal. The Edison Canal connects with the Channel Islands Harbor approximately half a mile south of the project site.

In their existing condition, storm drain lines serving the southern portion of the project site have adequate capacity to handle a 10-year storm event Jensen Design and Survey Inc. 2016).

Flooding. FEMA defines base flood heights for the 100-year flood zone, also referred to as Flood Hazard Areas (not including flooding in the unlikely event of a dam failure). The 100-year flood zone is defined as the area that would be inundated by the magnitude flood which has a 1 percent probability of occurring in any given year. As shown in Figure 4.8-1, the entire project site is outside the effective FEMA-defined 100-year flood zone. The project site is identified as being within the Zone X flood area. The Zone X area is defined as being within the 500 year flood zone, or being inundated by 0.2 percent annual chance flooding (Federal Emergency Management Agency, 2010).

c. Regulatory Setting

Federal. At the Federal level the County falls under the jurisdiction of the U.S. Environmental Protection Agency (USEPA) Region 9. USEPA is primarily responsible for implementing Federal water quality laws and USACE is responsible for implementing one portion of the water quality law, as described below.

Clean Water Act (CWA). The CWA is the primary Federal law that protects the quality of the nation's surface waters, including lakes, rivers, aquifers, and coastal areas. Although the CWA applies to groundwater, implementation is focused on the protection of surface water. The CWA is a 1977 amendment to the Federal Water Pollution Control Act of 1972 (United States Code, Title 33, Section 1251 et seq.), which established the basic structure for regulating pollutant discharges to navigable waters of the United States. Under the CWA, USEPA sets national standards and effluent limitations, but delegates significant responsibilities to the California State Water Resources Control Board (SWRCB) and its regional water quality control boards (RWQCB). The CWA is based on the concept that all discharges into the nation's waters are unlawful unless specifically authorized by permit. The CWA includes a permit system that provides two general types of pollution control limits: (1) effluent limits that are technology-based and limit the quantity of pollutants discharged from a point source such as a pipe, ditch, or tunnel into a navigable water body; and (2) ambient water quality standards that limit the concentration of pollutants in navigable waters based on the beneficial uses to which particular waters are put. Key sections of the CWA are described below.

Section 303(d) of the CWA requires states to submit a list of impaired waters which are too polluted or otherwise degraded to meet water quality standards. The law requires that the state prioritize waters/watersheds for development of TMDL regulations. This

Imagery provided by Google and its licensors © 2016;
Additional data provided by FEMA, 2015.

FEMA Flood Map

Figure 4.8-1

information is compiled in a list and submitted to USEPA for review and approval. The SWRCB and RWQCBs monitor and assess water quality on an ongoing basis.

- Section 401 of the CWA requires water quality certification for any activity, including the construction or operation of a facility which may result in any discharge into navigable waters (Title 33 CFR §1341). Within California, Section 401 is implemented by SWRCB and the RWQCBs.
- Section 402 of the CWA establishes a framework for regulating non-point source storm water discharges under the National Pollutant Discharge Elimination System (NPDES) (Title 33 CFR §1342). The project is subject to requirements of the current NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (NPDES No. CAS000002; Order No. 2012-0006-DWQ). In accordance with NPDES regulations specified in Section 402 of the federal Clean Water Act, if a project disturbs more than one acre of land, the project contractor is required to implement a Stormwater Pollution Prevention Plan (SWPPP) which specifies best management practices (BMPs) to be implemented as part of the project. These BMPs include erosion and sediment controls such as the use of silt fences and straw wattles to prevent loose soils from leaving the project disturbance area such as in the case of a precipitation event, as well as measures to prevent and contain accidental spills or leaks of potentially hazardous materials.
- Section 404 of the CWA requires a permit for the discharge of dredged fill material into navigable waters at specified disposal sites (Title 33 CFR §1344). Responsibility for administering and enforcing Section 404 is shared by the USACE and USEPA.

Federal Emergency Management Agency (FEMA). FEMA is responsible for determining flood elevations and floodplain boundaries based on USACE studies and approved agency studies, and for coordinating the federal response to floods, earthquakes, hurricanes, and other natural or man-made disasters. FEMA produces Flood Insurance Rate Maps (FIRMS), which identify the locations of special flood hazard areas (SFHAs), including the 100-year flood zone, or the area that would be inundated by the magnitude flood which has a 1 percent probability of occurring in any given year. Executive Order 11988 (Flood Plain Management) links the need to protect lives and property with the need to restore and preserve natural and beneficial flood plain values. Specifically, federal agencies are directed to avoid conducting, allowing, or supporting actions on the base floodplain unless the agency finds that the base floodplain is the only practicable alternative location. Similarly, Department of Transportation (DOT) Order 5650.2, which implements Executive Order 11988, the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973, prescribes policies and procedures for ensuring that proper consideration is given to avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs, and budget requests.

State. USEPA has delegated direct authority for implementation and oversight of Federal water quality laws within California to SWRCB and the nine RWQCBs. At the State level, the City of Oxnard falls under the jurisdiction of the Los Angeles RWQCB.

Water Board. The California SWRCB and the nine RWQCBs have the responsibility in California to protect and enhance water quality, both through their designation as the lead agencies in implementing the Section 319 non-point source program of the federal CWA, and through the state's primary water pollution control legislation, the Porter-Cologne Water

Quality Control Act (Water Code, §13000 et seq.). The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. The RWQCBs develop and implement Water Quality Control Plans (Basin Plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of Waste Discharge Requirements (WDRs) by the respective RWQCB. Land and groundwater-related WDRs (i.e., non-NPDES WDRs) regulate discharges of privately or publicly treated domestic wastewater and process and wash-down wastewater. WDRs for discharges to surface waters also serve as NPDES permits, which are further described below.

The Los Angeles RWQCB (Region 4) guides and regulates water quality in streams and aquifers between Rincon Point and the eastern Los Angeles County line, through designation of beneficial uses, establishment of water quality objectives, and administration of the NPDES permit program for stormwater and construction site runoff. The Central Coast RWQCB is also responsible for providing permits and water quality certifications in the above-referenced areas (Section 401) pursuant to the CWA.

All dischargers of waste to waters of the State are subject to regulation under the Porter-Cologne Water Quality Control Act and the requirement for WDRs is incorporated into the California Water Code. This includes both point and non-point source dischargers. All current and proposed non-point source discharges to land must be regulated under WDRs, waivers of WDRs, a basin plan prohibition, or some combination of these administrative tools. Dischargers of waste directly to state waters would be subject to an individual or general NPDES permit, which also serve as WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. Violations of WDRs may be addressed by issuing Cleanup and Abatement Orders or Cease and Desist Orders, assessing administrative civil liability, or seeking imposition of judicial civil liability or judicial injunctive relief.

The Los Angeles RWQCB is responsible for implementing portions of the Federal CWA in the project region as discussed previously. This includes compliance with Section 303(d) and Section 402.

Sustainable Groundwater Management Act. Signed into law on September 16, 2014, the Sustainable Groundwater Management Act (SGMA) is a comprehensive legislation for the management of groundwater throughout the State composed of Senate Bill (SB) 1168, AB 1739, and SB 1319. The SGMA aims to provide for local planning and management of groundwater basins and requires DWR to prioritize these basins as high-priority, medium-priority, low-priority, or very low-priority using the CASGEM system by January 31, 2015. The SGMA requires local government entities to form a Groundwater Sustainability Agency (GSA) for individual groundwater basins by June 30, 2017. A GSA is responsible for developing and implementing a Groundwater Sustainability Plan (GSP) to meet the sustainability goal of ensuring that each groundwater basin is operated within its sustainable yield, to avoid

overdraft or water quality degradation. The SGMA encourages, but does not require, that basins defined as low- and very low-priority develop or be managed under a GSP. High- and medium-priority basins however, are required to develop and implement their own GSP or functional equivalent established by the local GSA by January 31, 2020 for critically over drafted basins, and January 31, 2022 for other medium- or high-priority basins. The DWR is required to develop and adopt emergency regulations for evaluating the development and implementation of GSPs, and coordination of agreements by June 1, 2016. A GSP may be any of the following (Water Code § 10727(b)):

- A single plan covering the entire basin developed and implemented by one GSA
- A single plan covering the entire basin developed and implemented by multiple GSAs
- Multiple plans implemented by multiple GSAs and coordinated pursuant to a single coordination agreement that covers the entire basin and which is subject to Water Code Section 10727.6

The SGMA gives a GSA broad power to adopt rules, regulations, ordinances, and regulations and take any action it deems necessary to carry out the SGMA. These powers and responsibilities include the following:

- Determine the need for groundwater management
- Prepare and adopt a groundwater sustainability plan and implement rules and regulations
- Propose and collect fees
- Monitor compliance and enforcement
- Investigate surface waters and groundwater, as well as surface and groundwater rights
- Regulate groundwater extractions. However, any limitation on groundwater extractions by a GSA shall not be construed to be a final determination of rights to extract groundwater from the basin.

If a basin fails to meet the requirements within the statutory deadlines, the SGMA authorizes the SWRCB to designate the basin as a probationary basin, develop an interim groundwater management plan for that basin, and assume the management authorities that the SGMA has granted to GSAs until the local GSA can assume management of the basin. The SGMA states that it will not alter, establish, or determine groundwater or surface water rights, but rather, establishes the policy of the State that groundwater resources be managed sustainably for long-term reliability and multiple beneficial uses.

The Oxnard Subbasin of the Santa Clara River Valley Groundwater Basin is listed as a high priority basin under the CASGEM system.

Local. Chapter 22, Article XII of the Oxnard Municipal Code addresses storm water quality management. Additionally, the Fox Canyon Groundwater Management Agency was created to act as an independent special district to manage and protect the aquifers within groundwater basins underlying the southern portion of Ventura County, including Oxnard.

Oxnard Municipal Code Chapter 22, Article XII, Storm Water Quality Management. This article of the City of Oxnard's Municipal Code implements the Federal Water Pollution Control

Act, and Division 7 of the California Water Code. The different sections of this article set rules and regulations to control storm water quality including setting discharge prohibitions, pollutant reduction, protection of storm drain systems and watercourses, implementation of BMPs, and control of runoff leaving construction development sites.

Section 22-222 requires all construction activity that results in land disturbance and requires a grading, building, or discretionary permit to be undertaken in accordance with any conditions and requirements established by the municipal storm water permit and any applicable NPDES permits or by the City, and a project specific plan identifying structural and nonstructural BMPs to be implemented during construction activities. Project specific plans include storm water pollution and prevention plans (SWPPP) and storm water pollution control plans (SWPCP). Any construction activity requiring a SWPPP or SWPCP will be inspected a minimum of once during the wet season for the implementation of storm water quality controls. Since the proposed project is disturbing more than one acre of land, it would be required to create and implement a SWPPP for the site.

Section 22-223 establishes rules and regulations for post construction development. Development projects requiring post construction storm water controls, such as land development, building additions and redevelopment, are required to create and submit a post construction storm water management plan (PCSMP) that includes demonstration that the post construct storm water controls will function properly, an operation and maintenance manual, and storm water treatment device access and maintenance agreement. The owner or responsible person of a property with a post-construction storm water control device must submit to the city an annual statement on the form provided by the city that certifies that the post-construction storm water device is being adequately maintained and functions as designed.

Sections 22-226 and 22-227 set rules and regulations to protect watercourses and storm drains, including required maintenance of structures within or adjacent to storm drains or waterways and required permits for activities that would discharge a pollutant, modify flows, or alter existing storm drain systems or waterways.

Oxnard 2030 General Plan. Chapter 4, *Infrastructure and Community Services*, and Chapter 5, *Environmental Resources*, of the City of Oxnard's 2030 General Plan provides the following objectives and policies pertaining to hydrology and water quality applicable to the proposed project:

Goal ICS-11	*Water supply, quality, distribution and storage adequate for existing and future development.*
ICS-11.1	*Support the countywide Water Quality Management Plan, the Sea Water Intrusion Abatement Program, wastewater reclamation, water conservation programs, and regional coordination.*
ICS-11.5	*Support the policies of the Fox Canyon Groundwater Management Agency to protect, enhance, and replenish the aquifers underlying the Oxnard Plain.*

ICS-11.9	*Continue to adhere to the recommendations of the Ventura County Regional Water Quality Planning Program regarding groundwater quality and extractions.*
ICS-11.11	*Monitor water quality regularly to ensure that safe drinking water standards are met and maintained in accordance with State agencies with jurisdiction and Environmental Protection Agency (EPA) regulations, and take necessary measures to prevent contamination.*
Goal ICS-12	*Adequate capacity at the City Waste Water Treatment Plant to accommodate existing and future growth.*
ICS-12.3	*Monitor and ensure that discharges comply with approved permits.*
ICS-12.4	*Treat all wastewater in compliance with approved discharge permits.*
ICS-12.5	*Require by conditions of approval that silt and sediment from construction be either minimized or prohibited.*
ICS-12.6	*Impose conditions in order to ensure adequate wastewater capacity for proposed new development.*
Goal ICS-13	*Adequately sized storm drain systems and discharge treatment, certified levees, and implementation of appropriate National Pollutant Discharge Elimination System (NPDES) permits and regulations.*
ICS-13.1	*Discourage development, major infill, and structural improvements (except for flood control purposes) within the 100-year floodplain as regulated by FEMA. Recreational activities that do not conflict with habitat uses may be permitted within the floodplain.*
ICS-13.2	*Provide storm drainage facilities with sufficient capacity to protect the public and property from the appropriate storm event and strive to meet storm water quality discharge targets set by NPDES and related regulations.*
ICS-13.3	*Design stormwater detention basins to ensure public safety, to be either visually attractive or unobtrusive, provide temporary or permanent wildlife habitats, and recreational uses where feasible in light of safety concerns.*
ICS-13.4	*Incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID alternatives include: (1) conserving natural areas and reducing imperviousness, (2) runoff storage, (3) hydro-modification (to mimic pre-development runoff volume and flow rate), and (4) public education.*
ICS-13.5	*Work expeditiously with County, State, and Federal agencies and the private sector to achieve full certification of Santa Clara River Levees that impact Oxnard and the Planning Area.*

Goal ER-3	*Protected, restored, and enhanced of water-related habitats and their associated plant and wildlife species.*
ER-3.5	*Require that construction-related silt and sediment be minimized or prohibited to minimize temporary impacts on biological resources.*
Goal ER-5	*Well managed water supply and wastewater treatment programs that together meet expected demand, prevent groundwater overdraft, and ensure water quality.*
ER-5.1	*Treat all wastewater in compliance with approved discharge permits.*
ER-5.2	*Support updating the "208" Wastewater Control Plan to control urban and nonurban runoff.*
ER-5.3	*The City shall maintain a minimal dependence on Basin 4A groundwater consistent with the Groundwater Resource Encroachment and Treatment (GREAT) Program and support the policies of the Fox Canyon Groundwater Management Agency to protect, enhance, and replenish the aquifers underlying the Oxnard Plain.*
ER-5.4	*Monitor all wastewater discharges on a periodic basis to ensure that discharges comply with approved permits.*
ER-5.7	*Require minimization and/or permeability of paved surfaces in new developments and replacement paving, where feasible.*

City of Oxnard Municipal Code. Chapter 22 of the City of Oxnard Municipal Code implements the CWA (33 U.S.C. Section 1251 *et seq.)*, as amended, and Division 7 of the California Water Code by prohibiting the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a permit issued pursuant to the NPDES required by CWA Section 402 (33 U.S.C. Section 1342), and by prohibiting non-storm water discharges into the storm drain system. The Chapter establishes rules and regulations for connection to the City storm drain system as well as prohibited discharges. Additionally, the chapter also establishes rules and regulations for development projects to protect stormwater quality such as compliance with the Storm Water Pollution Prevention Plan created for the site. Post construction development must also establish a Post Construction Stormwater Management Plan.

City of Oxnard Water Neutrality Policy. The City of Oxnard's 2010 Urban Water Management Plan (UWMP) lists the City's Water Neutrality Policy as follows:

> "*First established in 2008 and recently reaffirmed in 2011, the Oxnard City Council has established a water demand "neutrality" policy. That is, all new development approved within the City must offset the water demand associated with the project with a supplemental water supply. As noted above, "new development" includes all planned (anticipated in the current General Plan) and any unplanned future development occurring in the City. Under the policy, a development can be water neutral by meeting its projected demand through: existing FCGMA groundwater allocations that are transferred to the City; contributing to increased efficiency by funding water conservation or recycled water retrofit projects; providing additional water*

supplies; or any combination of these options. While this City policy has not been codified, it has been applied to every development project approved since 2008."

The policy was not developed to directly address the current four-year drought. The policy has subsequently been interpreted and applied by the City Council as recently as May 19, 2015 to mean that a project that is consistent with the 2030 General Plan land uses that were included in the 2010 UWMP demand projections is eligible for City-provided water service unless the project's water demand is substantially greater than the 2010 UWMP's water demand factor for that land use.

Fox Canyon Groundwater Management Agency (FCGMA). FCGMA was created by state Assembly Bill No. 2995 to manage and protect groundwater resources in the southern portion of Ventura County. Both the City of Oxnard and UWCD are within the jurisdiction of FCGMA. FCGMA ordinances include requirements such as semi-annual reporting of well extractions, payment of annual extraction charges, and requiring flow meters on wells extracting more than 50 acre feet (AF) of water per year. The FCGMA also has established extraction allocations placed on individual water extractors with the intent to manage groundwater extraction to a safe yield of 120,000 AF per year within the FCGMA area. Additionally, FCGMA requires that water wells be a minimum of 60 percent efficient, or risk losing a portion of their historical allocation. FCGMA also has the ability to limit extraction from existing wells, and establish a moratorium on the drilling of new wells within their jurisdiction in the case of a drought emergency. Currently, Emergency Ordinance E is in place, which limits extractions from groundwater extraction facilities, suspends use of credits, and prohibits construction of any groundwater extraction facility and/or the issuance of any permits.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology. Assessment of hydrology and water quality impacts is based on, among other information, the peer reviewed Preliminary Hydrology and Hydraulic Report (Jensen Design and Survey Inc. 2016) (Appendix G), as well as a review of the City of Oxnard 2030 General Plan, City of Oxnard 2010 Urban Water Management Plan (UWMP), UWCD 2010 UWMP, the Watershed Coalition of Ventura County 2014 Integrated Regional Water Management Plan, and Fox Canyon Groundwater Management Agency 2014 Groundwater Management Plan. The Preliminary Hydrology and Hydraulic Report was peer reviewed by Rincon Consultant staff. Flood risk was determined using Federal Insurance Rate Maps for the area and information posted on the FEMA web-site.

Significance Thresholds. According to the adopted *State CEQA Guidelines*, impacts related to hydrology and water quality from the proposed project would be significant if the project would:

1. *Cause a violation of any water quality standards or waste discharge requirements;*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be 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 which would not support existing land uses or planned uses for which permits have been granted);

3. *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 on- or off-side flooding or exceed the capacity of existing or planned stormwater drainage systems;*
4. *Place new structures 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;*
5. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*
6. *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; and/or*
7. *Be exposed to a substantial risk related to inundation by seiche, tsunami, or mudflow.*

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project cause a violation of any water quality standards or waste discharge requirements?*

Impact H-1 **Construction of the proposed project would include ground disturbing activities that could result in erosion and sedimentation. Implementation of the project SWPPP would avoid adverse effects to water quality. Additionally, measures identified in the Post Construction Stormwater Quality Report would avoid adverse effects to water quality during project operation. Residences within the project would be connected to the City of Oxnard sewer system, delivering wastewater to the Oxnard Wastewater Treatment Plant. Impacts to water quality would be Class III, *less than significant*.**

Temporary soil disturbance would occur during construction of the proposed project as a result of earth-moving activities, such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. If not managed properly, disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via storm water runoff from the project site. The types of pollutants contained in runoff from construction sites would be typical of urban areas, and may include sediments and contaminants such as oils, fuels, paints, and solvents. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to collecting waterways, contributing to degradation of water quality.

As discussed in Section 4.8.1(c), *Regulatory Setting*, construction activity on project sites that disturb one or more acres of soil are required to comply with the NPDES program through preparation of an SWPPP, which outlines BMPs that would address construction runoff. Additionally, Section 22-222 of the Oxnard Municipal Code requires construction projects to implement BMPs outlined in a SWPPP for the project site and also requires inspection of the project site to ensure implementation of the project BMPs. Construction BMPs are required to ensure the project site is in compliance with the Ventura County Municipal Separate Storm Sewer System (MS4) permit (NPDES Permit No. CAS004002), which covers the City of Oxnard.

The Ventura County MS4 permit outlines potential BMPs for construction sites, including the following:

Erosion Control

- *Scheduling*
- *Preservation of existing vegetation*
- *Hydro seeding*
- *Hydraulic mulch*
- *Straw/wood mulch*
- *Geotextiles and mats*

Sediment Control

- *Silt fencing*
- *Sand bag barriers*
- *Stabilized construction site entrance/exit*
- *Fiber rolls*
- *Storm drain inlet protection*
- *Sediment Basin*
- *Check Dam*

In addition to BMPs required during construction phases of the project, the City of Oxnard Municipal Code Section 22-223 requires a Post Construction Stormwater Quality Report for land development, building additions, and redevelopment projects. The Post Construction Stormwater Quality Report is a written report that includes description of post construction BMPs to be implemented, and conformance of the BMPs to the City's Technical Manual for Stormwater Quality Control Measures. BMPs must be designed to promote infiltration as well as provide stormwater treatment (Preliminary Post-Construction Stormwater Quality Report, Oxnard 2011). The Preliminary Hydrology and Hydraulic Report conducted for the project site identifies stormwater treatment measures that would be implemented on the project site to treat the required Stormwater Quality Design Volume. These include the installation of pervious pavement in parking areas along the proposed road, and infiltration facilities incorporated into the site detention system. Infiltration would be promoted on the project site through of a vegetated bio swale at the northwest side of the portion of the site to be developed and a gravel bed beneath the proposed detention facility, which would act as an infiltration trench (Jensen Design and Survey, Inc. 2016).

Compliance with existing regulations and implementation of the proposed stormwater treatment measures would limit erosion and promote infiltration of stormwater within the project site. This would reduce temporary and long term impacts to surface water quality. As such, with adherence to all applicable laws and regulations, as well as proposed stormwater treatment measures, the proposed project would not violate water quality standards or contribute additional sources of polluted runoff. Impacts to water quality during construction and project operation would be less than significant.

Wastewater from the proposed project would be connected to the City of Oxnard sewer system and delivered to the City of Oxnard Wastewater Treatment Plant. The Oxnard Wastewater Treatment Plant complies with all County and State regulations to ensure no significant impact

to water quality from the disposal of treated wastewater. Impacts from the proposed project on water quality would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be 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 which would not support existing land uses or planned uses for which permits have been granted)?*

Impact H-2 **The project would generate demand for groundwater delivered by the City of Oxnard's. However, this demand is within the planned growth within the City of Oxnard's 2010 UWMP. Further, impacts of increasing water demand would be minimized by the management of groundwater resources by the Fox Canyon Groundwater Management Agency. Onsite management of stormwater would promote retention and infiltration, such that the project would not substantially interfere with groundwater recharge. Impacts would be Class III, *less than significant*.**

As described in Section 2.0, *Project Description*, construction would occur over approximately 18 months. During construction of the Project, water would be used to reduce fugitive dust and to aid in earth compaction. Construction water use would be temporary and limited to the project construction. Impacts to groundwater resources would be less than significant.

Water resources would be provided to the project site by the City of Oxnard. The City of Oxnard currently receives approximately 60 percent of their water supply from local groundwater resources from the Oxnard Subbasin. This groundwater is pumped from City owned and operated wells, as well as UWCD owned and operated wells. Groundwater resources available to the City of Oxnard are projected to increase from 18,294 acre feet (AF) per year in 2010 to 28,351 AF per year by 2025. For this analysis, water demands from the proposed project were estimated assuming wastewater generation rates used by the City of Oxnard. Wastewater generation rates were multiplied by 125 percent to estimate potable water demand. Using this method, the proposed project would demand approximately 290 gallons per day per unit, or a total of approximately 21 AF per year for a maximum of 65 proposed units. This increase represents approximately 0.1 percent of the projected increase in groundwater resource demand. Further, this water demand would be supplemented by imported surface water resources available to the City.

The Oxnard Subbasin has been designated as a high priority basin by the CASGEM program and therefore is required to implement a Groundwater Sustainability Plan (GSP) by January 31, 2020. The FCGMA is in charge of the management of the Oxnard Subbasin and is serving as the Groundwater Sustainability Agency (GSA). With implementation of the GSP and management

of groundwater resources by the FCGMA, extraction of groundwater resources in the Oxnard Subbasin will be managed within the established sustainable yield to ensure that groundwater resources are not substantially depleted. Impacts to groundwater resources would be less than significant.

The proposed project would develop approximately 8.75 acres of the 38.33 acre site. The developed area would increase the impervious surfaces within the project area. However, the Preliminary Hydrology and Hydraulic Report by Jensen Design and Survey, Inc. identified design measures of the proposed project that would encourage infiltration of stormwater within the developed portions of the project site. To promote infiltration of stormwater within the project site, the proposed project would incorporate pervious pavement in parking areas along the proposed roadway, a vegetated bio swale at the west side of the project site along Dune Street, and a gravel bed underneath the proposed underground detention basin to act as an infiltration trench. Additionally, as discussed in Section 4.8.1(b), the primary area of groundwater recharge in the Oxnard Subbasin is the Oxnard Forebay area, which is approximately 4 miles north east of the project site (Oxnard 2012). Therefore, with implementation of the proposed stormwater infiltration features, impacts to groundwater recharge would be less than significant.

The project site is designated Coastal Zone Residential Existing under the 2030 General Plan. Therefore, it can be assumed that the water demand for the project is accounted for in the estimates of the 2010 UWMP for the City. Because future water use of the project would be accounted for in the water supply planning of the City's 2010 UWMP, the project is not required to offset water demand by providing additional water supplies pursuant to the City's Water Neutrality Policy. However, as discussed in Section 4.12, *Utilities*, the project would be subject to City-wide mandatory water conservation measures (Refer to Section 4.12.1{b]). Therefore, impacts to groundwater would be less than significant without mitigation.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 3:	*Would the project 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 on- or off-site flooding or exceed the capacity of existing or planned stormwater drainage systems?*

Impact H-3 The proposed project would alter existing drainage patterns on the site. Proposed site features would promote infiltration of stormwater on-site to control runoff, and prevent runoff from exceeding the respective undeveloped storm amounts. Impacts to drainage patterns and stormwater runoff would be Class III, *less than significant*.

Implementation of the proposed project would disturb approximately 8.75 acres of the 38.33 acre site. The developed areas of the project site can be separated into two different drainage areas as described in the Preliminary Hydrology and Hydraulic Report by Jensen Design and

Survey, Inc. Runoff from these areas would be directed toward three proposed catch basins within the project site.

Runoff from the majority of the developed portion of the project site would be directed to Catch Basin (CB)-5 and CB-6 located on the east and west side of the proposed roadway connection to Canal Street at the southern portion of the site. Runoff entering CB-5 and CB-6 would be directed to proposed 18" storm lines that would converge at a manhole structure. Runoff would then be directed toward either a proposed underground detention basin or the main on site storm drain system.

To reduce the amount of runoff leaving the developed portion of the site to the south, a proposed underground detention structure would be constructed at the southeast corner of the project site at the east side of the proposed roadway. The underground detention structure would be designed to maintain runoff flows at predevelopment levels during a 10, 50 and 100 year storm event (Jenson Design and Survey, Inc. 2016). More detail on runoff calculations are available in the Preliminary Hydrology and Hydraulic Report (Appendix G). The proposed detention basin structure would act like an infiltration trench by having a gravel bed to allow infiltration of detained stormwater. Runoff that does not enter the proposed detention structure would be directed to the existing 36 inch storm drain line in Canal Street. Storm water runoff that enters the existing storm drain system would eventually be discharged directly into the Edison Canal.

Runoff from the western portion of the developed area of the project site would drain toward the proposed CB-7. Runoff entering CB-7 would be directed to a proposed vegetated bio swale located at the southern side of the proposed roadway connection to Dune Street at the western border of the project site, as shown in Figure 2-4 in Section 2.0, *Project Description*. Runoff that does not infiltrate in the proposed vegetated bio swale would be directed to Dune Street and eventually Harbor Boulevard.

To further reduce stormwater runoff and promote infiltration within the project site, the parking areas along the proposed roadway would have pervious pavement. This would reduce the amount of stormwater entering the proposed CB-5, CB-6 and CB-7.

With implementation of the proposed vegetated bio swale, underground detention basin, and pervious pavement, stormwater runoff from the project site would remain at predevelopment levels. Therefore, alterations of the existing site drainage patterns would not result in on or off site erosion or flooding. Additionally, implementation of the project would not exceed the capacity of the existing storm drain system. Impacts would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 4:	*Would the project place new structures 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?*

Impact H-4 The proposed project would construct residences outside of a 100 year flood hazard area but within a 500 year flood zone. Impacts associated with a 100 year flood event would be Class III, *less than significant*.

The proposed project would construct a maximum of 65 new residential units. As discussed above in Section 4.8.1(b), the project site is located within Flood Zone X (Figure 4.8.1), per the Flood Insurance Rate Map Panel No. 06111C0905E (FEMA 2010). This area is within the 500 year flood zone. Therefore, the proposed residences would not be within a 100 year flood hazard area. Impacts associated with inundation and impediment or redirection of flood flows from a 100 year flood event would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 6:	*Would the project 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?*

Impact H-5 The proposed project would construct residences within the inundation zone resulting from a failure of Santa Felicia Dam, Pyramid Dam, Bouquet Dam, and Castaic Dam. However, the project would not alter existing risks associated with dam inundation in the project area. Impacts would be Class III, *less than significant*.

The project site would construct residences in an area that is subject to inundation resulting from a failure of either Santa Felicia Dam or Pyramid Dam on Piru Creek, Castaic Dam on the Santa Clara River, and Bouquet Dam on Bouquet Creek (Ventura County 2011). The project site is located approximately 40 mile southwest of Pyramid Dam, 33 miles southwest of Santa Felicia Dam, 42 miles west of Castaic Dam, 55 miles west of the Bouquet Dam.

The project would introduce new residences on the site, and would incrementally increase population in the dam failure inundation area. According to the Ventura County, the project area has over two hours after the time of failure from any dams within the Santa Clara River watershed (Ventura, 1989). Given the time it would take for inundation flows to reach the site, areas subject to flooding could be evacuated. Thus, the project would not expose people to significant risk of loss, injury, or death. Project structures and facilities could potentially be damaged in the unlikely event of inundation due to dam failure, but the proposed project would not alter existing risks associated with dam inundation in the project area. Impacts would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 7:	*Would the project be exposed to a substantial risk related to inundation by seiche, tsunami, or mudflow?*

Impact H-6 The proposed project is located approximately 2,000 feet inland from the Pacific Ocean and the southern portion of the project site is within the tsunami inundation zone. However, the project would not alter existing risks associated with tsunami inundation in the project area. Impacts would be Class III, *less than significant*.

A tsunami is a series of waves generated by an undersea disturbance such as an earthquake. The proposed project would construct new residences approximately 2,000 feet inland from the Pacific Ocean and a half mile north of the Channel Island Harbor. In general, within Oxnard properties within one mile of the coastline are within the tsunami inundation zone (City of Oxnard ND).

The County of Ventura has an Emergency Alert System (EAS) that includes every radio and TV station as well as all cable companies in Ventura County. These are networked together to provide emergency related information in times of severe weather or other disasters such as tsunamis. Given the time it would take for a tsunami to reach the site and the EAS that is in place, areas subject to inundation could be evacuated. Thus, the project would not expose people to significant risk of loss, injury, or death. Project structures and facilities could potentially be damaged in the event of inundation due to tsunami, but the proposed project would not alter existing risks associated with tsunami inundation in the project area. Impacts associated with tsunamis would be less than significant.

A seiche can be considered very similar to a tsunami with the difference being that the water waves are generated in a closed or restricted body of water such as a lake or within a harbor. The project site is located approximately half a mile from the Channel Island Harbor. However, the risk of seiche in Ventura County harbors has been identified to be low (Ventura County 2011). Impacts associated with seiche would be less than significant.

The project site and surrounding area is generally flat and there are no significant slopes. Therefore, impacts associated with mudflows are unlikely. Impacts would be less than significant.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The potential buildout through the year 2040 in the City of Oxnard would result in an increase of approximately 30,303 people and 5,365 households (SCAG 2016) (Department of Finance, 2016). Such development would generally increase soil erosion and urban pollutants, demand on groundwater resources, and introduce impermeable surfaces. However, other cumulative projects would be subject to the same laws and regulations

to avoid or minimize adverse effects associated with water quality, groundwater, and drainage pattern alterations as the proposed project. As described above, the proposed project would not result in significant impacts to hydrology and water quality, and would not cause, accelerate, or otherwise exacerbate off-site impacts related to hydrology and water quality. Therefore, the proposed project would not result in cumulatively considerable impacts to hydrology and water quality. Additionally, as discussed above management of groundwater resources by the FCGMA and implementation of the sustainable groundwater management act would ensure sustainable withdrawal of groundwater throughout the Oxnard Subbasin and no cumulatively considerable impacts to groundwater resources would occur.

4.9 LAND USE AND PLANNING

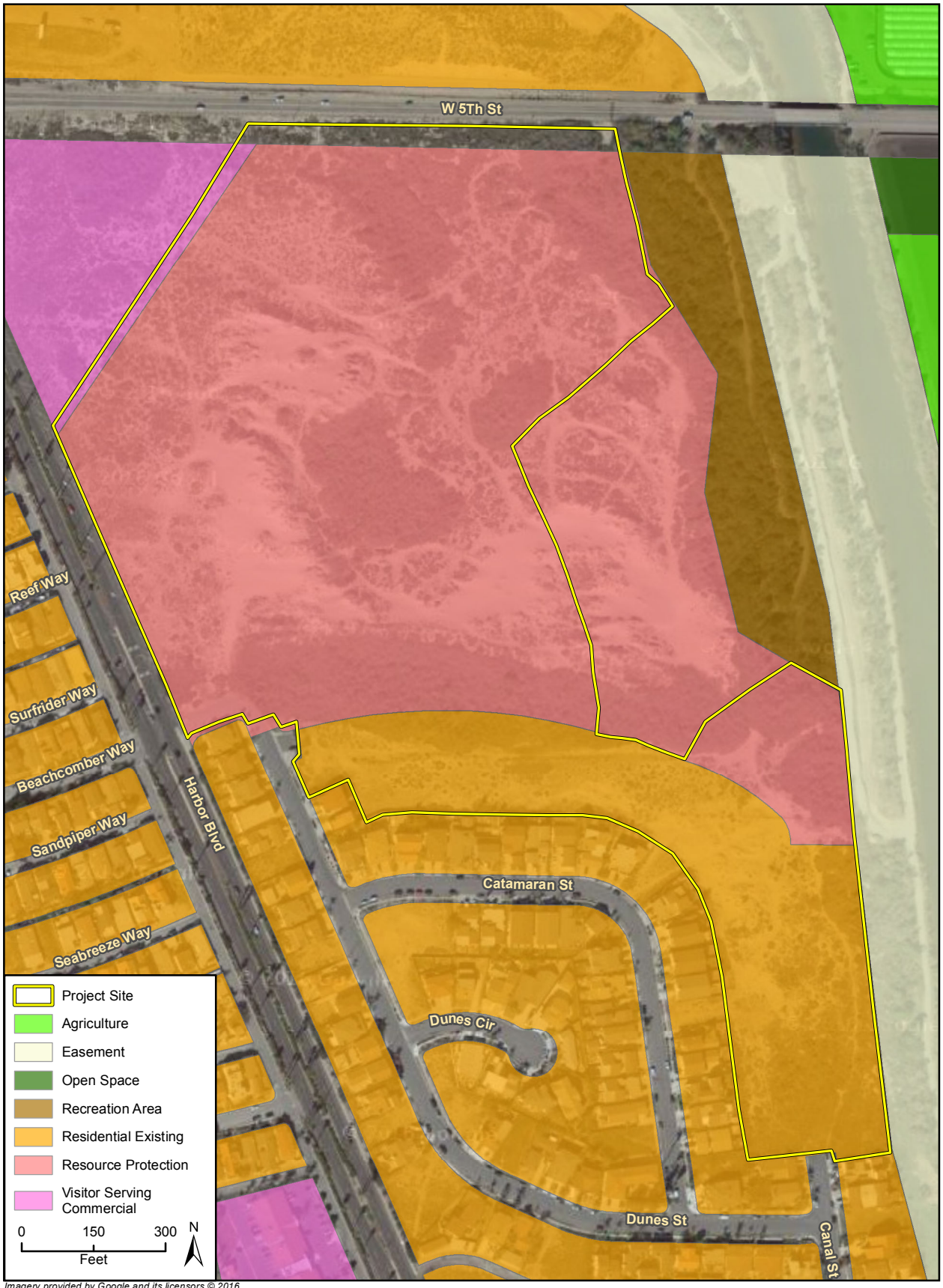
4.9.1 Setting

a. Citywide Land Use. The City of Oxnard is an incorporated area of approximately 26.9 square miles (17,230 acres), which includes the project site, and the City's Planning Area includes an additional surrounding unincorporated 43 square miles (27,526 acres). Bordered by the farmland of the Oxnard plain and the Pacific Ocean, the City's urban development is clustered in one core area mostly surrounded by rural open areas and agriculture. The predominant land use in the City is residential. Commercial, industrial, institutional, open spaces and other uses are also represented. Oxnard's historic land use pattern reflects the City's central location in the Oxnard plain with surrounding agriculture, as Oxnard grew in all directions from the original small town founded in 1903. With the exception of several high rise buildings in north Oxnard, the City is characterized predominantly by one- or two-story residential and commercial buildings and several industrial areas. Most of the City's higher intensity development lies adjacent to primary thoroughfares such as Highway 101, Gonzales Road, Rose Avenue, Rice Avenue, Oxnard Boulevard, Hueneme Road, Ventura Road, Victoria Avenue, Saviers Road, and in the central business district.

b. Site and Surrounding Land Uses. The 38.33-acre project area is located in the City of Oxnard on the Southeast corner of South Harbor Boulevard and West Fifth Street, north of existing Oxnard Dunes subdivision. The project is located in the Oxnard Dunes Neighborhood in the Southwest Community of the City of Oxnard and is currently undeveloped. Surrounding land uses are primarily residential and agricultural. Immediately adjacent to the site on the southwester edge is the Oxnard Dunes residential neighborhood. The Oxnard Shores residential neighborhood is located west of the project site, across South Harbor Boulevard and South Harbor Service Boulevard. Surrounding land uses on the north, northeast, and eastern edges of the project site are primarily agricultural in use. The approved Beachwalk on the Mandalay Coast residential development (formerly North Shore at Mandalay Bay) is located to the north of the project site, at the northeast corner of Harbor Boulevard and West Fifth Street. Figure 2-2 in Section 2.0, *Project Description*, shows the location and aerial view of the project site and surrounding uses.

c. Regulatory Setting. Development in the City is subject to the policies and development guidelines contained within the City's 2030 General Plan and the City's zoning regulations. The Ventura County Local Agency Formation Commission and the Oxnard Airport policies and regulations are also applicable to the proposed project. Figure 4.9-1 and Figure 4.9-2 show the land use and zoning designations, respectively, of the project site and vicinity.

City of Oxnard 2030 General Plan. The proposed project is located within the City of Oxnard. The 2030 General Plan was adopted in October, 2011 and includes the seven required General Plan elements (land use, circulation, housing, open-space, conservation, safety, and noise) within five chapters, each divided into a Background document and companion Goals and Policies document. The 2006-2014 Housing Element is incorporated by reference into the 2030 General Plan document as Chapter 8. The 2030 General Plan also includes a separate chapter on sustainable community development that addresses recently emerging topics of climate change, alternative energy, and the implementation of Senate Bill 375.



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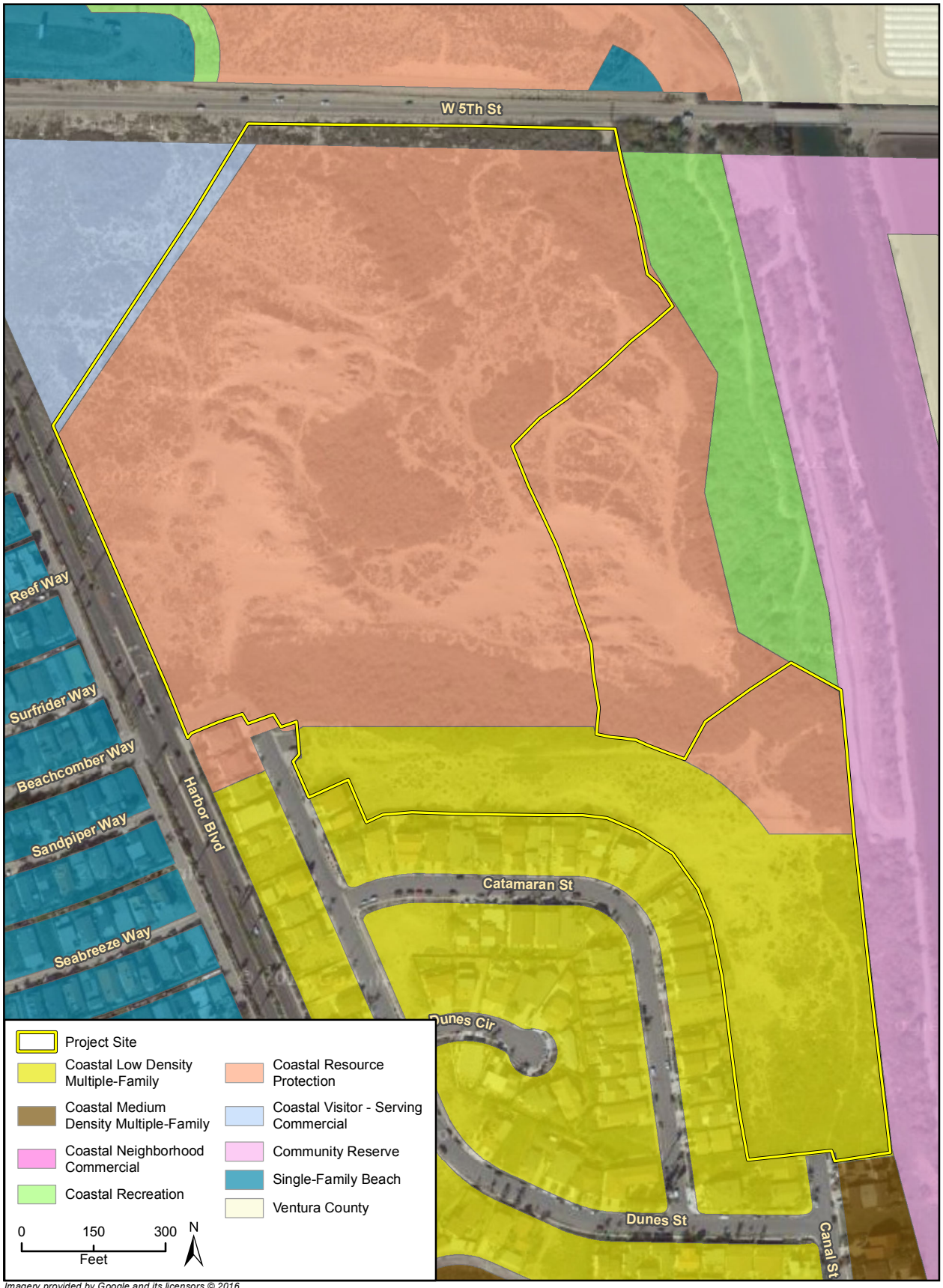
Additional data provided by City of Oxnard, 2014.

Land Use Designations
of the Project Site and Vicinity

Figure 4.9-1



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Additional data provided by City of Oxnard, 2014.

Zoning Designations
of the Project Site and Vicinity

Figure 4.9-2

The Land Use Element (2030 General Plan Chapter 3) designates the general distribution and intensity of land uses within the planning area. The General Plan designates the proposed project site as Coastal Zone Residential Existing and Resource Protection. Land uses in the Oxnard Coastal Zone are governed by the Coastal Land Use Plan and its zoning regulations adopted pursuant to the California Coastal Act and certified by the California Coastal Commission. Resource Protection areas are sensitive habitat areas such as coastal dunes, aquatic habitat, riparian areas, areas with endangered species activity found primarily in the Coastal Zone and along the Santa Clara River.

Airport Land Use Plan. The Oxnard Airport is located approximately 1 mile to the northeast of the project site. Therefore the project site is within the planning area, or Land Use Study Area, of the Oxnard Airport, a general aviation facility owned and operated by the County of Ventura. The County of Ventura has prepared the Airport Comprehensive Land Use Plan to "provide for the orderly growth of each public airport and the area surrounding the airport… [and] safeguard the general welfare of the inhabitants within the vicinity of the [Oxnard] airport and the public in general" (California Public Utilities Code Section 21675). Prior to making a decision on the proposed project, the City of Oxnard must refer the proposed project to the Ventura County Airport Land Use Commission (ALUC) for review and comment. The ALUC will review the project for consistency with the Airport Comprehensive Land Use Plan. The Airport Comprehensive Land Use Plan includes policies related to surrounding land uses and exposure to airport noise and hazards. Various regulations of the Federal Aviation Administration also apply to land use and structural development in proximity to active airports.

City of Oxnard Coastal Zoning Ordinance. The project site is zoned Coastal Low-Density Multiple Family (R-2-C), and Coastal Resource Protection (RP). According to the Coastal Zoning Ordinance (Chapter 17 of the Oxnard Municipal Code), the R-2-C Coastal Multiple Family Sub-zone provides an area of moderate-density multiple-family dwellings suitable for legally existing and new subdivisions located in areas adjacent to significant coastal resources, both urban and natural in character. Two-story structures are permitted, but shall not exceed 25 feet. There must be at least 3,500 square feet of lot area for each dwelling unit, and no more than six dwelling units in any one building cluster (OMC 17-13).

The purpose of the Coastal Resource Protection Sub-Zone (RP) is "to protect, preserve, and restore sensitive habitat areas within the coastal zone of the city" (OMC 17-23). Development within Resource Protection Zones must be consistent with the policies of the certified Oxnard Coastal Land Use Plan and the Coastal Act.

Oxnard Coastal Land Use Plan. The project site is classified by the 2030 General Plan and City of Oxnard Coastal Zoning Ordinances as Coastal Low-Density Multiple Family Zone and Coastal Resource Protection area. Therefore, the project must adhere to the policies of the Oxnard Coastal Land Use Plan. The policies serve the goals of providing maximum public access for economic sectors; ensuring coastal areas are suitable for recreational use; maintenance, enhancement, and restoration of marine resources; preservation of sensitive habitats, prime agricultural land, and archaeological resources; new residential and commercial development concentrated in existing developed areas; and industrial developments, including

coastal-dependent and energy facilities, to be concentrated and consolidated as much as possible.

Specifically, the proposed development area of the project site is within the Oxnard Shores area of the City's coastal zone. This area has been identified in the Oxnard Coastal Land Use Plan (CLUP) as a coastal zone suitable for new residential or visitor-serving commercial development. The dunes area on the northern portion of the property (CLUP, Area No. 6 on Map 3) is designated to "preserve the sensitive dune habitat and provide new visitor-serving and recreational opportunities" (CLUP Section 2.1).

Southern California Association of Governments. The project is located within the jurisdiction of the Southern California Association of Governments (SCAG), which includes Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. To facilitate planning activities for such a large region, SCAG has divided its jurisdiction into a number of sub-regions. The proposed project area is located within the Ventura Council of Governments Sub-region, which includes the Cities of Agoura Hills, Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, Thousand Oaks, and Westlake Village, as well as the County of Ventura.

SCAG has a Regional Transportation Plan (RTP) that is a long-range transportation plan developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends projected out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address the region's mobility needs. The Sustainable Communities Strategy (SCS) is a newly required element of the RTP. The SCS integrates land use and transportation strategies that will achieve ARB emissions reduction targets mandated under SB 375, a State law enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning (SCAG RTP/SCS 2016). The 2016-2040 RTP/SCS contains goals and policies pertinent to the proposed project.

4.9.2 Impact Analysis

a. Methodology and Significance Thresholds. According to Appendix G of the *State CEQA Guidelines* and the City of Oxnard's 2017 *Threshold Guidelines*, the proposed project would have a significant impact on land use if it would cause any of the following conditions to occur:

1. *Conflict with an applicable land use plan, policy, or regulation of the City or an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect;*
2. *Involve land uses that are not allowed under any applicable airport land use compatibility plan;*
3. *Conflict with any applicable habitat conservation plan or natural community conservation plan; and/or*
4. *Physically divide an established community.*

The Initial Study for the proposed project concluded that there would be no significant impact to disrupting or dividing an established community. Therefore, impacts related to Threshold 4, dividing an established community are not considered in this analysis.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project conflict with an applicable land use plan, policy, or regulation of the City or other agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?*

Impact LU-1 The proposed project is consistent with applicable land use plans, policies and regulations, but does not precisely meet specified buffer distances. This impact would be Class II, *significant but mitigable*

Oxnard Coastal Land Use Plan. The CLUP is the City's land use plan intended to protect coastal resources. The proposed project is located in the Northern Dunes Area of the Oxnard Shores Coastal Zone Area as designated in the CLUP (City of Oxnard, May 1990: Map No. 3). Map No. 3 designates areas that are designed to preserve the sensitive dune habitat and provide new visitor-serving and recreational opportunities. The proposed project would not develop the RP zone where the sand dunes are located, consistent with the CLUP. Therefore, the sand dunes on the project site would be preserved. Table 4.9-1 contains CLUP policies relevant to the proposed project and the projects consistency with each policy.

Table 4.9-1
Oxnard Coastal Land Use Plan Policy Consistency

General Plan Policy	Discussion
Agricultural	
3. All urban development shall be restricted to the area within the urban-rural boundary, as defined by Map 1 of the Lane Use Map.	Consistent. The proposed project is within the urban-rural boundary and has been zoned for development.
4. All agricultural lands bordering the urban-rural boundary will require buffer measures in addition to the designated adjacent buffer land uses in order to adequately protect their viability.	Consistent. Agricultural land is located approximately 300 feet to the east of the project site across the Edison Canal. The canal acts as a buffer to the agriculturally designated land, preventing direct interaction with the proposed residential land use.
Habitat Areas	
Local Coastal Policies *6d. New development adjacent to wetlands or resource protection areas shall be sited and designed to mitigate any adverse impacts to the wetland resources. A buffer of 100 feet in width shall be provided to all resource protection areas. The buffer may be reduced to a minimum of 50 feet only if the applicant can demonstrate that large buffer is unnecessary to protect the*	Consistent. The northern portion of the project site includes a resource protection area and development that includes a small (0.90 acre) encroachment into willow thickets, which are a sensitive habitat area. Project development would occur adjacent to the resource protection (RP) area, thereby not meeting the 100-foot buffer standard identified in Local Coastal Policy 6d. The project design would provide for 60 feet between the nearest structure and the RP area, meeting the minimum 50-foot buffer distance. The project design includes a single loaded private street (46-49 feet wide),

Table 4.9-1
Oxnard Coastal Land Use Plan Policy Consistency

General Plan Policy	Discussion
resources in the habitat area. *6e. When a development is proposed within or near an environmentally sensitive habitat area, applicable topographic, vegetative and soils information shall be provided. This information shall include physical and biological features existing in the habitat areas.*	aligned to separate the remaining willow thicket along the northern edge of the development from proposed residential lots along the south side of the roadway. The roadway itself, along with a minimal fence width on its northern side, and front yard setbacks along its southern side, would provide approximately 60 feet between the nearest proposed residential structures and the retained willow thicket and RP area. Section 4.3, *Biological Resources,* contains the topographic, vegetative, and soils information as required under the CLUP Local Coastal Policy 6e. Impact BIO-7 specifically addresses the buffer issue related to the sensitive habitat and RP designated areas. Mitigation measures contained within Section *4.3, Biological Resources,* include measures to help preserve and enhance the habitat retained in the RP area (see Mitigation Measures BIO-4(a) and BIO-4(b)). Applying these measures would reduce the indirect impacts to sensitive resources related to roadway traffic and the proximity of development, and would help to offset the effect of the smaller buffer. Therefore, although not meeting the policy of creating a 100-foot buffer, the proposed project would meet the minimum 50-foot distance from proposed residential structures and preserve the area within the RP designation, and would provide other measures to help offset the effect of the smaller buffer to be consistent with these policies.
Visual Resources	
Coastal Act Policy 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visually quality in visually degraded areas. *37. All new development in the coastal zone shall be designed to minimize impacts on the visual resources of the area. Particular care should be taken in areas of special quality, such as those identified in the CLUP.*	Consistent. The proposed project would preserve the Resource Protection land use designation at the northern end of the project site, which would preserve coastal views. See Section *4.1 Aesthetics* for discussion of visual resources.
38. Height restrictions as defined by City Zoning Ordinance shall be used to avoid blocking views.	Consistent. The proposed project would be consistent with the City zoning height standards for the R-C-2 coastal sub-zone developing two-story housing units that would not exceed 25 feet. These height restrictions would avoid blocking views and ensure consistency with the policy.

Table 4.9-1
Oxnard Coastal Land Use Plan Policy Consistency

General Plan Policy	Discussion
Hazards	
Coastal Act Policy 30253. New development shall: 1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard and 2) Assure stability and structural integrity, and neither create or contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area in any way require the construction of protective devices that would substantially alter natural land forms along bluffs and cliffs.	Consistent. See Section *4.5 Geology/Soils* for discussion of geological impacts and Section *4.7 Hazards and Hazardous Materials* for discussion of hazardous impacts. Hazardous impacts are considered less than significant. Mitigation measures within Section *4.5 Geology/Soils* would ensure consistency with the CLUP.
39. All applicants for grading and building permits and subdivisions shall be reviewed from threats from hazards such as seismic activity, liquefaction, tsunami run-up, seiche, beach erosion, flood, storm wave runup, and expansive soils. Geologic reports may be required in known hazard areas. Appropriate mitigation measures shall be applied to minimize threat from any hazards.	Consistent. See Sections *4.5 Geology/Soils 4.7 Hazards and Hazardous Materials,* and *4.8 Hydrology and Water Quality* for discussion of hazardous impacts and impacts related to erosion and liquefaction. Impacts related to hazards and hydrology/water quality would be less than significant. Mitigation measures within Section *4.5 Geology/Soils* would ensure consistency with the CLUP.
41. All new development in the coastal zone shall employ the most recent water conservation methods, including (but not limited to): *a. low-flow pipes and toilets;* *b. flow restrictions on all shower heads;* *c. underground drip irrigation systems;* *d. use of low-water use vegetation for landscaping.*	Consistent. Since 2014, the City of Oxnard has implemented mandatory water conservation measures to reduce consumption of potable water resources and ensure consistency with State regulations. Chapter 22 of the Oxnard Municipal Code identifies mandatory conservation measures to be applied during City Council declared water shortage conditions. See Section 4.14, *Utilities and Service Systems* for further discussion of water conservation.
42. Consideration of all proposed projects in the coastal zone shall include consideration of the remaining water and sewer capacities. This shall include a calculation of the proposed project's use of remaining capacity in percent. Projects shall be approved only when sufficient water and sewer services are available.	Consistent. As discussed in Section *4.12 Utilities and Service Systems*, the Oxnard Wastewater Treatment Plan (OWWTP) has sufficient capacity to accommodate wastewater flows from the proposed project. The OWWTP has a remaining capacity of 17 million gallons per day and the proposed project would generate 14,950 gallons per day, representing approximately 0.8 percent of the remaining capacity. The proposed project would be within the planned growth forecasted by the City of Oxnard in their 2010 Urban Water Management Plan (UWMP). Water demand projections in the 2010 UWMP incorporate a projected population of 250,706 by the year 2035. The proposed project would account for 0.6 percent of this projected growth. Therefore, the City would have adequate water resources to serve the proposed project.
44. Based on Section 30254 of the Coastal Act and the limitation on service capacities, the following shall be the prioritization of service allocation within the coastal zone. If a use of a lower priority is approved, the finding must be made that approval does not restrict the availability of services for all higher priority uses	Consistent. The proposed project would develop private residential housing within the coastal zone, a Priority III under Policy 43 of the CLUP. The development of housing on the project site would not restrict the availability of Priority I land uses including coastal-dependent industries or agriculture because the proposed project would have a buffer between existing agricultural uses east of the project site. The

Table 4.9-1
Oxnard Coastal Land Use Plan Policy Consistency

General Plan Policy	Discussion
designated on the land use plan but not yet constructed. *Priority I:* *a. Coastal-development industries and agriculture* *b. Essential public services* *c. Basic industries essential for the region, state, or nation* *Priority II:* *a. Visitor-serving commercial and recreational uses* *b. Commercial and recreational uses serving persons of low to moderate income* *c. Low to moderate cost housing* *Priority III:* *a. Private residential* *b. General industrial* *c. General commercial*	proposed project would not affect essential public services, as described in Section *XVI Public Services* of the project Initial Study (Appendix A). Basic industries essential for the region, state, or nation would not be affected by the development of the proposed project because the project would extend the existing residential development and the RP zoned area would remain undeveloped. The area that would be developed is already zoned for residential use. Therefore, the proposed project is consistent with the CLUP.
Development	
47. The Ventura County Air Quality Management Plan (AQMP) is incorporated into the CLUP by reference. All new development located within the coastal zone shall occur in a manner consistent with the AQMP.	Consistent. See discussion *Airport Land Use Plan* below of the proposed projects consistency with the AQMP.

2030 General Plan. The City of Oxnard's 2030 General Plan is the primary policy planning document that guides land use in the City. Development projects must be consistent with the 2030 General Plan's land use designations, goals, policies and objectives in order to be approved. The 2030 General Plan specifically identifies the project site as Resource Protection (RP) and Residential Existing Development (REX) land use designations. The northern portion of the project site extends into the RP land use designation, which includes sensitive habitats associated with the Oxnard Dunes and riparian vegetation. The RP land use designation includes two lots, Lot A and B, which have no proposed development. Because development would not occur within the RP area and it would be preserved for the existing resources in the northern portion of the project site, the project is consistent with the current land use designation. The proposed residential development would be constructed in the southern portion of the project site designated as REX-Residential Existing. The project site is within the Northern Dunes Area, shown in the Coastal Land Use Plan (City of Oxnard May 1990:Map No. 3). The proposed project would represent the buildout of the existing single-family residences immediately to the south and west of the project site in the R-2-C zone. Therefore, the proposed project is consistent with the City land use designations.

Mitigation measures as described throughout this EIR and included in Section 4.2, *Air Quality,* Section 4.5, *Geology and Soils,* and Section 4.10, *Noise,* further ensure consistency with relevant policies.

Table 4.9-2 contains a discussion of the proposed projects consistency with applicable policies of the City's 2030 General Plan. Consistent with the scope and purpose of this EIR, the discussion primarily focuses on those policies that relate to avoiding or mitigating environmental impacts. See Section 4.6, *Greenhouse Gas Emissions/Climate Change* for discussion of the proposed projects consistency with policies directly related to greenhouse gas emissions. The ultimate determination of whether the proposed project is consistent with the 2030 General Plan lies with the decision-making bodies (Planning Commission and City Council). Only policies relevant and applicable to the proposed project are included. Policies that are redundant between elements are omitted or combined. Policies that call for City actions that are independent of review and approval or denial of the proposed project are also omitted. Finally, policies that are already addressed in Table 4.9-1 are also omitted.

According to the consistency procedure outlined in Chapter 9 of the 2030 General Plan, the City has a three-level procedure for determining consistency. The three levels are defined by the relationship between the 2030 General Plan goal and its representative implementing policies and the proposed project. The three levels are:

I. Direct Applicability to the Proposed Project
II. Related or Indirect Applicability to the Proposed Project
III. No or Distant Applicability to the Proposed Project

A 2030 General Plan consistency analysis starts by categorizing all 2030 General Plan goals into one of the three consistency levels as they relate to the proposed project. Each Level I classification is supported by a narrative of appropriate length explaining the relationship between the 2030 goal and the proposed project. Level II classifications are listed into one or more groups with a summary narrative explaining the relationship between the 2030 goal and the proposed project. Level III goals are assumed to be all goals not classified as Level I or Level II and do not have to be individually listed in a consistency analysis. After the Level I and II goals are identified, consistency is found (or not found, as the case may be) for each identified goal. For Level I goals, the consistency standard is that the proposed project furthers at least one of the goal's implementing policies and otherwise does not inhibit achievement of remaining policies. For Level II goals, the consistency standard is that the proposed project shall not significantly inhibit achievement of the goal or its implementing policies.

Level III policies are not included in Table 4.9-2. Level I and Level II policies are included and are identified as either Level I or II in the narrative discussion.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
Sustainable Community	
SC-3.1. New Residential Development. Encourage incorporation of passive and active energy and resources conservation design and devices in new residential development and substantial remodels and/or expansions.	Level I - Consistent. The proposed project would be required to comply with Tile 24 standards for Building energy Efficiency that are in effect at the time of development. These standards include actions such as insulation certified by the Department of Consumer Affairs, Bureau of Home Furnishing, and Thermal Insulation to reduce energy necessary to regulate building temperature and natural gas systems to save energy.
SC-3.8. Require Use of Passive Energy Conservation Design. As part of the City and Community EAP's, require the use of passive energy conservation by building material massing, orientation, landscape shading, materials, and other techniques as part of the design of local buildings, where feasible.	Level I - Consistent. The proposed project would be required to comply with Tile 24 standards for Building energy Efficiency that are in effect at the time of development.
SC-3.12. Encourage Natural Ventilation Review and revise applicable planning and building policies and regulations to promote use of natural ventilation in new construction and major additions or remodeling consistent with Oxnard's temperate climate.	Level I - Consistent. The State Green Building Code, which is implemented by the City, requires natural ventilation in building design whenever feasible.
Community Development	
CD 1.4. Transportation Choices. Promote the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices (pedestrian, bicycle, transit, automobile).	Level I - Consistent. The proposed project consists of traditional neighborhood design components that promote "porch and street orientation" and encourage walking and interaction between residents. The project site is adjacent to an existing residential community to the west (Oxnard Shores) that contains some commercial land uses. The close proximity to existing land uses promotes walking and/or bicycle transit opportunities.
CD 1.5. Housing Variety. Promote the development of a variety of housing types throughout the City including apartments, condominiums, lofts, townhouses, and attached and detached single family units.	Level I - Consistent. The proposed project would develop up to 65 residential dwelling units that will be a mix of single family residences and condominiums. These units vary in density (Section 2.0, *Project Description*).
CD 1.6. Public Facilities. Enhance resident quality of life by providing adequate space for schools, libraries, parks and recreation areas, as well as space for the expansion of public facilities to support the community's vision.	Level I - Consistent. The proposed project would accommodate a population increase of approximately 260 residents, which would not substantially affect the City's ability to maintain and exceed its objectives for parkland and recreation. The City currently has sufficient parkland to serve the population and would continue to do so with development of the proposed project. Additionally, Lot E of the proposed project includes a private community/recreation area for the proposed residences that would be constructed as part of the project. This area would be a total of 0.19 acres in size. The proposed community/recreation area would be maintained by a future Homeowners Association that would be formed as part of the proposed project.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
CD 1.7. Compact Development. Promote the use of development patterns that are more compactly built and use space in an efficient aesthetic manner as part of the community vision.	Level I - Consistent. High-density residential zones are 30 or more dwelling units per acre and medium-high zones are 18 to 30 dwelling units per acre, as described in the City of Oxnard 2030 General Plan. The proposed project would construct a maximum of 65 residential dwelling units on 8.75 acres for an average density of 7.4 dwelling units per acre. The general distribution of densities for the site is included in the 2030 General Plan Land Use map, and the proposed project adheres to that distribution.
CD 1.8. Natural Resource Conservation. Promote a high quality of life within the community, incorporating the retention of natural open space areas, greenbelts, and the provision of adequate recreational facilities.	Level I - Consistent. As discussed in Section 2.0, *Project Description*, proposed project includes two open space lots, where no development would occur. These lots are located north of the proposed development comprising 27.67 acres and 1.91 acres.
CD 1.9. Commute Reduction. Minimize the commuting distances between residential concentrations and employment centers by encouraging the development of mixed land uses in appropriate areas.	Level II - Consistent. The proposed project is located in a residential area that is not within close proximity to employment centers. Zoning designations surrounding the project site are agriculture, resource conservation, and residential, which is not in an appropriate area to encourage development of mixed land uses.
CD 1.10. Jobs-Housing Balance. Consider the effects of land use proposals and decisions on efforts to maintain an appropriate jobs-housing balance ratio.	Level I - Consistent. The proposed project includes residential uses and would construct a maximum of 65 new single family residences. The project would add approximately 260 new residents. The 2010 Oxnard jobs/housing ratio was 1.11:1. The adopted VCOG 2040 forecast projects a total of 83,328 jobs and 71,602 households for the City of Oxnard by the year 2040. Therefore, the 2040 jobs/housing ratio would be 1.16:1 which is within the range of 1.1 and 1.34 jobs per housing unit, the acceptable jobs/housing ratio range identified by the VCOG (VCOG, May 2008). The proposed project would not move the City's ratio out of the VCOG range.
CD 1.12. Avoiding Encroaching the Oxnard Airport. Retain land within the airport hazard area as permanent open space as shown on the Land Use Map or otherwise recommended by the County Department of Airports.	Level II - Consistent. Development of the proposed project would place residential uses within 1 mile of the Oxnard Airport runway. No habitable development is proposed within the airport's inner or outer safety zone, and as discussed in Section 4.7, *Hazards and Hazardous Materials ,* the probability of an accident occurring in the Plan Area is low. Further, the presence of nearby emergency landing areas would reduce accident hazards. Prior to making a decision on the proposed project, the City of Oxnard must refer the proposed project to the ALUC for review and comment. The ALUC would then review the project for consistency with the Airport Comprehensive Land Use Plan. The City must consider the comments of the ALUC prior to making a decision on adoption of the project.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
CD 3.1. Neighborhood Preservation. Protect existing residential neighborhoods from the encroachment of incompatible activities and land uses as determined through environmental review and/or determination by the Planning Commission.	Level II - Consistent. The existing residential neighborhoods located to the south and west of the project site would be compatible with the proposed project because the proposed project would be expanding the residential community in the project vicinity. Additionally, the proposed project would not develop the two open space parcels which would remain for resource protection.
CD 6.2. Agricultural Preservation. Preserve agricultural land and uses within the Oxnard Planning Area unless other uses are allowed through a future CURB amendment and/or applicable exemptions.	Level II - Consistent. Review of the Farmland Mapping and Monitoring Program (FMMP) confirmed that the project site is not designated as agricultural land. The proposed project would therefore not convert any farmland to non-agricultural use and would not need to preserve farmland.
CD 8.5. Impact Mitigation. Ensure that new development avoids or mitigates impacts on air quality, traffic congestion, noise, and environmental resources to the maximum extent feasible.	Level I - Consistent. See Section 4.2, *Air Quality,* for mitigation measures relating to construction requirements that would reduce impacts to air quality to a less than significant level. See Section 4.10*, Noise*, which includes mitigation measures and concludes that impacts related to noise would be less than significant. See Section 4.11, *Traffic, Circulation, and Access,* for mitigation measures related to traffic circulation that would ensure that impacts related to traffic would be less than significant. Other mitigation measures and impacts to environmental resources are discussed throughout this EIR and impacts would be reduced to the extent feasible.
CD 8.7. Community Balance. Create an appropriate balance between urban development and preservation of agricultural uses by promoting development within the CURB while designating land outside the CURB as Resource Protection, Open Space or Agricultural land use, unless otherwise allowed through a CURB amendment and/or exemptions from the SOAR ordinance.	Level II - Consistent. Review of the Farmland Mapping and Monitoring Program (FMMP) confirmed that the project site is not designated as agricultural land. The proposed project would therefore not convert any farmland to non-agricultural use and would not need to preserve farmland and is not designated as a SOAR protected area.
CD 8.8. Public Facility Service Areas. Provide appropriate service areas for existing and planned public facilities such as a museum, secondary and elementary schools, fire stations, branch libraries, community centers, parks, and infrastructure utility for support facilities.	Level I - Consistent. The proposed project would provide primary access and secondary access for emergency vehicles and no new fire facilities would be required as a result of the proposed project. During the plan check and permitting process the Development Services Division will assess and determine the project impact fees that are required for this type of development. Development impact fees typically involve, but are not limited to: Planned Traffic Circulation System Facilities Fees (Traffic Impact); Planned Water Facilities Fee; Planned Wastewater Facilities Fee; Planned Drainage Facilities Fee; and Growth Requirement Capital Fee. Additionally, Government Code 65995 (b) establishes the base amount of allowable developer fees a school district can collect from development projects located within its boundaries, which would provide mitigation for new school facilities if necessary.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
CD 8.10. Timing of Large-Scale Development. Consider at an early stage the infrastructure investment needs of largescale developments in order to evaluate these needs as part of long-range water supply, conveyance, wastewater, and other relevant planning.	Level II - Consistent. As described in Section 4.14, *Utilities and Service Systems*, existing water supply and solid waste conveyance systems would be able to serve the proposed project. Wastewater conveyance systems and on-site water systems would be developed prior to occupancy.
CD 9.5. Unique Character Preservation. Ensure that new public and private investment maintains the unique coastal and agricultural character of the City.	Level II - Consistent. Review of the Farmland Mapping and Monitoring Program (FMMP) confirmed that there project site is not designated as agricultural land. The proposed project would therefore maintain the agricultural character of the City. As part of the proposed project, two parcels located on the northern end of the project site would remain undeveloped for resource protection and would maintain the coastal character of the City.
CD 10.1. Human-Scale Development. In the evaluation of development proposals, require urban development on a human scale, by emphasizing the pedestrian experience over the movement and storage of vehicles.	Level II - Consistent. The proposed project would provide for the pedestrian experience. The residential project would orient residences toward the street for a community feel and walkable neighborhood.
CD 10.2. Neighborhood Themes. In the evaluation of development proposals, require neighborhood themes and principles of design, such as neotraditional town planning, which include central parks, schools, and community and commercial facilities, strong pedestrian orientation and de-emphasis of automobile related elements in new development projects.	Level II - Consistent. The proposed project would have consistent cohesive design elements. Two parcels at the northern end of the project site would remain undeveloped providing aesthetically pleasing views. Additionally, Lot E of the proposed project includes a private community/recreation area for the proposed residents, which would be constructed as part of the proposed project.
CD 11.3. Protect and Enhance Cultural Resources. Ensure that new public and private investment protects and enhances Oxnard's existing cultural resources, traditional neighborhoods, and historic districts, to the extent feasible.	Level II - Consistent. See Section 4.4, *Cultural Resources* for mitigation measures that protect cultural resources.
Infrastructure and Community Services	
ICS 1.2. Development Impacts to Existing Infrastructure. Review development proposals for their impacts on infrastructure (e.g., sewer, water, fire stations, libraries, streets) and require appropriate mitigation measures to ensure that proposed developments do not create substantial adverse impacts on existing infrastructure and that the necessary infrastructure will be in place to support the development.	Level II - Consistent. The proposed project would have sufficient fire protection and police protection infrastructure. The population growth that would result from the proposed projects would represent a growth of 0.33 percent of the total growth projected by the City's 2030 General Plan, and would therefore not have a significant effect on the recommended standard for fire department staffing at one firefighter per 1,000 residents. Similarly, the estimated population increase from the proposed project would not result in incremental increase in the police officer to population ratio. The proposed See Section 4.12, *Utilities and Service Systems,* for a discussion of existing utility infrastructure for the proposed project.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
Circulation	
ICS 2.5. Mitigate Impacts on County Roads. Require new development to contribute to the enhancement of Ventura County-maintained roads based on an updated City/ County Memorandum of Understanding.	Level II - Consistent. The proposed project would not have a significant traffic impact. There would be no circulation improvements required for the proposed project as described in detail in Section 4.11, *Traffic, Circulation, and Access*.
ICS 3.1. CEQA Level of Service Threshold. Require level of service "C" as the threshold of significance for intersections during environmental review.	Level II – Consistent. A level of service "C" or better at intersections would be maintained as part of the proposed project, see Section 4.11, *Traffic, Circulation, and Access*.
ICS 3.3. New Development Level of Service C. Determine as part of the development review and approval process that intersections associated with new development operate at a level of service of "C" or better. The City Council may allow an exception to level of service "D" in order to avoid impacting private homes and/or businesses, avoid adverse environmental impacts, or preserve or enhance aesthetic integrity.	Level II - Consistent. The proposed project would not result in a level of service lower than "C." See Section 4.11, *Traffic, Circulation, and Access.*
ICS 6.1. Transit Facilities for New Developments. Include transit facilities such as bus benches, shelters, pads or turnouts, where appropriate, in new development improvement plans.	Level I - Consistent. There are no transit facilities included as part of the proposed project. However, the project site is located near existing public transit, bicycle, pedestrian, and multi-use transportation facilities. Residents at the project site would be able to access bus stops located at the corner of Victoria Road and Wooley Road, less than 1 mile to the east of the project site. Additionally, the project would be required to pay traffic impact fees to the City of Oxnard, which would provide funding improvements and additions to transit facilities.
ICS 8.4. New Development Requires Bicycle Improvements. Where designated, require proposed developments to include bicycle paths and / or lanes in their plan and to clearly indicate possible bicycling hazards such as speed bumps and storm drain inlet grates in parking lots.	Level I - Consistent. The project site is located near existing public transit, bicycle, and pedestrian transportation facilities. Bicycle facility improvements are planned along Wooley Road as well as expanded bike lanes and paths along Fifth Street and Mandalay Beach Boulevard.
ICS 11.7. Water Wise Landscapes. Promote water conservation in landscaping for public facilities and streetscapes, residential, commercial and industrial facilities and require new developments to incorporate water conserving fixtures (low water usage) and water-efficient plants into new and replacement landscaping.	Level II - Consistent. The proposed project would be required to adhere to Oxnard Municipal Code (OMC) Chapter 22 *Water*, Section 22-243 *Compliance Requirements*, which requires that the landscape area of single-family residential, multi-family residential, and institutional type of projects shall be designed with no more than 40 percent of the landscaped area in turf or plants that are not water wise plants.
ICS 11.12. Water for Irrigation. Require the use of non-potable water supplies for irrigation of landscape and agriculture, whenever available.	Level II - Consistent. Recycled water would be used, at a minimum, for all landscape irrigation, provided that the Utilities Department extends the recycled water facilities to the project site.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
ICS 13.2. Adequate Storm Drains and NPDES Discharge Treatment. Provide storm drainage facilities with sufficient capacity to protect the public and property from the appropriate storm event and strive to meet storm water quality discharge targets set by NPDES and related regulations.	Level II - Consistent. The project site is currently undeveloped and has no storm drains facilities. However, residential development directly south of the project site currently drains stormwater to the City storm drains through several existing catch basins. Stormwater is then discharged into the Edison Canal to the east of the project site. Implementation of the proposed project would be required to comply with local, state and federal water quality and discharge requirements.
ICS 13.3. Stormwater Detention Basins. Design stormwater detention basins to ensure public safety, to be either visually attractive or unobtrusive, provide temporary or permanent wildlife habitats, and recreational uses where feasible in light of safety concerns. *ICS 13.4. Low Impact Development. Incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID alternatives include: (1) conserving natural areas and reducing imperviousness, (2) runoff storage, (3) hydro-modification (to mimic pre-development runoff volume and flow rate), and (4) public education.*	Level II - Consistent. The proposed project would include a storm drain, diversion structures, and a detention basin because the site is currently undeveloped. The detention basins and infiltration areas would be located along the southern portion of the project side along the east site of the proposed roadway. Stormwater runoff from the central and eastern portions of the developed site would be directed toward a series of underground diversion structures that would direct water either to the underground detention basin or to the main site storm drain system. The location would be visually unobtrusive.
Environmental Resources	
ER 1.1. Protect Oxnard's Natural and Cultural Resources. Protect the City's natural resource areas, fish and wildlife habitat, scenic areas, open space areas, parks, and cultural and historic resources from unnecessary encroachment or harm and if encroachment or harm is necessary, fully mitigate the impacts to the maximum extent feasible.	Level I - Consistent. The proposed project would not develop the two northern parcels of the project site. They would remain undeveloped for natural resources. See Section 4.3, *Biological Resources*, for mitigation measures to further protect natural resources to the extent feasible.
ER 1.2. Protect Surrounding Agriculture and Open Space. Protect open space and agricultural uses around Oxnard through continued adherence to the Guidelines for Orderly Development, Ventura County Greenbelt programs, the Save Open-Space and Agricultural Resources Ordinance, and other programs or policies that may subsequently be adopted such as the SB 375 Sustainable Communities Strategy.	Level I - Consistent. Implementation of the proposed project would not develop the two northern parcels of the project site, a total of 29.6 acres. The agricultural land adjacent to the project site would not be affected by the proposed project because of the Edison Canal that acts as a buffer between the agricultural land and the project site.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
ER 2.2. Designation and Protection of Sensitive Habitat Areas. Evaluate existing and potential sensitive habitat areas (Environmentally Sensitive Habitat Area in the Coastal Zone – ESHA) as resource protection or open space land uses, including but not limited to: 1) Ormond Beach wetlands and upland areas, 2) Santa Clara River estuary and riverbed, 3) Edison Canal and harbor-related habitat areas, and 4) various dune habitat areas.	Level I – Consistent. Implementation of the proposed project would involve the development adjacent to a sensitive habitat area as mapped by the City of Oxnard Coastal Land Use Plan. The sensitive habitat is a portion of the Northern Dunes area. No development is proposed within the mapped sensitive habitat area, but the project would encroach into willow scrubland, which forms the southerly boundary of the dunes area. As discussed in Section 4.3, *Biological Resources*, mitigation measures to reduce impacts to sensitive habitats would be implemented as part of the proposed project.
ER 2.3. Promote Areas for Open Space. Reserve, preserve, and promote areas particularly suited for open space/recreational uses. Appropriate public access to these resources shall be preserved, enhanced, restored, and properly controlled.	Level I - Consistent. Implementation of the proposed project would not develop the two northern parcels of the project site, a total of 29.6 acres. Additionally, Lot E within the project site would be developed into a private community/recreation area for the proposed residences.
ER 3.1. Preserve Riparian Habitat. Require the preservation and enhancement of the riparian habitat along the Santa Clara River, Edison Canal, the McGrath Lake vicinity, and within the Ormond Beach wetlands.	Level I – Consistent. The northern portion of the project site extends into the Resource Protection land use designation, which includes sensitive resources associated with the Oxnard Dunes and riparian vegetation. The project includes these habitat areas in two lots (Lots A and B) intended for Resource Protection areas with no proposed development. Lack of development on these two lots would preserve riparian habitat on the project site.
ER 3.2. Review of Development Proposals. Review development proposals in accordance with applicable Federal, State, and local statutes protecting special-status species and jurisdictional wetlands and be open to requiring greater protection.	Level I - Consistent. As discussed in Section 4.3, *Biological* Resources, there are several special-status species and potential jurisdictional wetlands on the project area. Nesting birds and monarch butterflies would be protected through mitigation measures as described in Section 4.4, *Biological Resources.*
ER 3.5. Reduce Construction Silt and Sediment. Require that construction-related silt and sediment be minimized or prohibited to minimize temporary impacts on biological resources.	Level II - Consistent. As described in Section 4.8, *Hydrology and Water Quality,* compliance with NPDES Construction General Permit and the City of Oxnard ordinance requiring implementation of a Stormwater Pollution Control Plan would ensure that impacts on biological resources would be minimized.
ER 4.1 Encourage Protection of Sensitive Habitat. Identify and encourage protection of sensitive habitat areas, with attention to habitat that may span small parcels.	Level I – Consistent. The northern portion of the project site extends into the Resource Protection land use designation, which includes sensitive habitat associated with the Oxnard Dunes and riparian vegetation. The project includes these habitat areas in two lots (Lots A and B) intended for Resource Protection areas with no proposed development. The sensitive habitat on the project site would therefore be protected as part of the proposed project.
ER 4.5. Planning in Sensitive Areas. Require careful planning of new development in or near areas that are known to have particular value for biological resources to maintain sensitive vegetation and wildlife habitat.	Level I - Consistent. Implementation of the proposed project would not develop the two northern parcels of the project site, a total of 29.6 acres. Several mitigation measures within Section *4.3 Biological Resources* would be applied to the proposed project to protect areas with sensitive vegetation and wildlife.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
ER 5.7. Minimizing Paved Surfaces. Require minimization and/or permeability of paved surfaces in new developments and replacement paving, where feasible.	Level II - Consistent. The proposed project includes a private community recreation area and preservation of 29.6 acres of the project site. Impermeable surfaces, including buildings, surface parking lots, and streets do not exceed requirements. See Section 4.8, *Hydrology and Water Quality* for more details.
ER 6.1. Incorporate Views in New Development. Preserve important public views and viewsheds by ensuring that the scale, bulk and setback of new development does not significantly impede or disrupt them and ensure that important vistas and view corridors are enhanced. Require development to provide physical breaks to allow views into these vistas and view corridors.	Level II - Consistent. As discussed in Section 4.1, *Aesthetics* impacts to scenic views would be less than significant. Many of the views currently available from in and around the project site would continue to be accessible.
ER 6.6. New Development Private Open Space. Ensure that new development incorporates open space areas that provide community and neighborhood identity, private quality exterior private open space for each housing unit, and minimize conflicting land uses and noise generators.	Level II - Consistent. As proposed, there would be five open space parcels throughout the project site. Proposed Lots A and B (totaling 29.58 acres) are zoned for Resource Protection (R-P) and would remain undeveloped. The three remaining open space lots would include a drainage mitigation area, open space at the project gated entry, and a private community recreation area.
ER 9.4. Human Scale Development. Ensure that all new development emphasizes a human, pedestrian scale and minimizes its effect on the area's sensitive visual resources.	Level II - Consistent. The proposed project would develop up to 65 residential units. Without actual plans for single family homes and condominiums visual appearance, this can only be tentative at this time.
ER 10.1. Promote use of Native and Water Wise Plants. Promote the development of a native, drought-tolerant landscape character throughout the City that re-enforces a unified and cohesive landscape character and discourage plants that are invasive or problematic in other ways as determined by the City's landscape architect.	Level II - Consistent. The proposed project would be required to adhere to the City of Oxnard Municipal Code Chapter 22 *Water*, Section 22-243 *Compliance Requirements*, which requires the landscape area of single-family residential, multi-family residential, and institutional type of projects shall be designed with no more than 40 percent of the landscaped area in turf or plants that are not water wise plants.
ER 11.1. Archaeological Resource Surveys. Continue to require a qualified archaeologist to perform a cultural resources study prior to project approval. Inspection for surface evidence of archaeological deposits, and archaeological monitoring during grading should be required in areas where significant cultural resources have been identified or are expected to occur. *ER 11.6. Identification of Archaeological Resources. In the event that archaeological/paleontological resources are discovered during site excavation, continue to require that grading and construction work on the project site is suspended until the significance of the features can be determined by a qualified archaeologist/paleontologist.*	Level II - Consistent. The project site is undeveloped and project construction has the potential to unearth undiscovered archaeological resources. However, mitigation measures CR-1(a) through CR-1(c) would minimize impacts to cultural resources by requiring monitoring during grading (all earth disturbing work within the vicinity of the find would be temporarily suspended or redirected until an archaeologist has evaluated) and procedures for discovery of unearthed cultural resources.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
ER 11.7. Native American Remains. Continue to comply with State laws relating to the disposition of Native American burials consistent with the CEQA Guidelines (Section 15064.5) if human remains of possible Native American origin are discovered during project construction.	Level II - Consistent. The project site is undeveloped and project construction has the potential to unearth Native American burial grounds. However, mitigation measures CR-1(c) would minimize impacts to Native American remains by requiring compliance with applicable State regulations.
ER 14.1. Incorporate Ventura County AQMP Mitigations. Incorporate construction and operation mitigation measures recommended or required by the current Ventura County Air Quality Management Plan (AQMP) when preparing CEQA reviews, as appropriate.	Level II - Consistent. As described in Section 4.2, *Air Quality,* mitigation measures consistent with this policy would be required for project development.
ER 14.3. Reducing Carbon Monoxide Exposure at Congested Intersections. Require mitigation measures that consider prohibiting the construction of residences or buildings lacking ventilation systems at congested intersections with the potential for excessive Carbon Monoxide "hot spot" exposure to sensitive receptors.	Level II - Consistent. See Section 4.2, *Air Quality* Impact AQ-2 for discussion of Carbon Monoxide "hot spot" risks. It was determined that no intersections in the project area would require a hotspot analysis because all intersections studied would maintain a level of service C or better for existing plus project conditions and cumulative project conditions.
ER 14.4. Emission Control Devices. Require all construction equipment to be maintained and tuned to meet appropriate EPA, CARB, and VCAPCD emissions requirements and when new emission control devices or operational modifications are found to be effective, such devices or operational modifications are required on construction equipment.	Level II - Consistent. See Section 4.2, *Air Quality* for requirements related to construction equipment, which ensure consistency with this policy.
ER 14.5. Reducing Construction Impacts during Smog Season. Require that the construction period be lengthened to minimize the number of vehicles and equipment operating at the same time during smog season (May through October).	Level II - Consistent. See Section 4.2, *Air Quality,* which includes the requirement that the construction period be lengthened in Mitigation Measure AQ-1(b).
ER 14.6. Minimizing Dust and Air Emissions through Permitting Requirements. Continue to require mitigation measures as a condition of obtaining building or use permits to minimize dust and air emissions impacts from construction.	Level II - Consistent. Mitigation measures consistent with this policy are included in the EIR in Section 4.2, *Air Quality*, mitigation measures AQ-1(a and b), which require dust control measures and construction equipment controls in accordance with VCAPCD requirements.
ER 14.7. Mitigation Monitoring. Ensure that projects with identified air quality impacts in their respective EIRs are subject to effective mitigation monitoring as required by AB 3180.	Level II - Consistent. The Mitigation Monitoring Program includes specific details on how each mitigation measure is monitored, including those related to air emissions in compliance with *State CEQA Guidelines* 7.15097.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
ER 14.12. Use VCAPCD Air Quality Assessment Guidelines. Use the VCAPCD Air Quality Assessment Guidelines and recommended analytical tools for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents. The City shall continue to cooperate with the VCAPCD in the review of development proposals.	Level II - Consistent. See Section 4.2, *Air Quality* for discussion of the proposed project's consistency with the VCAPCD Air Quality Assessment Guidelines. This EIR determined that operational emissions related to air quality would not exceed VCAPCD daily thresholds and would not require mitigation.
Safety & Hazards	
SH 1.8. Mitigating Seismic Hazards. Where necessary, utilize the expert mitigation measures such as those identified in Special publication 117: Guidelines for Analyzing and Mitigating Seismic Hazards in California (prepared by the Southern California Earthquake Center) to minimize risk associated with seismic activity.	Level II - Consistent. As discussed in Section 4.5, *Geology and Soils*, mandatory compliance with applicable City of Oxnard and California Building Code requirements would mitigate seismic hazards to a less than significant level.
SH 3.2. New Development Flood Mitigation. As a condition of approval, continue to require new development to mitigate flooding problems identified by the National Flood Insurance Program and/or other expert information.	Level II – Consistent. The project site is outside the effective FEMA-defined 100-year flood zone. Therefore, there would be no flooding problems within a 100-year flood zone for the proposed project. However, the proposed project is within the inundation zone for several dams, but would not alter the existing risks associated with dam inundation in the project area.
SH 5.4. Older Neighborhood Noise Mitigation. Develop a noise research and mitigation program for any area where traffic generated noise is significant and exceeds or is likely to exceed acceptable thresholds.	Level II - Consistent. As described in Section 4.10, *Noise*, project-generated traffic would not result in a substantial increase in noise such that noise would be in exceedance of local thresholds. As such, impacts related to traffic-generated noise would be less than significant and the project would not require the development of a noise research and mitigation plan.
SH 5.6. Compatibility with Oxnard Airport. Work with the Oxnard Airport in revising flight paths to minimize flyovers of residential areas, especially "touch and go" pattern flying at low altitude and at relatively high frequency.	Level II - Consistent. Prior to making a decision on the proposed project, the City of Oxnard must refer the proposed project to the ALUC for review and comment. The ALUC would then review the project for consistency with the Airport Comprehensive Land Use Plan, including the policies and standards discussed above. The City must consider the comments of the ALUC prior to making a decision on adoption of the Specific Plan. The project site is located one mile from the Oxnard Airport, but is not located within an airport hazard zone. The ALUC has designated the project site as Low Density Residential.
SH 6.1. Construction Noise Control. Provide best practices guidelines to developers for reducing potential noise impacts on surrounding land uses.	Level II - Consistent. As described in Section 4.10, *Noise*, impacts would be less than significant for surrounding land uses.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
SH 6.2. Limiting Construction Activities. Continue to limit construction activities to the hours of 7 am to 7 pm, Monday through Saturday. No construction shall occur after hours, on Sundays, or national holidays without permission from the City.	Level II - Consistent. As described in Section 4.10, *Noise*, construction hours would be limited to 7am to 6pm Monday through Saturday.
SH 6.3. Buffering of Sensitive Receptors. Require noise buffering and/or other construction treatments in development located near major streets, highways, the airport, rail road tracks, or other significant noise sources as recommended by a noise analysis.	Level II - Consistent. As described in Section 4.10, *Noise*, impacts would be less than significant other than potential construction noise impacts on existing residences located adjacent to the project site. Mitigation Measures N-4(a) through N-4(d) would require maintenance of construction equipment, idling limitations for construction vehicles, and implementation of acoustical shielding to reduce potential impacts to a less than significant level.
SH 6.4. New Development Noise Compatibility. Require that proposed development projects not generate more noise than that classified as "satisfactory" based on CEQA Thresholds of significance on nearby property.	Level II - Consistent. As described in Section 4.10, *Noise*, construction noise from the project could result in generation of noise at nearby properties that exceeds significance thresholds. However, Mitigation Measures N-4(a) through N-4(e) would be required for the project and would reduce potential construction noise impacts to a less than significant level.
SH 6.6. Locating Education Institutions to Avoid Noise Disruption. Locate educational institutions in areas where students and teachers can perform both inside and outside activities without excessive distraction from noise.	Level II - Consistent. The project does not propose an educational institution and is not in an area zoned for education. The project site is also located outside of the 65 dBA airport noise contour.
SH 6.7. Peak Noise Evaluation Along Truck Routes. Evaluate peak event noise impacts for existing and proposed development along existing or proposed designated truck routes and require feasible and appropriate mitigations for project subject to discretionary review and approval.	Level II - Consistent. No truck routes are located adjacent to the project area. Additionally, as described in Section 4.10, *Noise*, impacts related to traffic- generated noise would be less than significant.
SH 6.9. Minimize Noise Exposure to Sensitive Receptors. Prohibit the development of new commercial, industrial, or other noise generating land uses adjacent to existing residential uses, and other sensitive noise receptors such as schools, child and daycare facilities, health care facilities, libraries, and churches if noise levels are expected to exceed 70 dBA.	Level II - Consistent. As described in Section 4.10, *Noise*, impacts would be less than significant other than potential construction noise impacts on existing residences located adjacent to the project site. However, Mitigation Measures N-4(a) through N-4(e) would be required for the project and would reduce potential construction noise impacts to a less than significant level. The project would not result in long-term noise exposure of any sensitive receptors, including the residences proposed on the project site, to noise levels exceeding 70 dBA.
SH 6.12. Development Near Railroads and Oxnard Airport. Require that new habitable structures be setback at least 85 feet from the nearest railroad track measured from the edge of the outermost railroad track, and only compatible new development is located within the Oxnard Airport 65 dBA CNEL contour.	Level II - Consistent. The proposed project 1 mile from the Oxnard Airport and within a Low Density Residential zone as defined by the Airport Comprehensive Land Use Plan Update for Ventura County (2000). The project site is not within the 65 dBA airport noise contour.

Table 4.9-2
2030 General Plan Policy Consistency

General Plan Policy	Discussion
SH 6.13. Noise Acceptable for Open Windows and Patios. Continue to require noise analysis of proposed development projects as part of the environmental review process and the require mitigation measures to reduce noise impacts to acceptable levels within outside activity areas and within residential structures without relying on mechanical ventilation, if feasible.	Level II - Consistent. As described in Section 4.10, *Noise*, impacts would be less than significant other than potential construction noise impacts on existing residences located adjacent to the project site. However, Mitigation Measures N-4(a) through N-4(e) would be required for the project and would reduce potential construction noise to acceptable levels and impacts would be less than significant.
SH-7.12. Hazardous Materials Studies. Ensure that the proponents of new development projects address hazardous materials concerns through the preparation of phase I or phase II hazardous materials studies for each identified site as part of the design phase for each project. Recommendations required to satisfy federal or State cleanup standards outlined in the studies will be implemented as part of the construction phase for each project.	Level II - Consistent. Converse Consultants completed a Phase I Environmental Site Assessment in 2014 for the project site. The ESA revealed no evidence of (ESA) recognized environmental conditions in connection with the project site.
SH 8.3. Ensure that construction of new roadways and expansion of existing streets mitigate impacts on air quality, noise, historic resources, sensitive biological areas and other resources.	Level II – Consistent. The proposed project would construct a new street through the project site to access the residences. See Sections 4.2, *Air Quality*, 4.3, *Biological Resources*, 4.4, *Cultural Resources*, 4.10, *Noise*, and 4.11, *Traffic, Circulation, and Access,* for discussion of individual resource areas.
SH 9.2. Compliance with FAA Regulations. Ensure development within the airport approach and departure zones are in compliance with applicable Federal Aviation Administration regulations that address objects affecting navigable airspace.	Level II - Consistent. The project site is located one mile from the Oxnard Airport, but is not located within an airport hazard zone, runway protection zone, outer safety zone, traffic pattern zone, or height restriction zone. The ALUC has designated the project site as Low Density Residential.
Housing	
Housing Element Policy-2.2 Balanced Opportunities. Provide opportunities to the private and public sector for the production of housing that meets the needs of special needs-, extremely low-, very low-, low-, moderate, and above moderate-income housing to achieve a balanced community.	Level II - Consistent. The Avalon Homes project envisions development of up to 65 residential dwelling units that will be a mix of condominiums and single family residences (Section 2.0, *Project Description*).

Zoning Designation. The project site is zoned Coastal Low-Density Multiple Family (R-2-C) and Coastal Resource Protection (RP). The project does not include development of northern lots A and B (27.67 and 1.91 acres). These lots would remain undeveloped, remaining consistent with the RP zoning designation. The R-2-C zoning designation allows for low density multi-family dwellings as well as emergency shelters for families, and allows up to six units per building and all uses permitted in the R-1 single family zone (Section 17-13 City of Oxnard Municipal Code). The proposed project would develop a maximum of 65 single-family residences, duplexes or a combination of both. Thus, the number of dwelling units in the middle of the site may range from 15 single-family units to 30 duplexes. In addition, there would be 35 condominiums in the southeast portion of the project site. Condominiums are

allowed in the R-2-C zone upon approval of a special use permit provided in Section 16-395 of the City of Oxnard Municipal Code. As depicted in the site plans the designs will comply with the R-2-C zoning standards. Therefore, the proposed project is consistent with the City zoning designations.

As required in Chapter 17 of the City of Oxnard Municipal Code the proposed project would obtain a coastal development permit because the project is located within the Oxnard Coastal Zone, specifically the Northern Dunes Area, designated in the Oxnard Coastal Land Use Plan. Chapter 17 of the Oxnard Municipal Code was developed to implement the policies of the California Coastal Act and protect the Oxnard coastal zone. Any project within the Oxnard Coastal Zone that includes grading requires a coastal development permit, which serves as the application for a planned unit development (City of Oxnard 2016). The City's Property Development Standards for the R-2-C zone (Section 17-13 of the Oxnard Municipal Code) require front yard setbacks of 20 feet and rear yard setbacks of 25 feet. Accordingly, the project would also require approval of a zoning variance to implement a proposed 10-foot minimum front yard setback for residential structures and 20-foot minimum rear yard setbacks.

Airport Land Use Plan. The Oxnard Airport is located approximately one mile to the northeast of the project site. The Federal Aviation Administration (FAA) requires runway protection zones and height limits on structures near airports to reduce risks to the public. The project site is not identified as part of a runway protection zone by the 2000 Airport Land Use for Ventura County Plan. The Plan identifies the project site for future residential use. (County of Ventura 2000). The Ventura County ALUC has prepared an Airport Comprehensive Land Use Plan (2000) to "provide for the orderly growth of each public airport and the area surrounding the airport… [and] safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general" (California Public Utilities Code Section 21675). As shown on Exhibit 6B of the Airport Comprehensive Land Use Plan, the project site is within the Airport Land Use Plan Area and Height Restriction Zone (HRZ). The Airport Comprehensive Land Use Plan includes the following policies related to surrounding land uses and exposure to airport noise and hazards:

- *Any structures proposed within the HRZ must remain below the Approach and Transitional Surface.*
- *For all conditionally acceptable land uses, the recording of a fair disclosure agreement and covenant shall be required.*
- *Any structures proposed within any part of the F .A.R. Part 77 Airspace Plan which require a variance, conditional use, or special use permit because they exceed the permitted height requirements of the zoning ordinance shall be reviewed by the ALUC if the height of the proposed structure would penetrate any F.A.R. Part 77 surface.*
- *If the FAA reviews the proposed structure and finds that the structure would represent a hazard to air navigation, the proposal shall be disapproved. The proposal shall also be disapproved if the FAA finds that the structure would require the raising of approach minimums at any military or public use airport in the County.*
- *If the Federal Aviation Administration (FAA) reviews the proposed structure and makes a finding of "no hazard," the structure shall be permitted, provided that it shall be marked and lighted in accordance with the recommendations of the FAA.*

Noise Compatibility. As discussed in Section 4.10, *Noise*, the project site is outside of the 65 dBA CNEL airport noise contour. The Airport Comprehensive Land Use Plan sets forth noise compatibility standards (Section 6.1) for Ventura County airports. The proposed land use categories and their associated classifications in the Airport Comprehensive Land Use Plan for the noise contours into which they would fall are:

- *Residential outside of the 60 dBA CNEL contour – acceptable.*
- *Residential within the 60-65 dBA contour – conditionally acceptable, i.e., must meet the following criterion: new construction or development may be undertaken only after an analysis of noise reduction requirements and necessary noise insulation is included in the design.*
- *Industrial (includes light industrial and business park uses) and Commercial uses within the 60-70 dBA contours – acceptable.*
- *Public/Institutional (schools, YMCA or similar) outside of the 60 dBA CNEL contour – acceptable.*

The project site is a residential development outside of the 65 dBA CNEL airport noise contour. Therefore, the proposed projects land use category is considered acceptable by the Airport Comprehensive Land Use Plan and would be consistent with the noise compatibility guidelines of the Airport Comprehensive Land Use Plan.

Safety Compatibility. The Airport Comprehensive Land Use Plan sets forth safety compatibility standards (Section 6.2) for Ventura County airports. This includes classifying the compatibility of specific land uses in proximity to the airport as to whether they are acceptable, conditionally acceptable or unacceptable within identified safety zones. The proposed land use categories and their associated classifications in the Airport Comprehensive Land Use Plan are:

- *Residential – conditionally acceptable, i.e., must meet the following criteria: structural coverage may not exceed 25%, and an avigation easement and fair disclosure agreement and covenant must be recorded for the subject property.*
- *Industrial (includes light industrial and business park uses) and Commercial – conditionally acceptable, i.e., must meet the following criteria: structural coverage may not exceed 50%, with structures placed as far as practical from the runway on parcels immediately adjacent to airport property; and an avigation easement and fair disclosure agreement and covenant must be recorded for the subject property.*
- *Public/Institutional [schools, YMCA or similar] – unacceptable.*

As discussed in Section 4.10, *Noise* and Section 4.7, *Hazards and Hazardous Materials*, the criteria for residential uses are met. As discussed in impacts HAZ-2 and N-5, noise and hazard impacts associated with the airport would be less than significant.

Prior to making a decision on the proposed project, the City of Oxnard must refer the proposed project to the ALUC for review and comment. The ALUC would then review the project for consistency with the Airport Comprehensive Land Use Plan, including the policies and standards discussed above. Neither the County of Ventura, the ALUC, nor the FAA has approval authority over the project; therefore, consistency findings and other decisions or

recommendations from these agencies are limited in the context of whether the City of Oxnard ultimately approves, approves with conditions, or denies the proposed project.

Southern California Association of Governments. The project site is located within the area served by the Southern California Association of Governments (SCAG), which includes Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. The project site area is located within the Ventura Council of Governments Subregion, which includes the Cities of Agoura Hills, Camarillo, Fillmore Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, Thousand Oaks, and Westlake Village, as well as the County of Ventura.

SCAG has published several land use plans applicable to the proposed project including SCAG's Southern California Compass Growth Vision, Regional Comprehensive Plan and Guide (RCP), and Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The consistency of the project with applicable goals of the SCAG 2016 RTP/SCS is analyzed in Table 4.9-3. Goals that call for action on the part of other, higher levels of government such as SCAG or the state or federal governments alone, or on the part of developers alone, are not included because they are outside the power of the City to accomplish. Additionally, goals unrelated to the proposed project are not included in Table 4.9-3.

Table 4.9-3
SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy Goals

SCAG RTP/SCS Goals	Project Consistency
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	**Consistent**. The proposed project would involve the construction of up to 65 residential units on the project site. The project would add approximately 260 new residents, based on the DOG average number of persons per household in the City of Oxnard, for a total population of 207,257 persons. Development and providing additional housing within the City brings in additional jobs and residents improving regional economic competiveness.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	**Consistent**. The proposed project is located within five miles of major transportation corridors including the Union Pacific railroad tracks, U.S. 101, and State Route 1.
Goal 5: Maximize the productivity of our transportation system.	**Consistent.** The proposed project consists of traditional neighborhood design components that promote "porch and street orientation" and encourage walking and interaction between residents. The project site adjacent to an existing residential community to the west that contains several commercial land uses. The close proximity to existing land uses promotes walking and/or bicycle transit opportunities, reducing traffic on the transportation system therefore maximizing its productivity.

Jobs/Housing Balance. In order to provide a comprehensive assessment of the potential changes to the City of Oxnard as a result of the proposed project, the following is a discussion of the City's jobs to housing balance and how it may be affected by project development.

Table 4.9-4 shows employment, households and population projections for Oxnard from the Southern California Association of Governments (SCAG). As shown, the current (2010) number of jobs in the City is estimated at 55,489.

Table 4.9-4
SCAG Employment, Households and Population Projections for Oxnard

	2015[2]	2020[3]	2035[3]
Employment[1]	59,401	64,000	69,800
Households	50,613	58,800	70,600
Population	206,997	216,700	244,500

[1] Number of jobs
[2] Source: SCAG, 2015.
[3] Source: SCAG, 2012.

Using the 2015 estimate of employment (jobs) shown in Table 4.9-4 and comparing it to the number of households in the City, the 2015 jobs/housing ratio in Oxnard was approximately 1.17:1. According to the Ventura County Planning Division, an area is normally considered to be "in balance" if it has between 1.1 and 1.34 jobs per housing unit, as recommended by the Ventura Council of Governments (VCOG) (VCOG, May 2008). A jobs/housing ratio of 1.17 is within the VCOG recommended range. The adopted VCOG 2040 forecast projects a total of 83,328 jobs and 71,602 households for the City of Oxnard by the year 2040. Therefore, the 2040 jobs/housing ratio would be 1.16, which is within the range of 1.1 to 1.34 jobs per household, which is the acceptable jobs/housing ratio range identified by the VCOG (VCOG May 2008).

Conclusion. The project is consistent with goals, policies, and objectives of the 2030 General Plan and other policy documents, with inclusion of the mitigation measures described throughout this EIR and in the tables above.

Mitigation Measures. Mitigation measures are contained in Sections 4.2, *Air Quality,* 4.5, *Geology and Soils,* and 4.10, *Noise.*

Significance After Mitigation. Mitigation measures form the EIR sections listed above would reduce environmental impacts to help achieve consistency with adopted goals and policies.

Threshold 2:	*Would the project involve land uses that are not allowed under any applicable airport land use compatibility plan?*

Impact LU-3 The proposed project would be compatible with existing adjacent urban and airport uses, with incorporation of mitigation measures included in the noise sections of this EIR. This is considered a Class II, *significant but mitigable*, impact.

The project site is located at the southeast corner of South Harbor Boulevard and West Fifth Street, north of the existing Oxnard Dunes subdivision and in the Oxnard Dunes Neighborhood in the Southwest Community of the City of Oxnard. To the north of the project site is

undeveloped open space zoned for resource protection (RP), Coastal Visitor-Serving Commercial (CVC), and Single-Family Beach (RB1). The North Shore Subdivision planned on the RB1 property is currently in plan check. To the east of the project site is undeveloped open space zoned for Community Reserve (CR) with the existing Edison Canal oriented north to south. Existing single-family residences in the Oxnard Dunes neighborhood are to the south and existing single-family beach residences are to the west of the project site. The Oxnard Airport is located approximately one mile northeast of the project site.
As discussed in Section 4.1, *Aesthetics,* the project site currently consist of relatively flat sand dunes with low laying tree vegetation along the northern portion of the site. The land use of the project site would be residential similar in appearance to the surrounding residential neighborhoods to the south and east. The project would not have a significant adverse impact on scenic vistas from surrounding neighborhoods. Therefore, land use conflicts related to aesthetics would not be significant.

As discussed in Section 4.7, *Hazards and Hazardous Materials,* development of the proposed project is approximately one mile southwest of the Oxnard Airport. The Airport Comprehensive Land Use Plan for Ventura County (2000) has designated the project site as Low Density Residential. As discussed in the section, the project is consistent with the airport land uses.

As discussed in Section 4.11, *Traffic, Circulation, and Access*, traffic impacts would be less than significant. The proposed project would not cause any intersections within the project vicinity to exceed the applicable LOS criteria or any bridges to exceed their capacity. Additionally, the proposed project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Therefore, land use conflicts related to transportation and traffic would not be significant.

As discussed in Section 4.10, *Noise*, there would be a short-term increase in ambient noise levels as a result of project construction. Temporary construction could affect sensitive noise receptors because construction noise could reach up to 95 dBA. However, impacts from construction noise on surrounding sensitive receptors would be temporary and is not associated with the use of property after construction, and therefore not a land use compatibility issue. Aircraft associated with the Oxnard Airport would periodically generate noise that may be audible to residents at the project site. However, the project site is outside the 65 dBA noise contour for the Oxnard Airport.

The most localized and hence direct air quality impacts to residents near a project site are from areas with high vehicle density, such as congested intersections, that have the potential to create high concentrations of carbon monoxide. As discussed in Section 4.2, *Air Quality*, project-generated traffic, together with cumulative traffic growth in the area, would not create carbon monoxide concentrations exceeding state or federal standards because all intersections would remain at a level of service C or better. Operation of the proposed project would generate other air pollutant emissions, particularly reactive organic compounds and nitrogen oxides. However, operational pollutants would not exceed the VCAPCD's daily significance thresholds of 25 pounds per day. In summary, local air quality would not be degraded by implementation of the new, more intense land use, and the change would not reach levels where the proposed land use could be considered in conflict with the surrounding uses.

Mitigation Measures. The mitigation measures recommended in Section 4.10, *Noise* would reduce noise impacts to levels that would avoid significant land use compatibility impacts.

Significance After Mitigation. With implementation of recommended mitigation measures, compatibility conflicts relating to hazards, noise and traffic would be reduced to less than significant.

c. **Cumulative Impacts.** Implementation of the proposed project, in conjunction with other related projects as part of buildout projected in the City's 2030 General Plan, would cumulatively result in an overall intensification of land uses in Oxnard. Although some future projects may require General Plan Amendments, Zone Changes, Variances, Conditional Use Permits, Tract Map approvals, or other discretionary land use actions, the merits of each project would be considered on a case-by-case basis. These projects may not be approved if they are found inconsistent with the 2030 General Plan, or if the required findings of approval, which typically address land use compatibility, cannot be made. Increased development densities from these projects would generate secondary cumulative impacts with respect to traffic, air quality, noise, and public services. These impacts are discussed in their respective sections of this EIR.

Threshold 3:	*Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?*

Impact LU-2 The proposed project would not conflict with any habitat conservation plan or natural community conservation plan. This is considered a Class IV, *of no impact*.

The project site is not within the coverage area of any adopted federal, state, or local Habitat Conservation Plan. Accordingly, the project would result in no impacts related to consistency with such plans.

Mitigation Measures. No mitigation is necessary.

Significance After Mitigation. Impacts would be less than significant without mitigation.

4.10 NOISE

4.10.1 Setting

a. Overview of Noise. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate at a rate of approximately 6 dBA per doubling of distance from point sources (such as industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distances. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed (approximately 30 years old) generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (FTA, 2006).

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. Lmax is the highest RMS (root mean squared) sound pressure level within the measuring period, and the Lmin is the lowest RMS sound pressure level within the measuring period.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 p.m. to 7 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty

for noise occurring from 7 p.m. to 10 p.m. and a 10 dBA penalty for noise occurring from 10 p.m. to 7 a.m. Noise levels described by Ldn and CNEL usually do not differ by more than 1 dB.

b. Fundamentals of Groundborne Vibration. Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S., is referenced as vibration decibels (VdB).

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. According to the Federal Transit Administration *Transit and Noise Vibration Impact Assessment* (FTA, 2006), a vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. The general human response to different levels of groundborne vibration velocity levels is described in Table 4.10-1.

Table 4.10-1
Human Response to Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
90 VdB	Difficulty with tasks such as reading computer screens.

Source: FTA, 2006

c. Sensitive Receptors. Noise exposure standards for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are most sensitive to noise intrusion and therefore have more stringent noise exposure standards than manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. The project itself is a sensitive receptor. There is also residential development immediately adjacent to the project site, located approximately 25 feet to the south and west.

d. Existing Noise Environment. The general noise environment of the project site and the vicinity is characterized by nearby roadways, including S. Harbor Boulevard, W. Wooley Road, and West Fifth Street. Additionally, nearby development such as the Oxnard Dunes residential development contribute to the noise environment. Motor vehicle noise is of concern because it is characterized by a high number of individual events, creating a sustained noise

level. Additionally, overhead electrical lines along Harbor Drive and W Wooley Road create consistent buzzing, contributing to the noise environment.

Sound level measurements were taken by Rincon Consultants staff at four locations on or near the project site using an ANSI Type II integrating sound level meter in accordance with standard protocols on July 14, 2016. These sound level measurements were collected during AM peak hours (7:00-9:00 AM), and provide an estimate of the general noise environment in the project vicinity. Table 4.10-2 identifies the sound level measurement locations and measured sound levels.

Table 4.10-2
Noise Measurement Results

Measurement Number	Measurement Location	Primary Noise Source	Approximate Distance to Roadway Centerline	Leq (dBA)	Lmax (dBA)	Lmin (dBA)
1	Between Dunes Alley and W Wooley Road	Traffic	100 feet	54.0	69.9	42.9
2	Harbor Drive and Beachcomber Street	Traffic	40 feet	66.8	87.5	41.5

Source: Rincon Consultants, Inc. 2016. Recorded during field visit using ANSI Type II Integrating sound level meter. See Appendix H for noise monitoring data sheets.

e. Regulatory Setting.

Federal. The U.S. Department of Transportation Federal Transit Administration (FTA) has recommended noise criteria related to traffic generated noise. Recommendations contained in the May 2006 Transit Noise and Vibration Impact Assessment prepared by FTA can be used as guidance to determine whether or not a change in the traffic would result in a substantial permanent increase in noise. Under the FTA standards, the allowable noise exposure increase is reduced with increasing ambient existing noise exposure, such that higher ambient noise levels have a lower allowable noise exposure increase. Table 4.10-3 shows the significance thresholds for increases in traffic related noise levels. These standards are applicable to project-impacts on existing sensitive receptors, as defined in Section 4.10.1(c).

Table 4.10-3
Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure (dBA Ldn or Leq)	Allowable Noise Exposure Increase (dBA Ldn or Leq)
45-50	7
50-55	5
55-60	3
60-65	2
65-74	1
75+	0

Source: FTA, 2006

The FTA also recommends vibration impact thresholds to determine whether groundborne vibration would be "excessive." According to FTA, groundborne vibration criteria for residential receptors are 72 VdB for frequent events, 75 VdB for occasional events, and 80 VdB for infrequent events (FTA, 2006). The FTA recommended 80 VdB threshold for infrequent

events at residences and buildings where people normally sleep; this threshold was used for this analysis. In terms of groundborne vibration impacts on structures, the FTA states that groundborne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings. The threshold for this project is 80 VdB for infrequent events at residences and buildings where people normally sleep (e.g., the existing residences to the north and east of the project site.

State. California Government Code §65302 encourages each local government entity to implement a noise element as part of its general plan. In addition, the California Governor's Office of Planning and Research has developed *Guidelines for the Preparation and Content of Noise Elements of the General Plan* (2003). The guidelines include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.

Local. Consistent with state law, the City of Oxnard adopted noise policies in its 2030 General Plan Safety and Hazards Element, as well as the City of Oxnard's Noise Regulation Ordinance (Chapter 7, Article XI, of the Oxnard Municipal Code).

Noise Regulation Ordinance. The City's Noise Ordinance identifies noise standards for various sources and includes specific noise restrictions for sources of noise within the City. Section 7-184 of the Oxnard Municipal Code designates sound zones for properties within the City based on their corresponding land use. Residential uses are designated as Sound Zone I; Commercial properties are designated Sound Zone II; Industrial areas are designated as Sound Zone III; and all property within the contours around a roadway, railroad track, or the Oxnard Airport (as identified in Figure IX-2 of the Noise Element of the 2030 General Plan) are designated as Sound Zone IV.

Table 4.10-4 shows the allowable noise levels and corresponding times of day for each of the identified sound zones.

Table 4.10-4
Exterior Noise Standards

Sound Zone	Type of Land Use	Allowable Exterior Sound Level (dBA)	
		7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
I	Residential	55	50
II	Commercial	65	60
III	Industrial	70	70
IV	As identified in Figure IX-2 of the 2020 General Plan		

Source: City of Oxnard, February 2016

Section 7-185 of the Municipal Code specifies that no person at any location within the City shall create, maintain, cause, or allow any sound on property which causes the sound level, when measured on any other property, to exceed:

1. *The allowable exterior sound level for a cumulative period of more than 30 minutes in any hour;*
2. *The allowable exterior sound level plus five dBA for a cumulative period of more than 15 minutes in any hour;*
3. *The allowable exterior sound level plus ten dBA for a cumulative period of more than five minutes in any hour;*

4. *The allowable exterior sound level plus 15 dBA for a cumulative period of more than one minute in any hour; or*
5. *The allowable exterior sound level plus 20 dBA for any period of time.*

In addition, with respect to residential uses, the interior noise level may not exceed 45 dBA between the hours of 10 p.m. and 7 a.m. and 50 dBA between 7 a.m. and 10 p.m. for a period of five or more minutes in any hour, as shown in Table 4.10-5. Further, the allowable interior level plus 5 dBA cannot be exceeded for more than one minute in an hour and the allowable interior level plus 10 dBA cannot be exceeded for any period of time (Municipal Code Section 7-186).

Table 4.10-5
Residential Interior Noise Standards

Sound Zone	Type of Land Use	Allowable Interior Sound Level (dBA)	
		7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
All	Residential	50	45

Source: City of Oxnard, February 2016

2030 General Plan. Chapter 6, *Safety and Hazards*, of the City of Oxnard 2030 General Plan identifies policies to ensure a quiet and safe residential and working environment. The following policies within the General Plan apply to the proposed project.

SH-5.2 ***State Noise Insulation Standard****s. Continue to enforce State Noise Insulation Standards for projects in high noise environments and require developers to comply with noise mitigation measures, designed by an acoustical engineer.*

SH-5.3 ***Sound Attenuation Measures.*** *Promote, where feasible, alternative sound attenuation measures such as berms, heavy landscaping, resurfacing of noise walls to promote noise absorption as well as deflection, berms and landscaping, or location of buildings away from roadways or other noise sources.*

Goal SH-6 *Consideration of noise levels and impacts in the land use planning and development process.*

SH-6.1 ***Construction Noise Control.*** *Provide best practices guidelines to developers for reducing potential noise impacts on surrounding land uses.*

SH-6.2 ***Limiting Construction Activities.*** *Continue to limit construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday. No construction shall occur after hours, on Sundays, or national holidays without permission from the City.*

SH-6.3 ***Buffering of Sensitive Receptors.*** *Require noise buffering and/or other construction treatments in development located near major streets, highways, the airport, railroad tracks, or other significant noise sources as recommended by a noise analysis.*

SH-6.4 ***New Development Noise Compatibility.*** *Require that proposed development projects not generate more noise than that classified as "satisfactory" based on CEQA Thresholds of significance on a nearby property.*

SH-6.5 ***Land Use Compatibility with Noise.*** *Encourage non-noise sensitive land uses to locate in areas that are permanently committed to noise producing land uses, such as transportation corridors and industrial zones.*

SH-6.12 ***Development Near Railroads and Oxnard Airport.*** *Require that new habitable structures be setback at least 85 feet from the nearest railroad track measured from the edge of the outermost railroad track, and only compatible new development is located within the Oxnard Airport 65 dBA CNEL contour.*

SH-6.13 ***Noise Acceptable for Open Windows and Patios.*** *Continue to require noise analysis of proposed development projects as part of the environmental review process and require mitigation measures to reduce noise impacts to acceptable levels within outside activity areas and within residential structures without relying on mechanical ventilation, if feasible.*

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology. The analysis of noise impacts considers the effects of both temporary construction-related noise, including construction activities, and operational noise associated with long-term project-related activities, including project-generated traffic and stationary source noise. Construction noise estimates are based upon noise levels reported by the FTA in the *Transit Noise and Vibration Impact Assessment* (2006), and the distance to nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Construction noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Noise levels associated with existing and future traffic along area roadways were calculated using the U.S. Department of Transportation, Federal Highway Administration's (FHWA) Traffic Noise Model Version 2.5 (2004) (noise model data is provided in Appendix H). The model calculations are based on traffic data from the Traffic and Circulation Study prepared by Associated Traffic Engineers (ATE, 2016), included as Appendix I.

Significance Thresholds. The following thresholds are based on Appendix G of the *State CEQA Guidelines* and the City of Oxnard 2017 Threshold Guidelines. Impacts would also be potentially significant if the proposed project would:

1. *Generate or expose persons to noise levels in excess of standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies;*
2. *Generate or expose persons to excessive groundborne vibration or groundborne noise levels;*
3. *Generate a substantial temporary or periodic increase in ambient noise in the project vicinity above levels existing without the project;*
4. *Generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project;*

5. *Be located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the project area to excessive noise levels; and/or*
6. *Expose non-human species to excessive noise.*

Long Term Operational Noise. Impacts to future development within the project area relating to operational on-site activities, traffic noise, and aircraft noise would be considered significant if the project-related activities create noise exceeding the City's noise standards as shown in Table 4.10-4 and Table 4.10-5.

Traffic Noise. For traffic-related noise, impacts are considered significant if project-generated traffic noise would result in exposure of sensitive receptors to an unacceptable increase in noise levels. Recommendations contained in the May 2006 *Transit Noise and Vibration Impact Assessment* report created by the Federal Transit Administration (FTA) were used to determine whether increases in traffic noise would be unacceptable. With these thresholds, the allowable noise exposure increase is reduced with increasing ambient noise exposure, such that higher ambient noise levels have a lower allowable exposure increase. Table 4.10-3, above, shows the significance thresholds for increases in traffic-related noise levels caused either by the project alone or by the project's contribution to cumulative development.

Temporary Construction Noise and Vibration. Construction noise is considered significant if it would occur between the hours of 6 p.m. and 7 a.m. Monday through Saturday or anytime on Sunday (Oxnard Municipal Code 7-188). The City has not adopted specific numerical thresholds for groundborne vibration impacts. Therefore, this analysis uses the FTA's vibration impact thresholds to determine whether groundborne vibration would be "excessive." A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Consequently, the FTA recommends an 80 VdB threshold for infrequent events at residences and buildings where people normally sleep (e.g., the future on-site residences and the residences to the south and west of the project site). The FTA does not consider most commercial and industrial uses to be noise-sensitive (except for those that depend on quiet as an important part of operations, such as sound recording studios) and therefore does not recommend thresholds for groundborne vibration impacts to such uses. In terms of groundborne vibration impacts on structures, the FTA states that groundborne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project generate or expose persons to noise levels in excess of standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?*

Impact N-1 **The proposed project is a residential neighborhood, which has an allowable exterior sound level of 55 dBA during daytime hours and 50 dBA during nighttime hours. The allowable interior sound level for residential uses is 50 dBA during daytime hours and 45 dBA during nighttime hours. The project would not be exposed to sound levels over this range; therefore impacts would be Class III, *less than significant.***

The project site is adjacent to residential development, open space, S. Harbor Boulevard, and W. Fifth Street. Noise generated by existing uses is limited to residential and traffic related noise sources. As measured by Rincon Consultants Inc., during a site visit on July 29, 2016, noise measurements in the vicinity of the project site range from 54-67 dBA. These noise measurements were further modeled using TNM 2.5, as shown in Table 4.10-6.

Table 4.10-6
Noise Model Results

Measurement Number[1]	Measurement Location	Primary Noise Source	Approximate Distance to Roadway Centerline	Measurement Leq (dBA)	Model* dBA
1	Between Dunes Alley and W Wooley Road	Traffic	100 feet	54.0	56.7
2	Harbor Drive and Beachcomber Street	Traffic	40 feet	66.8	60.6

See Appendix H
** The modeled used AM peak hour traffic to reflect the measurements being taken during the AM peak hour.*

The model is within 3 dBA of noise measurement 1, along W Wooley Road. However, noise measurement 2, along Harbor Drive is 6 dBA higher than the model. This is because the model is reflective of roadway noise but there are other sources of noise along the road, including the overhead electrical wires, which are a large source of noise. For this reason, the noise measurements are the appropriate Leq for assessing whether the project would expose the proposed residences to excessive noise, while the roadway noise modeling is appropriate for assessing the proposed project's impact on roadway noise specifically.

The proposed project is located approximately 550 feet from noise measurement 1 and approximately 650 feet from noise measurement 2. Based on the attenuation of sound and the existing residences between the project site and noise sources, explained in *Setting,* noise at the project site is less than noise at the measurement locations. Based on distance from the roadways and intervening structures, proposed residences on the west side of the project site would be exposed to noise levels of approximately 55 dBA and residences on the south side of the project site would be exposed to noise levels of approximately 46 dBA. This is within the allowable exterior sound level for residential development.

As explained in *Setting*, the exterior to interior noise reduction from new construction is generally 30 dBA or more. Therefore, for sensitive receptors located near internal roadways with noise levels above 75 dBA, interior noise levels may exceed City standards. The project site is not located near any roadways with noise levels above 75 dBA. Based on a maximum exterior noise level of 55 dBA on the western edge of the project site, interior noise level would be 25 dBA or less. This is within the allowable interior sound level for residential development.

Because exterior and interior noise levels would be within City standards, impacts would be less than significant.

Mitigation Measures. No mitigation would be required.

Significance after Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would the project generate or expose persons to excessive groundborne vibration or groundborne noise levels?*

Impact N-2 **Construction activity associated with the proposed project would intermittently generate groundborne vibration on and adjacent to the project site. This may affect existing offsite receptors near the project site. However, construction vibration would not exceed the FTA thresholds for vibration. Therefore, impacts would be Class III, *less than significant.***

Construction activity has the potential to generate low levels of groundborne vibration, which could impact nearby noise sensitive land uses. Grading and excavation are the primary source of man-made vibration. Table 4.10-7 identifies various vibration velocity levels for the types of construction equipment that would operate at the project site during construction.

Table 4.10-7
Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB			
	25 Feet	50 Feet	75 Feet	100 Feet
Large Bulldozer	87	78	77	69
Loaded Trucks	86	77	76	68
Small Bulldozer	58	48	48	39

Source: Harris Miller Miller & Hanson, Inc. 1995

The primary sources of man-made vibration are blasting, grading, pavement breaking, and demolition. As the project site is undeveloped with no pavement or existing structures, vibration noise would primarily be generated during grading. As shown, typical bulldozer or loaded truck activities generate an approximate vibration level of 58-87 VdB at a distance of 25 feet. Vibration levels in excess of 80 VdB typically result in annoyance. As such, existing residences adjacent to the project site may intermittently be disturbed by vibration noise. The vibration levels would not be anticipated to exceed 95 VdB within the project area, which is the threshold where minor damage can occur in fragile buildings.

Groundborne vibration from temporary construction activity could affect sensitive receptors. Vibration levels could reach up to 87 VdB at a distance of 25 feet. The Oxnard Municipal Code Section 7-188 exempts construction and grading activities from noise restrictions provided the activities occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. Consistent with the City's code requirements, construction-related vibration would occur within these hours and would not occur during normal sleeping hours. Further, construction activities would be temporary and intermittent in nature and would not result in long-term noise impacts.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 3:	*Would the project generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Impact N-3 **The proposed project would generate noise through daily operations and a result of project generated traffic on area roadways, including South Harbor Boulevard and West Fifth Street. However, operational noise and project generated traffic are not expected to result in a substantial increase in ambient noise levels that would significantly impact nearby sensitive noise receptors. Therefore, impacts would be Class III, *less than significant.***

Implementation of the proposed project would result in an increase in the average number of daily vehicle trips in the project's vicinity, particularly Harbor Drive and W Wooley Road. The *Traffic and Circulation Study* prepared for the proposed project (ATE, 2016) determined the existing traffic levels on the surrounding roads, as well as the traffic levels expected as a result of the proposed project. These traffic levels were used to determine existing and potential future sound levels at sensitive receptors along Harbor Drive and W Wooley Road.

Table 4.10-8 shows estimates of noise levels that are based on traffic noise modeling using TNM 2.5. The fleet mix for vehicle trips along all roadways was estimated at 99 percent passenger vehicles and 1 percent light trucks. This estimate is based on the traffic mix during noise measurements. The modeled noise levels are an accurate representation of traffic noise and it is appropriate to use the modeled noise levels to determine the expected change in noise level that would result from the project generated traffic increases under existing and cumulative scenarios. Afternoon peak hour traffic was used, as the traffic study estimates traffic to be higher during the PM peak hour.

Table 4.10-8
Project Related Traffic Noise

Receptor #	Receptor Location	Existing Conditions	Existing + Project Conditions	Change	FTA Increase Threshold	FTA Threshold Exceeded?
SR 1	Harbor Drive, 300 feet west of project site	64.5	64.5	<0.1	2	No
SR 2	Harbor Drive and W Wooley Road, 850 feet from project site	59.4	59.5	0.1	3	No
SR 3	W Wooley Drive, 300 feet from project site	41.6	41.7	0.1	7	No

See Appendix H; Based on afternoon peak hour traffic

As shown in Table 4.10-8, the addition of project generated traffic would increase traffic noise levels at sensitive receptors by 0.1 dBA. These projected noise levels would not exceed the applicable FTA noise increase threshold.

As discussed previously, the manner in which older homes in California were constructed (approximately 30 years old or older) generally provides a reduction of exterior to interior noise levels of about 25 dBA with closed windows (FTA, 2006). Therefore, the interior noise level at existing residences surrounding the project site would be 16-40 dBA. This is within the City of Oxnard allowable range for residential development (50 dBA during daytime hours and 45 dBA during nighttime hours).

Therefore, sensitive receptors surrounding the project site would not experience a substantial increase in interior noise conditions, and project-generated traffic would be considered a less than significant impact for noise.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. The project would be less than significant without mitigation.

Impact N-4 Threshold 4: Would the project generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project? Construction of the proposed project would result in a short-term increase in noise levels due to the operation of heavy equipment. Therefore, impacts would be Class II, *significant but mitigable*.

The existing residences adjacent to the project site could be exposed to temporary construction noise during construction of the proposed project. The nearest existing residences are approximately 25 feet from the southern portions of the project site. Noise levels associated with construction of the proposed project could range from 82 to 95 dBA, as shown in Table 4.10-9 at a distance of 25 feet from the source, depending on the types of equipment in operation at any given time and the phase of construction. The operation of heavy equipment during construction would result in temporary increases in noise in the immediate vicinity of the project area. The highest noise levels would generally occur during grading, excavation, and

foundation development, which involve the use of such equipment as backhoes, bulldozers, shovels, and front-end loaders. In addition, construction vehicles traveling on local roadways can generate intermittent noise levels that affect adjacent receptors.

Table 4.10-9
Typical Noise Levels at Construction Sites

	Typical Noise Level (dBA)			
Equipment Onsite	**25 Feet from Source**	**50 Feet from Source**	**75 Feet from Source**	**100 Feet from Source**
Air Compressor	87	81	77.5	75
Backhoe	86	80	76.5	74
Concrete Mixer	91	85	81.5	79
Crane, mobile	94	83	79.5	87
Dozer	95	85	81.5	89
Jack Hammer	82	88	84.5	82
Paver	94	89	85.5	83
Saw	82	76	72.5	70
Truck	94	88	84.5	82

Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance. The analysis provided does not account for attenuating factors, such as topography, structures, or vegetation. Such factors would decrease the noise levels at sensitive receptors.
Source: FTA, 2006

Temporary construction could affect sensitive noise receptors. Noise levels could reach up to 95 dBA. As shown in Table 4.10-4, allowable exterior noise levels for residential uses are 55 dBA between 7:00 a.m. and 10:00 p.m. (OMC §7-185). According to OMC §7-185, noise is not permitted to exceed 20 dBA over the allowable exterior noise level at any time.

Sensitive receptors are less noise sensitive during daytime hours. The OMC Section 7-188 exempts construction and grading activities from the noise restrictions in Section 7-185 (Table 4.10-4), provided that construction activities occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. Consistent with the City's Code, project construction would be limited to the construction hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday and construction would be prohibited on Sundays and holidays. Construction would be consistent with the construction hours set forth by OMC Section 7-185. However, due to the proximity to existing residences, construction could create a significant on the existing residences.

Mitigation Measures. To reduce the impact from construction noise on nearby residences, the following mitigation is required.

N-4(a) **Concrete Masonry Unit (CMU) Wall Construction.** The six-foot tall CMU wall proposed for the project between the existing residential lots to the south and west and the proposed residential lots shall be constructed prior to construction of residential buildings and associated infrastructure.

N-4 (b) **Construction Equipment.** Construction equipment shall be properly maintained and all internal combustion engine driven machinery with intake and exhaust mufflers and engine shrouds, as applicable, shall be in good condition and appropriate for the equipment. Equipment engine shrouds shall be closed during equipment operation. Whenever feasible,

electrical power shall be used to run air compressors and similar power tools rather than diesel equipment. The developer shall require all contractors, as a condition of contract, to maintain and tune-up all construction equipment to minimize noise emissions.

N-4(c) **Vehicle and Equipment Idling.** Construction vehicles and equipment shall not be left idling for longer than five minutes when not in use.

N-4(d) **Stationary Equipment.** Stationary construction equipment that generates noise that exceeds 60 dBA Leq at the boundaries of the nearby residential uses shall be shielded. Temporary noise barriers used during construction activity shall be made of noise-resistant material sufficient to achieve a Sound Transmission Class (STC) rating of STC 40 or greater, based on sound transmission loss data taken according to ASTM Test Method E90. Such a barrier may provide as much as a 10 dB insertion loss, provided it is positioned as close as possible to the noise source or to the receptors. To be effective, the barrier must be long and tall enough (a minimum height of eight feet) to completely block the line-of-sight between the noise source and the receptors. The gaps between adjacent panels must be filled-in to avoid having noise penetrate directly through the barrier or sound blanket requirements would reduce construction noise levels by at least 10 dB.

The equipment area with appropriate acoustical shielding shall be designated on building and grading plans. Equipment and shielding shall remain in the designated location throughout construction activities.

N-4(e) **Disturbance Coordinator and Noticing.** A noise disturbance coordinator shall be designated by the contractor. The noise disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall require that reasonable measures warranted to correct the problem be implemented. In addition, the noise coordinator shall distribute notices to nearby residences, including construction hours and location, and anticipated use (time and location) of heavy noise-generating equipment. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site and on notices distributed to nearby residences.

Significance After Mitigation. Implementation of Mitigation Measures N-4(a)-N-4(e) would reduce construction noise impacts to a less than significant level.

Threshold 5:	*For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the project area to excessive noise levels?*

Impact N-5 Aircraft associated with the Oxnard Airport would periodically generate noise that may be audible to residences at the project site. However, the project site is outside the 65 dBA noise contour for the Oxnard Airport, therefore, impacts would be Class III, *less than significant.*

The Oxnard Airport is located approximately 1 mile to the northeast of the project site. Operation of aircraft at this airport may intermittently generate noise that is audible within the project area. As shown in the Airport Comprehensive Land Use Plan for Oxnard Airport, the project site is outside of the CNEL Contours for the Oxnard Airport. As the project site is not within the airport noise contours, no people residing or working at the project site would be exposed to excessive airport noise.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Cumulative development in the project area would incrementally increase noise levels throughout the City. Cumulative noise levels were modeled in TNM 2.5 based on traffic generated by approved projects in the project vicinity, including Avalon Townhomes, located approximately 450 feet to the southwest of the project site. Cumulative noise levels and the project's contribution to cumulative noise levels are shown in Table 4.10-10.

Table 4.10-10
Cumulative and Cumulative + Project Traffic Noise

Receptor #	Receptor Location	Cumulative Conditions	Cumulative + Project Conditions	Project Contribution to Cumulative Conditions	FTA Increase Threshold	FTA Threshold Exceeded?
SR 1	Harbor Drive, 300 feet west of project site	64.7	64.7	<0.1	2	No
SR 2	Harbor Drive and W Wooley Road, 850 feet from project site	59.6	59.6	<0.1	3	No
SR 3	W Wooley Drive, 300 feet from project site	41.9	42.0	0.1	7	No

See Appendix H

As shown in the table, the project's contribution to cumulative traffic would result in a 0.1 dBA increase at SR 3. The project would contribute an increase greater than the FTA threshold.

Threshold 6:	*Would the project expose non-human species to excessive noise?*

Impact N-6 Development within the project would cause minor increases in neighborhood noise levels and in adjacent willow and dune habitat areas to the north. These effects would typically be less than 1 dBA and would be Class III, *less than significant*.

The project would lead to the development of a private street and residences at distances less than 100 feet from willow areas within the RP zone portion of the project. The dominant noise source in this area is traffic along Harbor Drive, and to a lesser extent traffic on other roadways in the neighborhood. The small volume of internal traffic from the project, moving at slow speeds, would contribute a small increment of less than 1 dBA to noise levels in this RP area. This increase would have little effect on birds and other wildlife associated with the willow and dune areas, and would be a less than significant impact.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. **Cumulative Impacts**. Cumulative development in the project area would incrementally increase noise levels in the vicinity. As noted above, Harbor Boulevard is the dominant noise source in the area, and the project effect on noise from this source would be very small and less than significant.

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4.11 TRAFFIC, CIRCULATION AND ACCESS

The following section is based on the Traffic and Circulation Study prepared by Associated Transportation Engineers in December 2019, included as Appendix I.

4.11.1 Setting

a. Existing Street System. The project site is located on the north side of Wooley Road, east of Harbor Boulevard and west of the Edison Canal. A gated, private road would be constructed off of Dunes Street to the west and Canal Street to the south, see Figure 2-4 in Section 2.0, *Project Description.* Ingress would be provided from the west, off of Dunes Street. The road would connect through to Canal Street, providing egress only and use by emergency vehicles. The principal components of the surrounding street system are shown in Figure 4.11-1 and discussed in the following text:

Harbor Boulevard. Harbor Boulevard is a north-south arterial street adjacent to the project site, extending north from the Channel Islands Harbor area to the City of Ventura. Harbor Boulevard is a 2- to 4- lane divided arterial roadway north of Fifth Street and a 4-lane divided arterial roadway south of Fifth Street. The Harbor Boulevard/Gonzales Road, Harbor Boulevard/Fifth Street, and Harbor Boulevard/Wooley Road intersections are signalized.

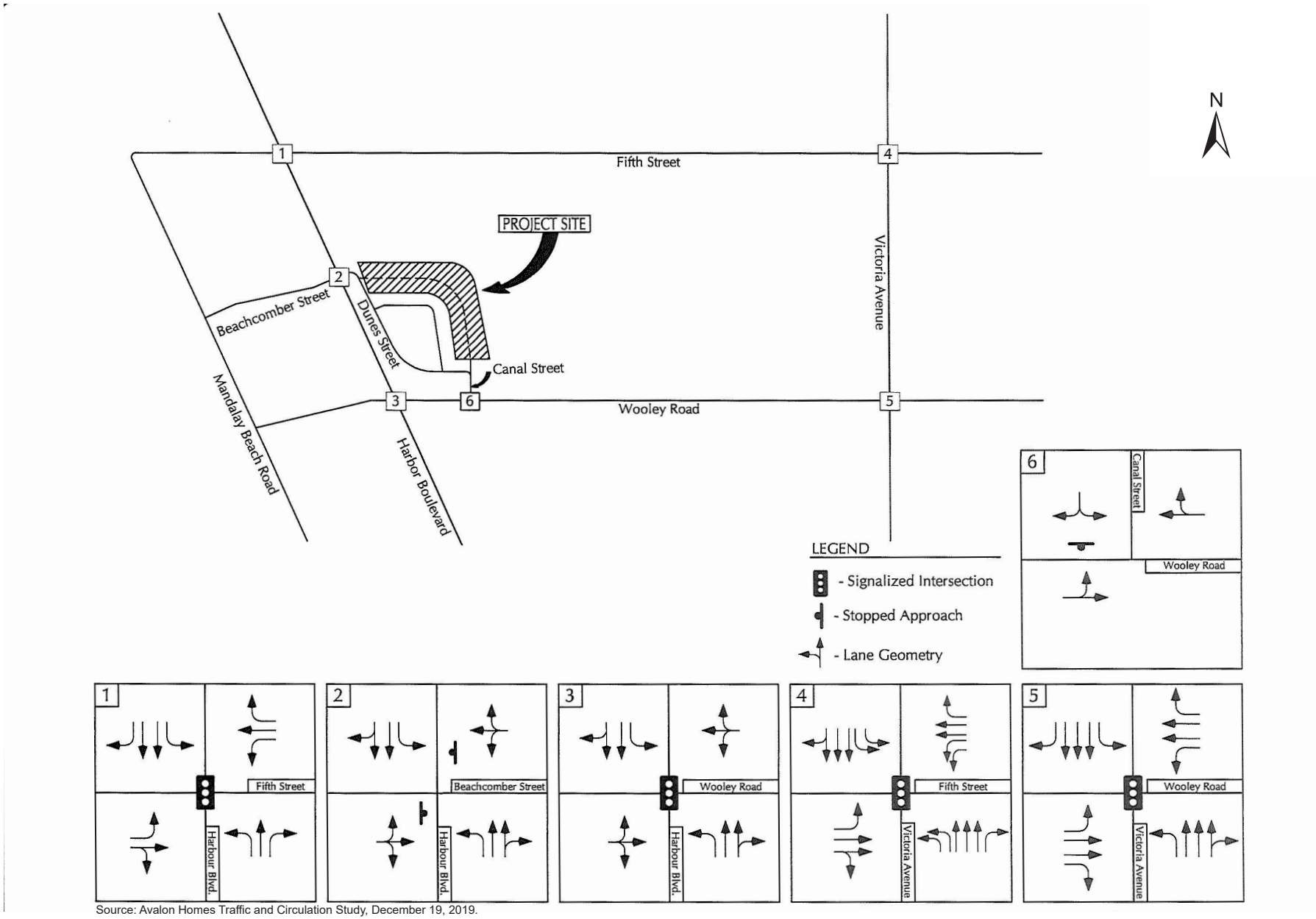
Victoria Avenue. Victoria Avenue is a north-south arterial east of the project site, extending north from the Channel Islands Harbor to the eastern portion of the City of Ventura. Victoria Avenue is a 6- to 8- lane arterial roadway north of U.S. 1010 and a 4-lane roadway south of U.S. Highway 101. Victoria Avenue has freeway interchanges at U.S. Highway 101 and State Route 126. Victoria Avenue is signalized at Gonzales Road, Doris Avenue, Fifth Street, and Wooley Road.

West Fifth Street. W. Fifth Street is an east-west street extending from Harbor Boulevard to the City of Camarillo. The roadway is a 2- to 4- lane roadway and is designated as State Route 34 to the east of Oxnard Boulevard.

Wooley Road. Wooley Road is an east-west street that borders the southern edge of the project site. Wooley Road is a 2- to 4- lane roadway, extending east from Harbor Boulevard to Rice Avenue. Directly east of the project site, Wooley Road spans the Edison Canal with a 2-lane bridge. Wooley Road is signalized at Harbor Boulevard and Victoria Avenue.

Canal Street. Canal Street is a 2-lane, north-south local roadway. Canal Street serves residential uses within the existing Dunes at Mandalay Bay Shores subdivision. Canal Street is STOP-sign controlled at the Harbor Boulevard/Beachcomber Street intersection.

Beachcomber Street. Beachcomber Street is a 2-lane, east-west local roadway serving residential land uses within the existing Dunes at Mandalay Bay subdivision. The Harbor Boulevard/Beachcomber Street intersection is controlled by a STOP-sign.



Source: Avalon Homes Traffic and Circulation Study, December 19, 2019.

Existing Road System, Lane Geometries, and Traffic Controls

Figure 4.11-1

b. Existing Bicycle, Pedestrian, and Transit Facilities

Public Transportation. Public transportation in the Oxnard area is provided by Gold Coast Transit, created in 1973 by a joint powers merger of the Oxnard and Ventura municipal bus systems. Gold Coast Transit operates nineteen bus lines, providing service throughout Oxnard, Ventura, Port Hueneme, and Ojai. In the vicinity of the project site, lines 5, Hemlock-Seabridge-Wooley, and 21, Pacific View Mall-Victoria-C Street, provide service, each with a stop at the corner of Victoria Avenue and Wooley Road, approximately 0.8 mile from the project site.

Bicycle Facilities. The City of Oxnard adopted the Bicycle and Pedestrian Master Plan (BPMP) in February 2011. The BPMP provides for four distinct types of bicycle facilities, as described below:

- *Class I Bikeway:* Typically called a "bike path" or "multi-use path," a Class I Bikeway provides for bicycle and other non-motorized travel on a paved right-or-way completely separated from any street or highway.
- *Class II Bikeway:* "Bike lane," a striped and stenciled lane for one-way travel on a street or highway.
- *Class III Bikeway:* "Bike route," shared use of a motor vehicle travel lane identified only by signage.
- *Class III Bikeway:* "Bike boulevards" are roadways that prioritize bicycle travel through various traffic calming measures. They are generally installed on minor or local roadways.

In the project vicinity, Wooley Road is designated as a Class III Bicycle Route between Harbor Boulevard and Victoria Street and as a Class II Bicycle Lane east of Victoria Avenue. Harbor Boulevard and Victoria Avenue are designated as a Class II Bicycle Lanes (City of Oxnard, 2011). Going forward, the BPMP has identified multiple improvements to bicycle and pedestrian facilities in the project vicinity, including:

- Upgrading the Wooley Road bicycle route between Harbor Boulevard and Victoria Street to a Class II Bicycle Lane;
- Addition of a Class I Multi-Use Path system throughout Oxnard, including along Edison Canal and Fifth Street;
- Addition of a Class II Bicycle Lane on Fifth Street west of Harbor Boulevard;
- Addition of a Class IIII Bicycle Boulevard along Mandalay Beach Drive to the west of the project site;

Pedestrian Facilities. Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. As the project area is currently undeveloped, there are no sidewalks within the project area; however, the existing Oxnard Dunes subdivision has sidewalks adjacent to the site. Additionally, there are walking trails located in the northern portion of the project site, which would remain undeveloped and the planned Multi-Use Paths, discussed above, would serve pedestrians in the project area.

c. Existing Roadway Conditions

The following section presents the existing peak hour traffic conditions on area roadways.

Level of Service (LOS). Peak hour intersection vehicle turning movement and average daily traffic (ADT) counts were obtained in June 2019. The performance criteria used for evaluating volumes and roadway capacities are based on the City of Oxnard standards of Intersection Capacity Utilization (ICU) methodology for calculating level of Service (LOS) values at signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections during the AM and PM peak hour.

The term "Level of Service" is used by traffic engineers to estimate the level of congestion generally accepted by drivers and to grade the stability of traffic flow. The ICU methodology defines LOS as the volume to capacity (V/C) ratio at an intersection. This is typically used to describe the percentage of capacity utilized by existing or project traffic at an intersection. Under the HCM methodology, LOS at intersections is defined as a function of the average overall wait time for a vehicle to pass through the intersection. In this way, LOS can be quantitatively measured at any intersection. Table 4.11-1 summarizes LOS definitions.

Table 4.11-1
Level of Service Descriptions

LOS	Description	HCM Delay per Vehicle (sec)		ICU Volume/Capacity (V/C) Ratio
		Signalized	Unsignalized	
A	Los A describes operations with low control delay, up to 10 seconds per vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.	<10.0	<10.0	<0.60
B	LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than the LOS A, causing higher levels of delay.	10.1-20.0	10.1-15.0	0.61-0.70
C	LSO C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though may still pass through the intersection without stopping.	20.1-35.0	15.1-25.0	0.71-0.80
D	LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.1-55.0	25.1-35.0	0.81-0.90

Table 4.11-1
Level of Service Descriptions

LOS	Description	HCM Delay per Vehicle (sec)		ICU Volume/Capacity (V/C) Ratio
		Signalized	Unsignalized	
E	LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent.	55.1-80.0	35.1-50.0	0.91-1.00
F	LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high V/C ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.	>80.1	>50.1	>1.00

V/C = volume-to-capacity; LOS = Level of Service
Source: Highway Capacity Manual 2010, Transportation Research Board, National Research Council.

Existing Level of Service. Table 4.11-2 summarizes the existing AM and PM peak hour LOS at each of the study intersections under existing conditions.

Table 4.11-2
Existing Peak Hour Levels of Service

Intersection	A.M. Peak Hour		P.M. Peak Hour	
Signalized				
	ICU	**LOS**	**ICU**	**LOS**
Harbor Boulevard/Fifth Street	0.72	C	0.59	A
Harbor Boulevard/Wooley Road	0.56	A	0.65	B
Victoria Avenue/Fifth Street	0.59	A	0.51	A
Victoria Avenue/Wooley Road	0.62	B	0.61	B
Unsignalized				
	Delay	**LOS**	**Delay**	**LOS**
Harbor Boulevard/Beachcomber Street	13.6 sec	B	16.6 sec	B
Wooley Road/Canal Street	11.9 sec	B	15.5 sec	C

ATE, 2019, see Appendix I

As shown in the table, all of the study intersections in the study area operate at the city's acceptable LOS C or higher during both AM and PM peak hours under existing conditions.

Wooley Road Bridge/Two-Lane Section. East of the project site, Wooley Road spans Edison Canal with a 2-lane bridge. The bridge is approximately 30 feet wide, containing two 15-foot travel lanes and sidewalks on each side. Traffic counts conducted by ATE indicate the bridge carries 8,700 ADT, with 582 A.M. peak hour trips and 820 P.M. peak hour trips. These volumes are within the capacity of the bridge (27,000 ADT) and the roadway operates in the LOS A to LOS C range.

d. Cumulative Conditions

In addition to existing traffic, traffic from approved and pending projects in the project vicinity was analyzed to determine the effect on existing LOS. Table 4.11-3, below, summarizes the AM and PM peak hour LOS at each of the study intersections under cumulative conditions.

Table 4.11-3
Cumulative Peak Hour Levels of Service

Intersection	A.M. Peak Hour		P.M. Peak Hour	
Signalized				
	ICU	**LOS**	**ICU**	**LOS**
Harbor Boulevard/Fifth Street	0.75	C	0.59	A
Harbor Boulevard/Wooley Road	0.59	A	0.68	B
Victoria Avenue/Fifth Street	0.62	A	0.52	A
Victoria Avenue/Wooley Road	0.66	B	0.66	B
Unsignalized				
	Delay	**LOS**	**Delay**	**LOS**
Harbor Boulevard/Beachcomber Street	17.8 sec	C	22.7 sec	C
Wooley Road/Canal Street	12.2 sec	B	16.1 sec	C

ATE, 2019, see Appendix I

Under cumulative conditions, all of the study intersections would remain operating at acceptable LOS C conditions during AM and PM peak hours.

Wooley Road Bridge/Two-Lane Section. Under cumulative conditions, traffic on the two-lane section of Wooley Road would be 9,300 ADT, with 620 A.M. peak hour trips and 859 P.M. peak hour trips. These volumes are within the capacity of the bridge and the roadway would continue to operate in the LOS A to LOS C range.

e. Project Conditions

Project Access and Circulation. Access to the project site would be via a new private road, connecting to Dunes Street and the terminus of Canal Street. Both ends of the private road would be gated, with entry off of Dunes Street. The Canal Street terminus would be for egress and use by emergency vehicles only.

Project Trip Generation. ATE used the Single Family Detached Housing (Land Use Code 210) rates published in the Institute of Transportation Engineering (ITE), Trip Generation, 10th Edition. Trip generation by the Avalon Homes project is shown in Table 4.11-4. Trip generation rates for condos and duplexes are lower than for single family homes; however, single family detached housing was used for all potential 65 units to represent a conservative analysis.

Table 4.11-4
Project Trip Generation

Land Use	Size	ADT		Weekday Peak Hour Trips			
				A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips	Rate	Trips
Single Family Residential	65 Units	9.44	614	0.74	48	0.99	64

ATE, 2019, see Appendix I

As shown in the table, the project would generate a total of 614 ADT, with 48 A.M. peak hour trips and 64 P.M. peak hour trips.

Proposed Project Trip Distribution and Assignment. Project generated trips were distributed and assigned to the study-area intersections based on travel data derived from the existing traffic volumes, as well as a general knowledge of the population, employment, and commercial centers in the Oxnard/Ventura area. Figure 4.11-2 shows the distribution of project trips amongst area roadways. As shown, a quarter of trips would be distributed north on South Harbor Boulevard, with the remaining being distributed amongst Victoria Avenue, Wooley Road, Fifth Street, and south on South Harbor Boulevard.

f. Regulatory Setting. The City of Oxnard requires payment of a Traffic Impact Fee for new development based on traffic increases resulting from each project. The funds accumulated by the city through assessment of these fees are earmarked for improvements to the City's

g. Transportation network, including arterial roads and intersections. Under a reciprocal agreement, a portion of the fee is paid to the County of Ventura to mitigate project related contributions to the regional road network.

2030 General Plan. The City of Oxnard 2030 General Plan includes the Circulation Element which outlines goals and policies regarding transportation in the City. The following goals and policies are relevant to the project:

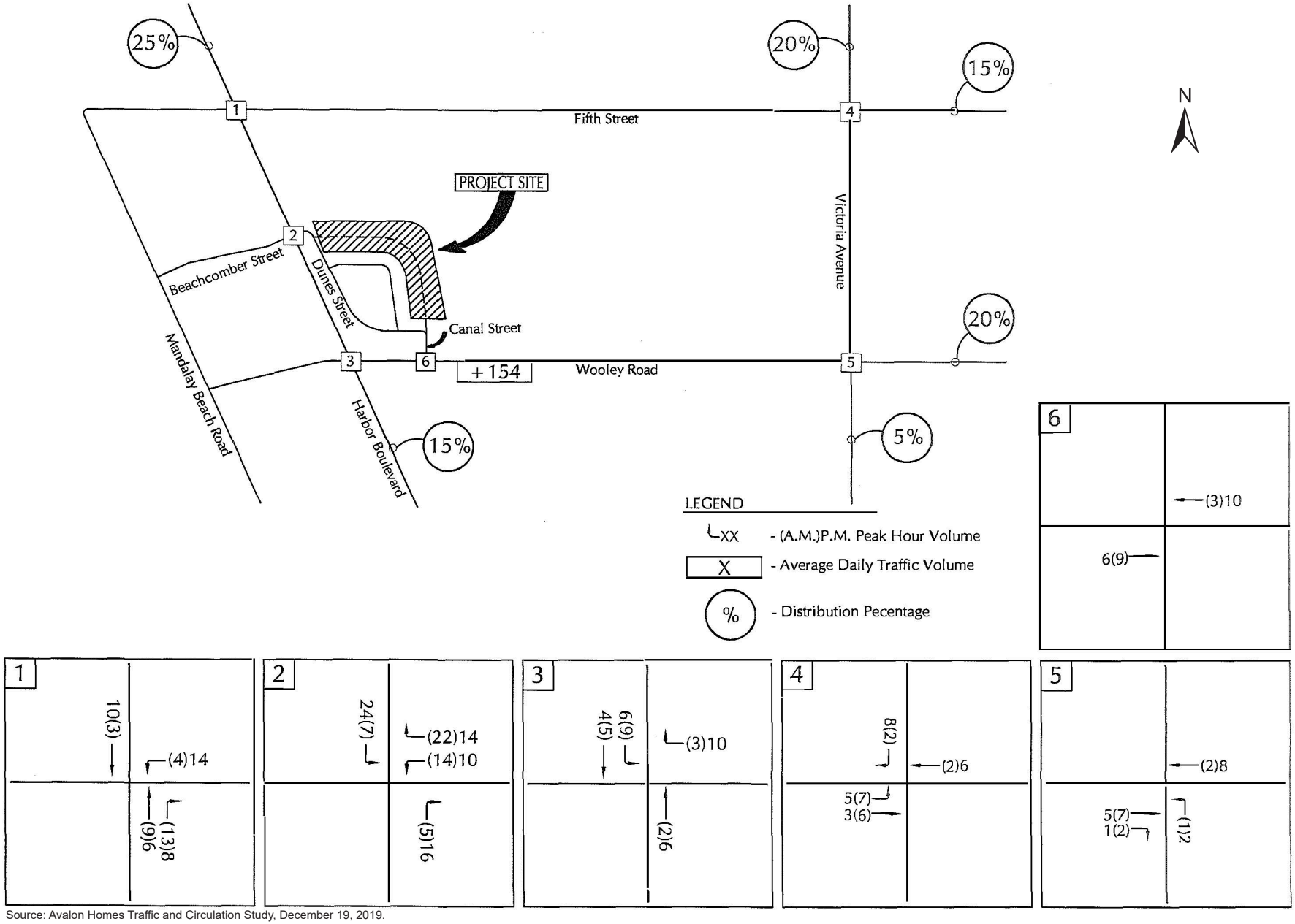
Goal ICS-2 *A transportation system that supports existing, approved, and planned land uses throughout the City while maintaining a level of service "C" at designated intersections unless excepted.*

ICS-2.1 ***Coordinate with Regional Transportation Planning.*** *Continue to work cooperatively with the various local, state, and federal transportation agencies and private operators in Ventura County to maintain a transportation system that is well-integrated and interconnected in terms of service, scheduling, and capacity. Continue to participate in Congestion Management Program (CMP) led by the Ventura County Transportation Commission (VCTC).*

ICS-2.5 ***Mitigate Impacts on County Roads.*** *Require new development to contribute to the enhancement of Ventura County-maintained roads based on an updated City/County Memorandum of Understanding.*

Goal ICS-3 *Level of service "C" at designated intersections, unless otherwise reduced by City Council direction.*

ICS-3.1 ***CEQA Level of Service Threshold.*** *Require level of service "C" as the threshold of significance for intersections during environmental review.*



Source: Avalon Homes Traffic and Circulation Study, December 19, 2019.

Project Trip Distribution and Assignment

Figure 4.11-2

ICS-3.3 ***New Development Level of Service C.*** *Determine as part of the development review and approval process that intersections associated with new development operate at a level of service of "C" or better. The City Council may allow an exception to level of service "D" in order to avoid impacting private homes and/or businesses, avoid adverse environmental impacts, or preserve or enhance aesthetic integrity.*

Goal ICS-6 *Public transit system that serves the needs of the residents and workers of Oxnard.*

ICS-6.1 ***Transit Facilities for New Developments.*** *Include transit facilities such as bus benches, shelters, pads, or turnouts, where appropriate, in new development improvement plans.*

Goal ICS-8 *Safe bicycle and pedestrian circulation throughout the City.*

ICS-8.4 ***New Development Requires Bicycle Improvements.*** *Where designated, require proposed developments to include bicycle paths and/or lanes in their plan to clearly indicate possible bicycling hazards such as speed bumps and storm drain inlet grates in parking lots.*

ICS-8.5 ***Public Sidewalks and Pedestrian Orientation.*** *Consider and require where appropriate and feasible the enhancement of the pedestrian environment as part of private development and public works projects, especially for public sidewalks.*

ICS-8.13 ***Importance of Pedestrian and Bicycle Access in Site Planning.*** *Require that new development treat pedestrian and bicycle circulation as equal to or preferred to vehicular access in site design including, but not limited to, access to neighborhood and commercial shopping centers, schools, and parks.*

4.11.2 Impact Analysis

a. Methodology and Significance Thresholds. Assessment of impacts is based on the Traffic and Circulation Study (ATE, 2019; Appendix I).

Methodology. Buildout of the project would introduce a maximum of 65 new residences, resulting in additional traffic to the project area, as discussed in Section 4.11.1(e) above. These trips would increase the existing and cumulative traffic amounts, potentially impacting the LOS at area intersections. The additional project trips were added to existing and cumulative traffic conditions to determine the project's impact on LOS.

Significance Thresholds. For the purpose of this analysis, a significant impact would occur if physical changes that could be facilitated by buildout of the proposed project would result in the following conditions, listed in Appendix G of the *State CEQA Guidelines.*

1. *Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) based on adopted City of Oxnard level of service (LOS) standards?*

2. *Would the project exceed, either individually or cumulatively, and LOS standard established by the Ventura County Congestion Management Program (CMP) for designated roads or highways?*
3. *Would the project 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?*
4. *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*
5. *Would the project result in inadequate emergency access?*
6. *Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle tracks)?*

According to the City of Oxnard criteria, LOS C (peak hour ICU less than or equal to 0.80) is considered the worst acceptable LOS for an intersection in Oxnard. A project causes a significant impact if it contributes 0.02 or more to the ICU value at an intersection operating at LOS C or worse. Mitigation would require construction of all improvements necessary to reduce project impacts at intersections operating at LOS C or worse where the project would worsen the ICU value by 0.02 or more.

The Initial Study for the project determined that the project would not result in significant impacts due to safety risks associated with changes in air traffic patterns. Refer to the Initial Study in Appendix A for additional information.

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) based on adopted City of Oxnard level of service (LOS) standards?*
Threshold 2:	*Would the project exceed, either individually or cumulatively, and LOS standard established by the Ventura County Congestion Management Program (CMP) for designated roads or highways?*

Impact T-1 Implementation of the proposed project would not cause operations at study area intersections to exceed applicable LOS criteria under the Existing plus Project condition. Impacts would be Class III, *less than significant.*

Although area roadways and intersections near the project site are currently operating at acceptable levels, roadways near the beach experience sporadic heightened traffic levels during holidays and weekends. As discussed in Section 4.11.1(e), the project would introduce 614 ADT to the project area, with 48 AM peak hour trips and 64 PM peak hour trips. These trips would be distributed amongst area roadways and intersections, as depicted in Figure 4.11-2. To estimate the project-only impact on area roadways under existing conditions, the project generated traffic was added to existing traffic volumes, shown in Table 4.11-5 and Table 4.11-6.

Table 4.11-5
Existing + Project AM Peak Hour Level of Service

Intersection	Existing		Existing +Project		Change	Impact?
Signalized						
	ICU	**LOS**	**ICU**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Fifth Street	0.72	C	0.73	C	0.01	No
Harbor Boulevard/Wooley Road	0.56	A	0.57	A	0.01	No
Victoria Avenue/Fifth Street	0.59	A	0.59	A	0.00	No
Victoria Avenue/Wooley Road	0.62	B	0.62	B	0.00	No
Unsignalized						
	Delay	**LOS**	**Delay**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Beachcomber Street	13.6	B	15.4	B	1.8 sec	No
Wooley Road/Canal Street	11.9 sec	B	12.0 sec	B	0.1 sec	No

ATE, 2019, see Appendix I

Table 4.11-6
Existing + Project PM Peak Hour Level of Service

Intersection	Existing		Existing +Project		Change	Impact?
Signalized						
	ICU	**LOS**	**ICU**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Fifth Street	0.59	A	0.59	A	0.00	No
Harbor Boulevard/Wooley Road	0.65	B	0.66	B	0.01	No
Victoria Avenue/Fifth Street	0.51	A	0.52	A	0.01	No
Victoria Avenue/Wooley Road	0.61	B	0.61	B	0.00	No
Unsignalized						
	Delay	**LOS**	**Delay**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Beachcomber Street	16.6 sec	B	17.3 sec	C	0.7 sec	No
Wooley Road/Canal Street	15.5 sec	B	15.8 sec	B	0.3	No

ATE, 2019, see Appendix I

As shown in the above tables, no intersections would exceed the acceptable LOS C standard under Existing plus Project conditions during the AM or PM peak hour. While the ICU would increase at Harbor Boulevard/Fifth Street (AM), Harbor Boulevard/Wooley Road (AM and PM), and Victoria Avenue/Fifth Street (PM) the increase is less than the 0.2 threshold set by the City of Oxnard. Additionally, while the delay would increase at Harbor Boulevard/Beachcomber Street during the AM peak hour, the intersection would continue to operate at an acceptable LOS C. In addition, the project would not substantially increase traffic levels or present any particular obstruction or impediment which would increase traffic issues on area roadways near the beach during heightened traffic periods.

As no intersections would operate at an unacceptable LOS under existing plus project conditions and ICU would not increase by 0.2 at any intersection, impacts would be less than significant.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant prior to mitigation.

Impact T-2 Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Existing plus Project conditions. Impacts would be Class III, *less than significant*.

As shown in Figure 4.11-2, project traffic would increase traffic on the Wooley Road Bridge by 154 ADT. This increase would result in 8,884 daily trips on the Bridge, with 594 AM peak hour trips and 836 PM peak hour trips. The additional traffic on the Bridge would continue to be within the capacity of the Bridge, and the Bridge would continue to operate in the LOS A to LOS C range. Thus, impacts on the Wooley Road Bridge under Existing plus Project conditions would be less than significant.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact T-3 Implementation of the proposed project would not cause operations at any of the study intersections to exceed acceptable LOS standards under Cumulative plus Project conditions. Impacts would be Class III, *less than significant*.

As shown in Table 4.11-3, under Cumulative conditions, all of the study intersections would operate at an acceptable LOS. Project generated traffic would create additional traffic under the cumulative scenario. Cumulative plus Project LOS is shown in Table 4.11-7 and Table 4.11-8, below.

Table 4.11-7
Cumulative + Project AM Peak Hour Level of Service

Intersection	Cumulative		Cumulative + Project		Change	Impact?
Signalized						
	ICU	**LOS**	**ICU**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Fifth Street	0.75	C	0.75	C	0.00	No
Harbor Boulevard/Wooley Road	0.59	A	0.60	A	0.01	No
Victoria Avenue/Fifth Street	0.62	B	0.63	B	0.01	No
Victoria Avenue/Wooley Road	0.66	B	0.66	B	0.00	No
Unsignalized						
	Delay	**LOS**	**Delay**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Beachcomber Street	17.8 sec	C	19.2 sec	C	1.4 sec	No
Wooley Road/Canal Street	12.2 sec	B	12.3 sec	B	0.1 sec	No

ATE, 2019, see Appendix I

Table 4.11-8
Cumulative + Project PM Peak Hour Level of Service

Intersection	Cumulative		Cumulative + Project		Change	Impact?
Signalized						
	ICU	**LOS**	**ICU**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Fifth Street	0.62	B	0.64	B	0.02	No
Harbor Boulevard/Wooley Road	0.68	B	0.69	B	0.01	No
Victoria Avenue/Fifth Street	0.52	A	0.52	A	0.00	No
Victoria Avenue/Wooley Road	0.66	B	0.66	B	0.00	No
Unsignalized						
	Delay	**LOS**	**Delay**	**LOS**	**Change**	**Impact?**
Harbor Boulevard/Beachcomber Street	22.7 sec	C	24.1 sec	C	1.4 sec	No
Wooley Road/Canal Street	16.1 sec	C	16.4 sec	C	0.3 sec	No

ATE, 2019, see Appendix I

As shown in the tables, all intersections would continue to operate an acceptable LOS C and no ICU would increase by 0.2 under Cumulative plus project conditions. Therefore, impacts would be less than significant.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact T-4 Implementation of the proposed project would not increase traffic on the Wooley Lane Bridge to exceed capacity under Cumulative plus Project conditions. Impacts would be Class III, *less than significant*.

Project generated traffic would increase cumulative traffic on the Wooley Road Bridge to 9,454 ADT, with 632 AM peak hour trips and 875 PM peak hour trips. The additional traffic is within the capacity of the Bridge and the Bridge would continue to operate in the LOS A to LOS C range. Thus, impacts on the Wooley Road Bridge under Cumulative plus Project conditions would be less than significant.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 4:	*Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*
Threshold 5:	*Would the project result in inadequate emergency access?*

Impact T-5 The project would not increase hazards due to a design feature or incompatible uses. Impacts would be Class III, *less than significant*.

Access to the project site would be provided from a new, private road, connecting the northern end of Dunes Street and the terminus of Canal Street. The new roadway would be accessed via Beachcomber Street, off of Harbor Boulevard. The existing median break on Harbor Boulevard allows for left turns in and out of Beachcomber Street. The Canal Street terminus of the roadway would be for exit only, exiting at Wooley Road. Both the Harbor Boulevard/Beachcomber Street and Wooley Road/Canal Street intersections would operate at an acceptable level under project conditions. The project would not have access from Catamaran Street and would not affect the operation of this roadway. With ingress and egress access from Beachcomber Street and Wooley Road, the project would not result in a substantial increase of traffic on Dune Street or result in any dangerous intersections in the area. The project would not otherwise introduce any sharp curves or other incompatible design features that would increase traffic hazards.

The project would not introduce any incompatible uses such as farm equipment to the roadway network. The project is residential in nature and traffic generated would be compatible with the surrounding development in the project area.

The new, private road would be gated at both the Dunes Street and Canal Street terminus. Vehicles would be able to enter off of Dunes Street and exit from both Dunes Street and Canal Street. Additionally, the Canal Street gate would allow for access from emergency vehicles. The project would not block or limit access to any roadways traveled by emergency vehicles and would not create unacceptable LOS at any area intersection that would impede emergency access to the project site.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 6:	*Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

Impact T-6 The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be Class III, *less than significant*.

The project site is located near existing public transit, bicycle, pedestrian, and multi-use transportation facilities. Residents at the project site would be able to access bus stops located at the corner of Victoria Road and Wooley Road, less than one mile to the east of the project site. Wooley Road and Harbor Boulevard both feature bicycle facilities. Sidewalks are present on the surrounding roadways for pedestrians and additional sidewalks would be constructed along the new, private road.

The Bicycle and Pedestrian Master Plan includes multiple improvements to bicycle and pedestrian facilities that within the project area. Bicycle facility improvements are planned along Wooley Road as well as expanded bike lanes and paths along Fifth Street and Mandalay Beach Boulevard. Additionally, a multi-use path is planned throughout the City of Oxnard, including a segment along the Edison Canal immediately to the east of the project site.

While the project would incrementally increase use of transit facilities, the project would be required to pay traffic impact fees to the City of Oxnard, which would provide funding improvements and additions to transit facilities.

Mitigation Measures. No mitigation would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. As discussed in Section 3.0, *Environmental Setting*, cumulative development within the City of Oxnard includes buildout in accordance with the City's 2030 General Plan which accommodates a population between 238,000 and 236,000 people by 2030. This cumulative development would increase the amount and density of development in the City, which would incrementally increase traffic compared to existing conditions. According to the Traffic and Circulation Study for the project (ATE, 2019), the City of Oxnard requires that the intersections be analyzed with the addition of traffic generated by projects which have been approved or are pending within the project study area. Trip generation estimates were developed for the cumulative developments using the rates presented in the ITE, Trip Generation, 10th Edition and the approved/pending projects in and around the City. As discussed under Impact T-3 and Impact T-4, the project would contribute to increased traffic within the City under cumulative conditions. However, project generated traffic, when combined with approved/pending development in and around the City, would not result in an unacceptable LOS at any area intersections, an increase ICU by an unacceptable amount, or adverse impacts to area intersections. Therefore, the project would not result in considerable contribution to cumulative traffic impacts and impacts would be less than significant.

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4.12 UTILITIES AND ENERGY

4.12.1 Setting

a. Site Setting

Water Supply. Water supply to the proposed project site would be provided via connection to the City of Oxnard municipal water system. As of 2010, the City of Oxnard had a total of 40,802 water service connections, including residential, commercial industrial, landscaping and agricultural connections (Oxnard 2012). The City of Oxnard water system includes water resources from a mixture of sources including both local groundwater and imported surface water.

The City of Oxnard purchases imported water from the Calleguas Municipal Water District (CMWD). CMWD purchases water imported through the California State Water Project (SWP) from the Metropolitan Water District of Southern California (MWD). Water purchased from MWD is filtered and disinfected at MWD's Joseph Jensen Filtration Facility in Granada Hills and delivered to CMWD through the West Valley Feeder to be either stored at Lake Bard or fed directly to the Springville Reservoir near the City of Camarillo. The City of Oxnard receives imported SWP water from the CMWD Springville Reservoir through the City's Oxnard and Del Norte Conduits that feed five of the City's six water blending stations.

Groundwater resources in the southern portion of Ventura County, including the City of Oxnard, are managed and protected by the Fox Canyon Groundwater Management Agency (FCGMA). The FCGMA has established a safe sustainable yield for water groundwater resources within its jurisdiction of 120,000 AF per year. Groundwater pumping is controlled through the issuance of groundwater credits to groundwater pumpers by the FCGMA. These credits are based on baseline pumping allocations and historical pumping allocations.

Groundwater resources are provided to the City through water purchased from the United Water Conservation District (UWCD) and wells owned and operated by the City. Water from the UWCD is provided through a Water Supply Agreement and delivered to the City through the Oxnard-Hueneme Pipeline. The Oxnard-Hueneme Pipeline consists of 12 miles of transmission pipeline that brings water from inland UWCD production wells to the City of Oxnard and the Port of Hueneme. UWCD also maintains FCGMA groundwater credit subaccounts for each of its contractors, including the City of Oxnard. In addition to this sub-allocation, the City also has access to additional groundwater through a Municipal and Industrial (M&I) Supplemental Water Program that allows the CMWD to transfer groundwater pumping credits to UWCD for the benefit of the Oxnard-Hueneme Pipeline.

The City of Oxnard sources local groundwater from city owned and operated wells. As of 2010, the City had ten active wells with a total historical pumping allocation of 8,146 AF per year. This allocation can be increase as private lands and private wells are developed and converted to City water. FCGMA Ordinance No. 8.1 limits the amount of groundwater the City can extract with its wells and the amount of groundwater being pumped and provided by UWCD. These limitations increase the City's reliance on imported water supplies.

In response to ongoing drought throughout California, the City of Oxnard has adopted water conservation measures throughout the City. Since 2014, the City of Oxnard has implemented mandatory water conservation measures to reduce consumption of potable water resources and to ensure consistency with the State regulations. These mandatory measures are discussed in more detail below in Section 4.12.1(b), *Regulatory Setting*.

Wastewater. Wastewater generated from the project site would be collected and treated by the City of Oxnard. The City of Oxnard provides wastewater collection and treatment services through the Public Works Wastewater Division. The Oxnard Wastewater Treatment Plant (OWWTP), located in southwest Oxnard, serves the cities of Oxnard and Port Hueneme, Naval Base Ventura County, and some adjacent unincorporated areas. The City owns, operates, and maintains over 425 miles of sewer pipeline and 15 wastewater lift stations. Three additional pumping stations owned and operated by other entities also discharge to the City's system (Oxnard, 2011). The OWWTP currently discharges all treated wastewater to the Pacific Ocean.

Stormwater. Stormwater within the City of Oxnard is managed through the City stormdrain system. Currently, the City uses storm drainage facilities maintained by the Public Works Department Operations Division and the County of Ventura to accommodate storm water runoff. These lines empty into storm drains or natural drainage courses. The project site is currently undeveloped and has no storm drain facilities. However, residential development directly south of the project site currently drains stormwater to City storm drains through several existing catch basins. Stormwater is then discharged into the Edison Canal to the east of the project site.

Solid Waste. Residential solid waste collection and disposal in the project area is carried out by the City of Oxnard Public Works. Waste within the City of Oxnard is then taken to the City owned and operated Del Norte Regional Recycling and Transfer Station (Del Norte). Del Norte accepts refuse from Oxnard and several other cities and areas in western Ventura County and is capable of recycling 50 to 80 percent of the refuse it receives. In 2012, the City of Oxnard achieved a 73 percent diversion rate (Oxnard 2014). The Del Norte Facility is approximately 120,000 square feet (sf; 5 acres) and is situated on 16.5 acres of land. Refuse incapable of being recycled is presently hauled to other landfill sites in Ventura County, including the Simi Valley landfill, approximately 26 miles east of the project site, and the Toland Road Landfill, approximately 20 miles east of the project site.

Energy. Electricity is supplied by the Southern California Edison. Natural gas is supplied by the Southern California Gas Company.

b. Regulatory Setting

Water Supply

Water Conservation in Landscaping Act. The Water Conservation in Landscaping Act, enacted in 2006, required the Department of Water Resources to update the Model Water Efficient Landscape Ordinance (MWELO). In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELO provisions. The City of Oxnard adopted a water efficient

landscaping ordinance in 2010. The MWELO applies to new construction with a landscape area greater than 2,500 sf, and requires, among other things, weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems.

In 2009, Governor Schwarzenegger signed SB No. 7 (SBX7-7), which established a statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020 for urban retail water suppliers.

Green Building Standards Code. In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (hereafter the "CAL Green Code") that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. CAL Green Code was incorporated as Part 11 into Title 24 of the California Code of Regulations. The CAL Green Code was revised in 2013 with the revisions taking effect on January 1, 2014; however, these revisions do not have substantial implications to the water use already contemplated by the 2010 CAL Green Code. The CAL Green Code applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. All new development must satisfy the indoor water use infrastructure standards necessary to meet the CAL Green Code.

The CAL Green Code requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20 percent. This reduction in potable water use can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20 percent reduction in water use from the building "water use baseline."

Urban Water Management Plan Act. The California Urban Water Management Planning Act (the Act) (California Water Code Division 6, Part 2.6 Sections 10610–10656) applies to municipal water suppliers, like the City of Oxnard, which serve more than 40,000 customers or provide more than 36,000 AFY of water. The Act requires these water suppliers to update their Urban Water Management Plan (UWMP) every five years to identify short-term and long-term water demand management measures to meet growing water demands during normal, dry and multiple-dry years. The plan should include a description of existing and planned water sources, alternative sources, conservation efforts, reliability and vulnerability assessments, and a water shortage contingency analysis. Details of the City's efforts to promote the efficient use and management of its water resources are contained in its 2010 UWMP.

Executive Order B-29-15. On April 1, 2015, Governor Jerry Brown signed Executive Order (EO) B-29-15, which directs the State Water Resources Control Board (SWRCB) to implement mandatory water reductions throughout California by 25 percent by February 18, 2016. In addition, EO B-29-15 intends to accomplish the following:

- *Replace 50 million square feet of lawns throughout the state with drought tolerant landscaping in partnership with local governments;*
- *Direct the creation of a temporary, statewide consumer rebate program to replace old appliances with more water and energy efficient models;*

- *Require campuses, golf courses, cemeteries and other large landscapes to make significant cuts in water use;*
- *Prohibit new homes and developments from irrigating with potable water unless water-efficient drip irrigation systems are used, and ban watering of ornamental grass on public street medians; and*
- *Prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or micro-spray systems.*

Executive Order B-36-15. On November 13, 2015, Governor Brown issued EO B-36-15, which calls for an extension of restrictions to urban potable water usage until October 31, 2016, should ongoing drought conditions in California persist through January 2016. Executive Order B-36-15 is the fifth in a series of EOs issued by Governor Brown to address California's ongoing drought conditions, which direct the SWRCB to implement water reductions in urban areas to reduce potable urban water usage by 25 percent statewide. Under this EO, the SWRCB has authority to extend and revise existing emergency water conservation regulations throughout the State of California. Current regulations mandate a statewide water savings goal of 25 percent for urban water suppliers. Oxnard is mandated to reduce water production by 12 percent each month, as compared to the 2013 (pre-drought) monthly usage figures.

Executive Order B-37-16. On May 9, 2016, Governor Brown issued EO B-37-16, which calls for an extension of drought restriction throughout the State. EO B-37-16 requires monthly reporting by urban water suppliers on a permanent basis regarding water use, conservation and enforcement. However, the order eliminates the mandatory 20 percent reduction in water use. Rather suppliers must create a Water Shortage Contingency Plan every five years to ensure an adequate water supply to last the supplier through another five years of drought. Additionally, the order permanently prohibit wasteful practices, such as hosing off sidewalks, driveways and other hardscapes, washing automobiles with hoses not equipped with a shut-off nozzle, and watering lawns in a manner that causes runoff. Finally, the order states that the DWR will update existing efficiency requirements for Agricultural Water Management Plans so that irrigation districts quantify their customers' water use efficiency and plan for water supply shortages.

Oxnard 2030 General Plan. The following objectives and policies within the City of Oxnard 2030 General Plan Chapter 4, *Infrastructure and Community Services*, and Chapter 5, *Environmental Resources*, apply to water supply for the proposed project.

Goal ICS-11 *Water Supply, quality, distribution and storage adequate for existing and future development.*

ICS-11.1 *Support the countywide Water Quality Management Plan, the Sea Water Intrusion Abatement Program, wastewater reclamation, water conservation programs, and regional coordination.*

ICS-11.2 *Continue to update as need the City's Master Plan of Drainage (2001), Water Master Plan (2003), Urban Water Management Plan (2005), Wastewater Master Plan (2008) and Recycled Water Master Plan, Phase I (2009) to address water related constraints and opportunities.*

ICS-11.3	*Continue to implement the Groundwater Resource Encroachment and Treatment (GREAT) Program as the key program for the City's short and long term water supply.*
ICS-11.4	*Continue upgrading the potable and recycled water transmission and distribution systems in a timely manner to meet anticipated demand and to implement the GREAT Program.*
ICS-11.5	*Support the policies of the Fox Canyon Groundwater Management Agency to protect, enhance, and replenish the aquifers underlying the Oxnard Plain.*
ICS-11.6	*Require the use of water conservation offset measures (efficient low flow fixtures and irrigation systems, drought tolerant landscaping, leak detection programs, water audits, and public awareness and education programs) and/or proportional contributions to recycled water production and/or conveyance infrastructure related to the GREAT Program as mitigation for water supply shortage as determined by a Water Supply Assessment, CEQA documentation, or similar analysis as part of new or master plan development review.*
ICS-11.7	*Promote water conservation in landscaping for public facilities and streetscapes, residential, commercial and industrial facilities and require new developments to incorporate water conserving fixtures (low water usage) and water-efficient plants into new and replacement landscaping.*
ICS-11.9	*Continue to adhere to the recommendations of the Ventura County Regional Water Quality Planning Program regarding groundwater quality and extractions.*
ICS-11.10	*Prior to approval of a discretionary proposed project not subject to a Water Supply Assessment pursuant to Government Code Section 66473.7, a finding shall be made to ensure an adequate water supply for the proposed development.*
ICS-11.12	*Require the use of non-potable water supplies for irrigation of landscape and agriculture, whenever available.*
ICS-11.13	*Incorporate the City's Water Neutral Policy regarding new development into the 2010 Urban Water Management Plan and develop appropriate ordinances, policies, and/or programs to fully implement the policy.*
GOAL ER-5	*Well managed water supply and wastewater treatment programs that together meet expected demand, prevent groundwater overdraft, and ensure water quality.*
ER-5.3	*The City shall maintain a minimal dependence on Basin 4A groundwater consistent with the GREAT Program and support the policies of the Fox Canyon Groundwater Management Agency to protect, enhance, and replenish the aquifers underlying the Oxnard Plain.*
ER-5.5	*Require immediate capping of abandoned water wells at the time of abandonment and where appropriate and feasible, require and accept transference of water rights to the City.*

Oxnard Municipal Code. Chapter 22 of the Oxnard Municipal Code specifies the service area of the City's water service, allowable uses of water within the service area and process for connecting to water service. All water service connections within the City's service area must be connected to the City's water system and include: a separate water meter for each connection. Chapter 22 also prohibits unreasonable or wasteful water use and sets restrictions on water use, such as:

- *Excessive irrigation of landscape which results in water running off and/or pooling on hard-surfaced areas, including sidewalks, streets, driveways, and patios.*
- *Washing a vehicle or boat without a workable automatic shut off nozzle installed on the hose.*
- *Washing down hard surfaces or the exterior of a building using a hose or flooding, except as required for the protection of public health and safety.*
- *Serving water at eating establishments without customer request.*
- *Filling and refilling swimming pools except as required for repair or maintenance, health and safety reasons, or in small amounts as needed to maintain proper water levels.*
- *Irrigating landscape between the hours of 9:00 AM and 4:00 PM, except when testing an irrigation system or making repairs.*
- *Irrigating when it is raining.*
- *Irrigating for more than 15 minutes per day per irrigation station except when certain high efficiency irrigation equipment is used.*
- *Washing dishes in commercial eating establishments without the use of a high efficiency pre-rinse spray nozzle.*
- *Installing new commercial car wash and laundry systems without re-circulating water systems.*
- *Installing single-pass commercial/industrial cooling systems.*
- *Plumbing leaks, breaks, and malfunctions must be fixed within 72 hours of discovery.*
- *Ornamental fountains and water features must use recycled water or be equipped with a re-circulating pump.*
- *Hotels and motels must post notices encouraging water conservation practices, including the option of not having linens and towels laundered daily.*

Further, Chapter 22 of the Oxnard Municipal Code identifies mandatory conservation measures to be applied during City Council declared water shortage conditions. The severity of water shortage condition shall be designated in stages, from 1 to 4, where each stage corresponds to the degree to which the city has or is likely to suffer reduced availability of water supplies, as follows: Stage 1 – up to 15 percent reduction, Stage 2 – 15 to 25 percent reduction, Stage 3 – 25 to 35 percent reduction, and stage 4 – greater than 35 percent reduction.

City of Oxnard Mandatory Water Conservation. Effective August 1, 2014, mandatory conservation measures have been in effect throughout the City of Oxnard. As part of this, the City has adopted mandatory water conservation measures designed to reduce consumption of potable water in a variety of uses Residents, commercial establishments, municipal and schools are required to implement the following water conservation measures:

- *The use of running water from a hose, pipe, or faucet to clean buildings, pavement, tile, wood, plastic, driveways, parking lots, and other paved surfaces, is prohibited, except for compelling public health and safety reasons. If allowed, a hose with a positive shut-off nozzle must be used;*

- *All restaurants that provide table service shall post, in a conspicuous place, a notice of water shortage conditions and shall refrain from serving water except upon specific request by a customer;*
- *The use of potable water in a fountain or other decorative water feature is prohibited, except where the water is part of a recirculating system.*
- *Operators of hotels, motels, and other commercial establishments offering lodgings shall post in each room a notice of water shortage conditions, encouraging water conservation practices;*
- *Any use of water that causes runoff to occur beyond the immediate vicinity of use is prohibited;*
- *Watering of lawns, ornamental turf, trees, shrubs, vegetation, landscape and other outside irrigation is prohibited except between 4:00 p.m. and 9:00 a.m. or 6:00 p.m. and 9:00 a.m. during daylight saving, no more than twice a week. Use of a hand held hose with positive shut-off nozzle, bucket, or micro irrigation systems/equipment is encouraged.*
  Exceptions to allow for irrigation outside of the designated periods include (1) watering of newly installed, drought-tolerant landscapes for up to 1 year after planting, and (2) hand watering of potted plants or stressed vegetation with use of a container (e.g., bucket or watering can) or a hose fitted with a shut-off valve.
  - *Odd numbered addresses (Ending in 1, 3, 5, 7, 9): Sundays and Thursdays ONLY*
  - *Even numbered addresses (Ending in 0, 2, 4, 6, 8): Saturdays and Wednesdays ONLY*
  - *NO WATERING BETWEEN 9AM AND 6PM During Daylight Saving Time*
  - *NO WATERING BETWEEN 9AM AND 4PM During Pacific Daylight Time*
- *Irrigation of newly constructed home and building exteriors with potable water is prohibited unless drip or microspray systems are used.*
- *Application of potable water to landscapes during and within 48 hours after measurable rainfall is prohibited.*
- *Irrigation is permitted for ground cover for fire protection purposes and erosion control;*
- *Boats and vehicles shall be washed only at commercial wash facilities that recycle their wash water; or by use of a bucket and hose equipped with a self-closing valve that requires operator pressure to activate the flow of water; or by mobile high pressure/low volume professional services;*
- *Watering to maintain the level of water in swimming pools shall occur only when necessary. A pool cover shall be used to conserve water when the pool is not in use. Draining of pools or refilling shall be done only for health or safety reasons;*
- *Irrigation of park and school ground areas with potable water will only be permitted during the twice weekly designated irrigation periods noted in the irrigation schedule and only if necessary. Sport activity fields may irrigate more frequently, but only as necessary to maintain playing surface quality.*

Failure to comply and/or implement the water conservation measures is punishable by a fine of up to $100 for a first violation, $200 for a second violation within one year, and $500 for a third and every additional violation within one year. Each day that a violation occurs shall constitute a new and separate offense and may be prosecuted as such.

Groundwater Recovery Enhancement and Treatment (GREAT) Program. The Groundwater Recovery Enhancement and Treatment (GREAT) Program is the City of Oxnard's adopted and active long-range water supply strategy to combine wastewater recycling, groundwater injection, and groundwater desalination to make more efficient use of existing local water resources to meet projected water supply needs of the City through year 2020.

Wastewater

Clean Water Act. The Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the United States Environmental Protection Agency (USEPA) implements pollution control programs and sets wastewater standards. The CWA is explained in more detail in Section 4.8, *Hydrology and Water Quality*.

National Pollutant Discharge Elimination System. As explained more fully in Section 4.8, *Hydrology and Water Quality*, the National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

In California, the federal requirements are administered by the State Water Resources Control Board, and individual NPDES permits are issued by the California Regional Water Quality Control Boards (RWQCBs).

Los Angeles Regional Water Quality Control Board. The Los Angeles RWQCB is the local division of the State Water Resources Control Board (SWRCB) that has oversight authority over the project area. The SWRCB is a state department that provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in California. The Los Angeles RWQCB issues NPDES permits in Ventura County, including the City of Oxnard. NPDES permits allow the RWQCB to collect information on where the waste is disposed, what type of waste is being disposed, and what entity is disposing of the wastes. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Oxnard 2030 General Plan. The following objectives and policies within the City of Oxnard 2030 General Plan Chapter 4, *Infrastructure and Community Services*, and Chapter 5, *Environmental Resources*, apply to wastewater for the proposed project.

Goal ICS-11 *Water supply, quality, distribution, and storage adequate for existing and future development.*

ICS-11.1 *Support the countywide Water Quality Management Plan, the Sea Water Intrusion Abatement Program, wastewater reclamation, water conservation programs, and regional coordination.*

ICS-11.2	*Continue to update as need the City's Master Plan of Drainage (2001), Water Master Plan (2003), Urban Water Management Plan (2005), Wastewater Master Plan (2008) and Recycled Water Master Plan, Phase I (2009) to address water related constraints and opportunities.*
Goal ICS-12	*Adequate capacity at the City Waste Water Treatment Plant to accommodate existing and future development.*
ICS-12.1	*Require water recycling and resource recovery where possible in industrial operations to minimize sewer flows and sewer treatment demands.*
ICS-12.2	*Continue to monitor the performance of the City wastewater treatment plant to determine when additional capacity will be required and plan for needed treatment capacity.*
ICS-12.3	*Monitor and ensure that discharges comply with approved permits.*
ICS-12.4	*Treat all wastewater in compliance with approved discharge permits.*
ICS-12.5	*Require by conditions of approval that silt and sediment from construction be either minimized or prohibited.*
ICS-12.6	*Impose conditions in order to ensure adequate wastewater capacity for proposed new development.*
Goal ER-5	*Well managed water supply and wastewater treatment programs that together meet expected demand, prevent groundwater overdraft, and ensure water quality.*
ER-5.1	*Treat all wastewater in compliance with approved discharge permits.*
ER-5.2	*Support updating the "208" Wastewater Control Plan to control urban and nonurban runoff.*
ER-5.4	*Monitor all wastewater discharges on a periodic basis to ensure that discharges comply with approved permits.*

City of Oxnard Municipal Code. Article I of Chapter 19, Sewage System; Wastewater Disposal, sets forth uniform requirements for users of the municipal wastewater system of the city and enables the city to comply with all applicable State and federal laws including the Clean Water Act (33 USC Sections 1251 et seq.), general pretreatment regulations (40 CFR Part 403), and the requirements of the city's NPDES permit. The Article establishes rules and regulations for establishing sewer service connections and provisions for extension of the sewer system. Additionally, the Article established discharges that are prohibited from entering the City sewer system such as:

- *Pollutants that create a fire or explosive hazard in the system*
- *Any pollutant or wastewater that may cause corrosive structural damage to the city system or equipment*

- *Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, single pass noncontact cooling water and unpolluted wastewater, unless specifically authorized by the city manager*
- *Wastes defined as hazardous waste by RCRA or the California Hazardous Waste Control Law*
- *Solids greater than a half inch in diameter*

Stormwater

The subject of stormwater is discussed in Section 4.8, Hydrology and Water Quality.

Solid Waste

California Integrated Waste Management Act. California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. To help achieve this goal, the Act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a department within the California Natural Resources Agency, which administers programs formerly managed by the State's Integrated Waste Management Board and Division of Recycling. As part of California's Integrated Waste Management Board's (CIWMB) Zero Waste Campaign, regulations affect what common household items can be placed in the trash. As of February 2006, household materials including fluorescent lamps and tubes, batteries, electronic devices, and thermostats that contain mercury are no longer permitted in the trash and must be disposed of separately.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CIWMB sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CIWMB with an update of its progress in implementing diversion programs and its current per capita disposal rate. The City of Oxnard has a disposal goal of 11.6 pounds per resident per day. As of 2014, the unincorporated areas of the County were disposing of 6.7 pounds per resident per day; thus, the County currently meets its disposal target (Cal Recycle 2014).

California Solid Waste Reuse and Recycling Access Act of 1991. The California Solid Waste Reuse and Recycling Access Act requires areas in development programs to be set aside for collecting and loading recyclable materials. The Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas in development programs for collection and loading of recyclable materials.

CAL Green Building Code. The CAL Green Code came into effect for all projects beginning after January 1, 2011. Section 4.408, Construction Waste Reduction Disposal and Recycling mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code

requires project applicants to have a waste management plan for on-site sorting of construction debris.

City of Oxnard 2030 General Plan. The following objectives and policies within the City of Oxnard 2030 General Plan Chapter 4, *Infrastructure and Community Services*, apply to solid waste management for the proposed project.

Goal ICS-14 *Reduce solid waste and increased recycling.*

ICS-14.1 *Continue to implement and participate in appropriate source reduction and recycling programs to meet mandated waste reduction levels as specified within the California Integrated Waste Management Act of 1989, promote the maximum feasible use of solid waste recycling and composting of organic waste, and strive to reduce commercial and industrial waste.*

ICS-14.2 *Use recycled materials and employ recycling techniques for City operations to reduce demand for solid waste disposal capacity, where feasible, and encourage recycling of construction and demolition materials generated at residential and commercial new construction and renovation sites.*

ICS-14.3 *Continue to require developers and operators to employ practices that reduce the quantities of waste generated and promote resource recovery during construction, demolition, and operation.*

City of Oxnard Municipal Code. Article II of Chapter 19, Public Works, aims to coordinate the collection, transportation, processing, marketing, transfer and disposal of solid waste and recyclables by qualified persons is necessary to protect the public health, safety and general welfare and to implement State law. This Article establishes rules and regulations for the removal and disposal of solid waste such as prohibiting the disposal of waste on public rights of way, burning of trash and the disposal of hazardous waste in solid waste containers. Further, this article establishes that the City and its authorized representatives have exclusive rights to collect solid waste from residential, commercial, agricultural, construction or demolition uses within the city.

City of Oxnard Water Neutrality Policy. First established in 2008 and recently reaffirmed in 2011, the Oxnard City Council has established a water demand "neutrality" policy. That is, all new development approved within the City must offset the water demand associated with the project with a supplemental water supply. As noted above, "new development" includes all planned (anticipated in the current General Plan) and any unplanned future development occurring in the City." Under the policy, a development can be water neutral by meeting its projected demand through: existing FCGMA groundwater allocations that are transferred to the City; contributing to increased efficiency by funding water conservation or recycled water retrofit projects; providing additional water supplies; or any combination of these options. While this City policy has not been codified, it has been applied to every development project approved since 2008. (Oxnard 2012).

Energy

Green Building Standards Code. In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (hereafter the "CAL Green Code") that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. CAL Green Code was incorporated as Part 11 into Title 24 of the California Code of Regulations. The CAL Green Code was revised in 2013 with the revisions taking effect on January 1, 2014; however, these revisions do not have substantial implications to the water use already contemplated by the 2010 CAL Green Code. The CAL Green Code applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. All new development must satisfy the indoor water use infrastructure standards necessary to meet the CAL Green Code. 2019 California Green Building Standards Code (CCR, Title 24, Part 11 – CAL GREEN) will be effective January 1, 2020.

Building Energy Efficiency Standards. In 1976 the California Building Energy Efficiency Standards were first adopted and have been updated periodically since then as directed by the statute. The standards contain energy and water efficiency requirements for newly constructed buildings, additions to existing buildings, and alternations to existing buildings. Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 emphasize the importance of building design and construction flexibility by requiring the Energy Commission to establish performance standards, in the form of an energy budget, in terms of the energy consumption per square foot of floor space. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water hearing and lighting.

Assembly Bill 32 California Global Warming Solutions Act (AB 32). In 2006 the California Legislature passed AB 32, which set the goal of reducing GHG emissions to 1990 levels by 2020. The legislature granted authority to the California Air Resources Board (CARB) to establish multiple mechanisms, including regulatory, reporting, voluntary and market, to achieve quantifiable reductions in GHG emissions to meet the statewide goal. The Climate Change Scoping Plan, adopted in 2008, outlines the State's plan to achieve the GHG reductions required in AB 32.

City of Oxnard Energy Action Plan. In April 2013 the City of Oxnard established an energy efficiency program, based on the city's 2005 baseline energy use and Greenhouse Gas Emissions, in order to meet 2020 and 2030 forecasts and reduction targets. For the residential energy sector, the annual population growth rate was calculated based on population projects included in the City of Oxnard 2030 General Plan Background Report from June 2006. The baseline identified that in 2010 the residential sector consumed roughly 26 percent of electricity and 27 percent of natural gas.

City of Oxnard 2030 General Plan. The following objectives and policies within the City of Oxnard 2030 General Plan Chapter 2, *Sustainability Community*, apply to sustainable energy management for the proposed project.

Goal SC-3 *Energy efficiency performance standards and generation from renewable sources.*

SC-3.1 *New residential Development: Encourage incorporation of passive and active energy and resources conservation design and devices in new residential development and substantial remodels and/or expansions.*

SC-3.8 *Require Use of Passive Energy Conservation Design: As part of the City and Community EAP's, require the use of passive energy conservation by building material massing, orientation, landscape, shading, materials, and other techniques as part of the design of local buildings, where feasible.*

SC-3.9 *Promote Voluntary Incentive Programs: Promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional and public buildings, including continued participation in the Ventura County Regional Energy Alliance (VCREA).*

SC-12 *Encourage Natural Ventilation: Review and revise applicable planning and building policies and regulations to promote use of natural ventilation in new construction and major additions or remodeling consistent with Oxnard's temperature climate.*

Goal SC-4 *Implementation of the California Green Building Code*

SC-4.1 *Green Building Code Implementation: Implement the 2010 California Green Building Code as may be amended (CALGREEN) and consider recommending and/or requiring certain developments to incorporate Tier I and Tier II voluntary standards under certain conditions to be developed by the Development Services Director.*

4.12.2 Impact Analysis

a. Methodology and Significance Thresholds

Methodology. Available information pertaining to utilities was reviewed during this analysis including, but not limited to: the *Oxnard 2030 County General Plan* (Oxnard, 2011), the City of Oxnard Urban Water Management Plan (Oxnard, 2012), and the Preliminary Hydrology and Hydraulic Report by Jensen Survey and Design, Inc. (Jensen Survey and Design, Inc. 2016). The City of Oxnard Public Works Department was contacted to determine the capacity to accept wastewater generated by the proposed project. The Simi Valley Landfill and the Toland Road Landfill were contacted to determine landfill capacity to accept solid waste generated by the project.

Significance Thresholds. According to the adopted *State CEQA Guidelines*, impacts related to utilities from the proposed project would be significant if the project would:

1. *Need new or expanded water supply entitlements that are not anticipated in the current Urban Water Management Plan;*

2. *Require additional wastewater conveyance or treatment capacity be required to serve project demand and existing commitments;*
3. *Generate solid waste that would exceed the permitted capacity of a landfill serving the City.*
4. *Conflict with federal, state, or local statutes or regulations related to solid waste;*
5. *Involve wasteful, inefficient, or unnecessary consumption of energy during project construction, operation, maintenance, and/or removal;*
6. *Require additional energy facilities, the provision of which may have a significant effect on the environment;*
7. *Be inconsistent with existing energy standards; and/or*
8. *Preempt future energy development or future energy conservation, or inhibit the future use of renewable energy or energy storage.*

b. Project Impacts and Mitigation Measures

Threshold 1:	*Would the project need new or expanded water supply entitlements that are not anticipated in the current Urban Water Management Plan?*

Impact UTIL-1 The proposed project would be within the planned growth forecasted by the City of Oxnard in their 2010 Urban Water Management Plan. Therefore the City would have adequate water resources to serve the project site. Impacts would be Class III, *less than significant*.

Water resources would be provided to the proposed project from the City of Oxnard. As discussed above in Section 4.12.1 (a), the City of Oxnard gets water resources from several different sources, including both imported surface water and local groundwater. The City of Oxnard 2010 Urban Water Management Plan (UWMP) projects the total anticipated amount of water resources available to the City as well as the anticipated demand for these water resources through the year 2035. In the analysis of future demand to plan for the availability of water resources, the UWMP relies in projections of future population. The UWMP uses a projection of 250,706 residents in the City of Oxnard by 2035 (Oxnard 2016). The proposed project would introduce a maximum of 65 new residences and an approximately 261 residents[1]. The current population of Oxnard is approximately 206,997 (DOF 2016). Therefore, the proposed project would account for approximately 0.6 percent of the planned growth within the City.

With water resources purchased from the CMWD and UWCD, and City owned and operated groundwater wells, as well as recycled water and new groundwater resources made available through the incorporation of agricultural land, the City projects an increase in available water resources. Table 4.12-1 shows the projected water supplies available to the City as well as the anticipated water demand through the year 2035 assuming multiple dry years.

[1] assuming 4.01 persons per household (DOF, 2016)

Table 4.12-1
Projected Water Supply and Demand for the City of Oxnard
(Multiple Dry Years)

Water Supply Sources	2015	2020	2025	2030	2035
Existing Supplies					
Imported Water (CMWD)	17,379	17,379	17,379	17,379	17,379
UWCD Groundwater	9,800	7,800	7,800	7,800	7,800
City Groundwater	10,782	9,782	9,782	9,782	9,082
Brine Loss[1]	(1,490)	(1,641)	(1,700)	(1,755)	(1,810)
Total Existing Supplies	**36,471**	**33,320**	**33,261**	**33,206**	**32,451**
Planned Supplies					
Future City Groundwater[2]	527	1,789	2,269	2,269	2,269
Future City Groundwater[3]	5,200	11,400	8,500	8,500	8,500
Recycled Water[4]	1,800	2,600	5,500	5,500	5,500
Total Planned Supplies	**7,527**	**15,789**	**16,269**	**16,269**	**16,269**
Total Existing and Planned Supplies	**43,998**	**49,109**	**49,530**	**49,475**	**48,720**
Demand Without Conservation	36,029	39,684	41,109	42,439	43,769
Reduction for Water Conservation[5]	1,816	3,017	3,963	4,993	4,987
Demand With Conservation	**34,213**	**36,667**	**37,146**	**37,446**	**38,782**

[1] Brine loss is assumed to be 20% of permeate production from desalting operations. Assumes that the City will continue its 2010 blend ratio of groundwater, desalted groundwater, and imported water to maintain product water quality between 600 to 700 TDS.
[2] Future City groundwater allocations transferred to the City as agricultural lands are developed.
[3] Future City groundwater allocations made available to the City as agricultural users abandon or reduce the use of their wells in exchange for recycled water and/or as a result of groundwater recharge.
[4] GREAT Program recycled water sold to City water customers for municipal and industrial uses, including landscape.
[5] Reduction from Water Conservation includes both passive water conservation from plumbing code updates and other legislation and active conservation programs.
Source: Table 6-4 (Oxnard 2016)

Due to consecutive years of drought, State Water Project allocations have been reduced. As of April 21, 2016, State Water Project allocations are estimated to be 60 percent of the full requested deliveries (DWR, 2016). This would result in reductions of CMWD deliveries to the City. However, as shown in Table 4.12-1, the City of Oxnard projects to have an excess of water supply through the year 2035, even in a scenario of multiple consecutive years of drought. It is projected that CMWD would be able to meet all of its purveyor demands during a multiple dry year event. However, the City will likely have to purchase Tier 2 water (at a higher rate) to blend with pumped groundwater to provide suitable water quality. In dry year conditions (both single- and multiple-dry years) the groundwater supply is assumed to remain 100 percent available because the long-term average of the groundwater basin includes dry periods; any multiple-dry year cycle does not impact the long-term yield of the basin, and full implementation of the FCGMA Groundwater Management Plan 2007 will lead to stable groundwater basins (Oxnard, 2012). Currently, the FCGMA is not allowing the City to use pumping allocations transferred from agricultural users, until further notice. Regardless, the projected excess of water supply available to the City from a combination of City-produced groundwater, UWCD-produced groundwater, and CMWD to meet customer demands should be adequate to continue to meet customer demands and the demands of the proposed project.

Water demand projections in the 2010 UWMP incorporate a projected population of 250,706 by the year 2035. The proposed project would account 0.6 percent of this projected growth. Therefore, with existing and planned water resources available to the City of Oxnard combined with the mandatory conservation measures imposed by the City, there would be adequate

water resources available to meet the demands of the proposed project. Further, the project would comply with the CAL Green Building Code requirements for water conservation features. No new or expanded water rights would be required and impacts would be less than significant.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 2:	*Would additional wastewater conveyance or treatment capacity be required to serve project demand and existing commitments?*

Impact UTIL-2 Wastewater generated from the proposed project would be collected through the City of Oxnard sewer system and treated at the Oxnard Wastewater Treatment Plan. The Oxnard Wastewater Treatment Plant has sufficient capacity to accommodate wastewater flows from the proposed project. Impacts would be Class III, *less than significant*.

The proposed project would be within the City of Oxnard. Wastewater collection and treatment within the City is managed by the City of Oxnard Public Works. The proposed project would connect to the existing West Wooley Road Trunk Sewer Line of the City's sewer system. Connection to the existing sewer system would be made where the proposed project roadway joins Canal Street at the southern end of the project (as shown in Figure 2-4 in Section 2.0, *Project Description*). Wastewater in the City's sewer system is then delivered to the Oxnard Wastewater Treatment Plan (OWWTP) for treatment and disposal.

The OWWTP has a current design capacity of 35 million gallons per day (MGD) and a current wastewater flow into the plant of 18 MGD (David Lutz 2016). Therefore, the remaining capacity is 17 MGD. Because the City of Oxnard does not have wastewater generation rates of their own, published wastewater generation rates from the City of Los Angeles were used to estimate the wastewater flows generated from the proposed project. This analysis assumes that due to the proximity of Los Angeles in the Southern California region, wastewater generation rates would be comparable. Assuming a wastewater flow of 230 gallons per day (GPD) per unit (Single Family Dwelling), a total 14,950 GPD would be generated from the proposed project (Los Angeles 2006). With a remaining capacity of 17 MGD at the OWWTP, 14, 950 GPD would represent approximately 0.08 percent of the remaining capacity. Therefore, the OWWTP would have adequate capacity to accommodate the wastewater flows of the proposed project. No new or expanded wastewater treatment facilities would be required. Impacts would be less than significant.

The OWWTP currently discharges treated wastewater to the Pacific Ocean through an ocean outfall pipe. Treated wastewater discharged from the OWWTP is permitted through the Los Angeles RWQCB. Wastewater must adhere to the Los Angeles RWQCB NPDES permit for the plant (Order No. R4-2013-094, NPDES No. CA0054097). Therefore, the proposed project would not exceed any wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Threshold 3:	*Would the project generate solid waste that would exceed the permitted capacity of a landfill serving the City?*
Threshold 4:	*Would the project conflict with federal, state and local statutes and regulations related to solid waste?*

Impact UTIL-3 **The project site would be served by the Simi Valley Landfill with an estimated remaining capacity of 36 years, and the Toland Road Landfill, with an estimated remaining capacity of 11 years. The amount of solid waste that would be generated during construction and operation of the project would not exceed this remaining capacity. Impacts to solid waste facilities from the proposed project would be Class III, *less than significant*.**

The volume of waste generated by the proposed project was determined based on the CalRecycle solid waste generation rates. This analysis assumes a residential waste generation rate of 12.23 pounds per household per day (CalRecycle 2013).

Table 4.12-2 shows the estimated amount of solid waste that would be generated by the buildout of the proposed project. The generation provided by CalRecycle is from the 2006 City of Los Angeles CEQA Threshold Guidelines. The generation rate is used to apply to the single family residences within the proposed project. For this analysis, the rate of 12.23 pounds per household per day was used. Assuming this generation rate, a total of 795 pounds of waste would be generated from the site per day, or a total of 145 tons per year.

Solid waste collected within the City of Oxnard is sent to the Del Norte Regional Recycling and Transfer Station located at 111 S Del Norte Boulevard. As of 2012, use of the Del Norte facility has allowed the City of Oxnard to achieve a waste diversion rate of 73 percent (Oxnard 2014). As such, this analysis assumes a 73 percent diversion rate for this project. With this diversion, the proposed project would generate an estimated 215 pounds of solid waste per day, or 0.11 tons per day (Table 4.12-2).

Table 4.12-2
Projected Solid Waste Generation

Land Use	Unit	Generation Rates	Daily Solid Waste (lbs per day)	Landfilled Solid Waste with Diversion (lbs per day) [a]
Residential	65 units	12.23 lbs/day/unit	795	215
Total (lbs/day)				215
Total (tons/day)				0.11

[a]Assumes a 73% diversion rate for City of Oxnard (Oxnard 2014).
[c] CalRecycle, Estimated Solid Waste Generation Rates, website: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm accessed 5/9/16.

Waste from the City of Oxnard is delivered to both the Simi Valley Landfill and the Toland Road Landfill. The Simi Valley landfill currently has a max permitted throughput of 9,250 tons per day and accepts on average around 4,000 tons per day. Additionally, the Simi Valley Landfill has a permitted operation through the year 2052 and an estimated remaining capacity of 87 million cubic yards (Waste Management 2016). The Toland Road Landfill has a maximum permitted throughput of 1,500 tons per day and has permitted capacity through the year 2027 with an estimated remaining capacity of approximately 22 million cubic yards (CalRecycle, 2016).

The solid waste generated from the proposed project would account for approximately 0.002 percent of the daily waste delivered to the Simi Valley and Toland Road landfills. With the combined capacities of these two landfill facilities, the project would be served by a landfill with adequate capacity to accommodate the solid waste generated from the project site. The project would have a less than significant impact.

Further, with sorting and recycling of waste at the Del Norte Facility and the disposal of waste at the Simi Valley Landfill and Toland Road Landfill, the proposed project would comply with all regulation associated with solid waste. Impacts would be less than significant.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The potential buildout through the year 2040 in the City of Oxnard would result in an increase of approximately 30,303 people and 5,365 households (SCAG 2016) (Department of Finance 2016). Such development would generally increase the demand on utilities such as water supply, stormwater facilities, wastewater facilities, and solid waste management within the City of Oxnard.

The proposed project would incrementally increase demand for water resources and wastewater, stormwater, and solid waste management facilities within the City of Oxnard. However, the proposed development is within the planned growth of the City of Oxnard and as such is within the planned demand for utility services. Therefore, cumulative impacts of the project would be less than significant.

Threshold 5:	*Would the project involve wasteful, inefficient, or unnecessary consumption of energy during project construction, operation, maintenance, and/or removal?*
Threshold 6:	*Would the project require additional energy facilities, the provision of which may have a significant effect on the environment?*
Threshold 7:	*Would the project be inconsistent with existing energy standards?*
Threshold 8:	*Would the project preempt future energy development of future energy conservation, or inhibit the future use of renewable energy or energy storage?*

Impact UTIL-4 Energy consumed by the proposed project would comply with the City of Oxnard Energy Action Plan, the City of Oxnard 2030 General Plan, and the Green Building Standards Code (CALGreen). Impacts would be Class III, *less than significant*.

As described in Section 4.4, *Climate Change and Greenhouse Gas Emissions*, CalEEMod provides operational and construction emissions of CO2, N_2O, and CH_4. Energy use involved in these estimates includes electricity and natural gas use associated with the buildings and residences within the completed project, and the energy necessary to supply the project with water and solid waste services. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide, 2013). The default electricity consumption values in CalEEMod included the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. The estimates of energy used in the project are found in Section 5 of the air emissions modeling in Appendix B. For the project as proposed, the estimated natural gas use would be 987,134 kBTU/yr (thousand British Thermal Units per year), and the estimated electricity consumption would be 257,707 kWh/yr (kilowatt-hours per year). To put these figures in perspective, their associated GHG emissions are compared with other aspects of the project in Table 4.6-6 in the section of this EIR addressing Greenhouse Gas Emissions and Climate Change. In that summary, emissions from all aspects of the project are well below the criteria used to define a significant impact, and the energy related emissions associated with the project are less than one-quarter of the total GHG emissions, most of which are from motor vehicle operation. The energy demand of the project is expected to be typical of land development in the region, and would not contribute towards excessive energy use or GHG emissions.

The project is within existing planning and population projections, and within the service areas and capabilities of Southern California Edison and Southern California Gas Company. The project area is small, and adjacent to an existing developed neighborhood. As such, its development would not interfere with the provision of new energy facilities and existing utility service lines exist in the immediate vicinity.

Furthermore, the project would comply with the City's standard conditions of approval and the energy efficiency standards in the California Green Building Code, and with policies in the Oxnard 2030 General Plan Chapter 2, *Sustainability Community,* as listed above. For these reasons, the effects of the project on the use of energy and the provision of energy service in the area would be a Class III, *less than significant*.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

5.0 GROWTH-INDUCING EFFECTS AND OTHER CEQA-REQUIRED DISCUSSIONS

This section discusses growth-inducing impacts and irreversible environmental impacts that would be caused by the project.

5.1 GROWTH-INDUCING IMPACTS

State CEQA Guidelines § 15126.2(d) requires a discussion of a proposed project's potential to induce growth by, for example, fostering economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The project's growth-inducing potential is therefore considered significant if growth induced by the project could result in significant physical effects in one or more environmental issue areas. The most commonly cited example of how an economic effect might create a physical change is where economic growth in one area could create blight conditions elsewhere by causing existing competitors to go out of business and the buildings to be left vacant.

5.1.1 Population and Economic Growth

The project would add a maximum of 65 new residential units to Oxnard's housing stock. The current population of Oxnard is 206,997 (Department of Finance [DOF], 2016). Based on an average of 4.01 persons per household, development of the project would accommodate approximately 260 persons (DOF, 2016). Therefore, the project would be expected to increase the City's population to 207,257.

The City of Oxnard 2030 General Plan produced projections of population growth within the City by 2030. The General Plan estimates that the population of the City of Oxnard will grow to 285,521 by 2030 following market trends for housing development. Consequently, development of the project would not add population beyond that anticipated in 2030 General Plan growth forecasts. The addition of 260 new residents to the City would equal 0.33 percent of the total projected cumulative population growth through 2030. The level of population growth associated with the project was anticipated in City of Oxnard's long-term population forecasts and would not cumulatively exceed official regional population projections. The project is not expected to induce any additional population growth beyond that associated with the project itself.

According to Table 3-1 in Section 3.0, *Environmental Setting*, cumulative development in Oxnard involves 3,163 residential units. Assuming 4.01 persons per household, this amount of residential development would add 12,684 residents (3,163 dwelling units x 4.01 people/dwelling unit) to the City population. Cumulative development, which includes the project, would increase the City's population to 219,681 (current population of 206,997 + 12,684), which would is within the City's 2030 General Plan population projections. The physical environmental effects of cumulative development are addressed in Section 4.0 of this EIR as well as in the environmental documents prepared for each individual project.

The project includes residential development rather than commercial development. As such, the project would not directly contribute to economic growth by providing additional space for business. Under the project, a maximum of 65 new residential units could be developed, which may indirectly contribute to economic growth. The additional population associated with the project would likely contribute to the local economy as demand for general goods increases, which in turn could result in economic growth for various sectors. Project residents would increase the City population by about 0.1 percent and would be expected to primarily use existing City commercial services, creating only a minor need for expanded services. The project would not be expected to induce economic expansion to the extent that significant environmental impacts directly associated with the project's contribution would occur.

5.1.2 Removal of Obstacles to Growth

The project would facilitate residential development on vacant and undeveloped land consisting of remnant, disturbed sandy areas and willows. To the south of the project site is residential development within the existing Oxnard Dunes subdivision. The western side of the project site is bordered by Harbor Boulevard and the north is bordered by Fifth Street. The project would include one private road with gated entry off of Dunes Street to the west, and a second security gate at Canal Street to the south, but would not require the development of any new public roadways for access. None of these changes would open any new areas to potential development. In addition, the project would utilize existing water, wastewater and solid waste facilities that serve the City of Oxnard (see Section 4.12, *Utilities and Service Systems*). Service would be provided through minor extensions of existing utility infrastructure. No additional infrastructure or facilities beyond those necessary to accommodate the project would be required. No other undeveloped land in the vicinity of the project would benefit in terms of growth from the extension/provision of urban services to the project site. Because the project does not require the extension of new infrastructure that would open up additional undeveloped areas to potential future development, project implementation would not remove an obstacle to growth.

5.2 SIGNIFICANT, IRREVERSIBLE CHANGES

State CEQA Guidelines § 15126.2(b) requires EIRs to identify those significant impacts that cannot be reduced to a less than significant level with the application of mitigation measures. The implications and reasons why the project is being proposed, notwithstanding, must be described. As discussed in Section 4.0, Environmental Impact Analysis, the project would not result in any significant and unavoidable impacts.

State CEQA Guidelines § 15126.2(c) requires a discussion of any significant irreversible environmental changes which would be caused by the project should it be implemented. Such significant irreversible environmental changes may include the following:

- *Use of non-renewable resources during the initial and continued phases of the project which would be irreversible because a large commitment of such resources makes removal or non-use unlikely.*

- *Primary impacts and, particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area) which generally commit future generations to similar uses.*
- *Irreversible damage which may result from environmental accidents associated with the project.*

Construction of the project would require building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to the project. The addition of new residential units would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. Additional vehicle trips associated with the project would incrementally increase local traffic and regional air pollutant and greenhouse gas emissions. As discussed in Section 4.2, *Air Quality*, Section 4.6, *Greenhouse Gas Emissions*, and Section 4.11, *Traffic, Circulation, and Access*, impacts resulting from traffic generated by future development would be less than significant or could be mitigated to a less than significant level.

Growth accommodated under the project would require an irreversible commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. However, these impacts would be less than significant or would be reduced to a less than significant level with mitigation.

5.3 ENERGY EFFECTS

The *State CEQA Guidelines* Appendix F requires that EIRs include a discussion of the potential energy consumption and/or conservation impacts of project, with particular emphasis on avoiding or reducing inefficient, wasteful or unnecessary consumption of energy.

As discussed previously (Section 4.12 Utilities and Energy), the project would involve the use of energy during the construction and operational phases of the project. Energy use during the construction phase would be in the form of fuel consumption (e.g. gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. In addition, temporary grid power may also be provided to any temporary construction trailers or electric construction equipment. Long-term operation of the project would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems. In addition, the increase in vehicle trips associated with the project would increase fuel consumption within the City.

The project would be subject to the energy conservation requirements of the Title 24 of the California Code of Regulations, known as the California Building Standards Code or Title 24, and the City's *Energy Action Plan: A Component of the Oxnard Climate Action and Adaptation Plan*, which aims to reduce energy consumption and increase renewable energy production in the City consistent with 2030 General Plan goals and policies, utility company programs, and State and Federal legislation and initiatives (City of Oxnard, 2013). Compliance with the City's Energy Action Plan and other energy conservation requirements would ensure that energy is not used in an inefficient or wasteful manner. In addition, the location of the project site in proximity to existing job opportunities and commercial services would generally limit vehicle miles traveled (VMT) and associated travel-related energy use.

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6.0 IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

This section addresses the potential environmental effects of the project that were determined to be less than significant, as described in the Initial Study (IS) for the project (refer to Appendix A). The items listed below are contained in the City's IS environmental checklist form and the environmental checklist form included in Appendix G of the *State CEQA Guidelines*. Each subsection listed below includes the checklist items from the *State CEQA Guidelines* that are addressed in this section. Any items not addressed in this section have been addressed in Section 4.0, *Environmental Impact Analysis*, of this EIR. Section 4.0 also includes an expanded discussion of the settings under each environmental issue area discussed therein.

The Initial Study determined that the project would not result in adverse impacts related to Agriculture and Forest Resources, Mineral Resources, Population/Housing, Public Services, or Recreation. A summary of the analysis of issue areas for which no significant adverse impacts were identified is provided in this section. Refer to the Initial Study (Appendix A) for the complete issue area analysis.

6.1 AGRICULTURE

Would the project:

- *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?*
- *Conflict with existing zoning for agricultural use or an existing Williamson Act contract?*
- *Involve other changes in the existing environment that, due to their location or nature, could result in conversion of off-site farmland to non-agricultural uses?*

Review of the Farmland Mapping and Monitoring Program (FMMP) maps prepared by the California Department of Conservation (DOC) confirmed that the project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the FMMP (DOC, 2014) and would not convert any farmland to non-agricultural use. There is agricultural land located approximately 300 feet to the east of the project that is designated as Farmland of Statewide Importance and Prime Farmland. However, this farmland is separated from the project site by the Edison Canal. Further, the project is an extension of existing residential development. Therefore, the project would not represent a change in the existing environment that would lead to the conversion of any farmland to non-agricultural use.

The project site is not enrolled in a Williamson Act contract and is not zoned for agricultural production by Ventura County or the City of Oxnard. Therefore, the project would not conflict with any zoning for agricultural use or Williamson Act contracts.

Neither the project site nor adjacent areas contain forest resources or are used for timber production (Ventura County, 2016). Therefore, the proposed project would not damage or result in the loss of forestry, and it would not conflict with any zoning designations designed to preserve timber resources.

Impacts to agriculture and forest resources would be less than significant.

6.2 MINERAL RESOURCES

Would the project:

- *Result in the loss of availability of a known mineral resource of value to the region or state?*
- *Result in the loss of availability of a locally important mineral resource recovery site delineated in the 2030 General Plan, specific plan, or other land use plan?*

According to the 2030 General Plan, the City of Oxnard has mineral/sand/gravel deposits primarily along the Santa Clara River channel, along the Highway 101 corridor and along the eastern edge of the City extending west to Oxnard Boulevard. The project site is not located near any known mineral resource. The project would not create a unique demand on available mineral resources in the City, since the project site is not located in an area of importance for mineral deposits. There would be no impacts to mineral resources as a result of the project.

6.3 POPULATION, EDUCATION AND HOUSING

Would the project:

- *Involve a General Plan amendment that could result in an increase in population over that projected in the 2030 General Plan that may result in one or more significant physical environmental effects?*
- *Induce substantial population growth on the project site or surrounding area, resulting in one or more significant physical environmental effects?*
- *Result in a substantial (15 single-family or 25 multi-family dwelling units – about one-half block) net loss of housing units through demolition, conversion, or other means that may necessitate the development of replacement housing?*
- *Result in a net loss of existing housing units affordable to very low- or low-income households (as defined by federal and/or City standards), through demolition, conversion, or other means that may necessitate the development of replacement housing?*
- *Cause an increase in enrollment at local public schools that would exceed capacity and necessitate the construction of new or expanded facilities?*
- *Directly or indirectly interfere with the operation of an existing or planned school?*

The City of Oxnard 2030 General Plan produced projections of population growth within the City by 2030. The General Plan estimates that the population of the City of Oxnard will grow to 285,521 by 2030 following market trends for housing development. The current estimated population of the City of Oxnard is 206,997 (California Department of Finance [DOF], 2016).

The project would involve the construction of a maximum of 65 new single family residences. According to data provided by the DOF, the current average number of persons per household in the City of Oxnard as of January 1, 2016 is 4.01 (DOF, 2016). Based on this average, the project would add approximately 260 new residents for a total population of 207,257. Therefore, development of the project would not add population beyond that anticipated in 2030 General Plan growth forecasts. The addition of 260 new residents to the City would equal 0.33 percent of the total projected cumulative population growth through 2030. The level of population growth associated with the project was anticipated in City of Oxnard's long-term population forecasts

and would not cumulatively exceed official regional population projections. In addition, the project site is currently undeveloped and development of the site would not displace any existing residences.

The project site is located within the Oxnard Elementary School District (OESD) and Oxnard Union High School District (OUHSD). Construction of the proposed project would accommodate an estimated 260 new residents to the area. The population would be expected to include school-aged children who would attend local schools. Students would attend McAuliffe or Marina West Elementary, Haydock Middle School, and Channel Islands High School.

To offset a project's potential impact on schools, Government Code 65995 (b) establishes the base amount of allowable developer fees a school district can collect from development projects located within its boundaries. The fees obtained by OESD and OUHSD are used to maintain the desired school capacity and the maintenance and/or development of new school facilities. The project proponents for any future residential developments would be required to pay the state-mandated school impact fees. Pursuant to Section 65995(3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Therefore, impacts to population, housing, and school services and facilities would be less than significant.

6.4 PUBLIC SERVICES AND RECREATION

Would the project:

- *Increase demand for fire protection service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?*
- *Increase demand for law enforcement service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?*
- *Increase the use of existing park facilities such that substantial deterioration of the facilities would occur or be accelerated or that new or expanded park facilities would be needed to maintain acceptable service levels?*
- *Increase the need for or use of existing library or other community facilities such that substantial physical deterioration of the facilities would occur or be accelerated?*

The Oxnard Fire Department (OFD) provides fire protection to the City of Oxnard. The National Fire Protection Association's (NFPA) recommended standard for fire department staffing is one firefighter per 1,000 residents. The current population of Oxnard is 206,997 (DOF, 2016). The population growth that would result from the proposed projects would represent a growth of 0.33 percent of the total growth projected by the City's General Plan, and would therefore not have a significant effect on these ratios. Further, there are eight fire stations in the City. The basic unit is the engine company, which consists of a captain who supervises the crew, an engineer who is responsible for the safe operation of the equipment, and a firefighter who

carries out the basic firefighting and medical tasks. In addition, the NFPA recommends that each fire station serve approximately 15,000 residents. Based on the current population of the City, Oxnard's eight fire stations serve approximately 26,000 residents per station. Furthermore, the Fire Department can access additional manpower and equipment through an automatic aid agreement with Ventura County and a mutual aid agreement with the City of Ventura and Point Mugu Naval Air Station. The projects would include uniformly applied development policies that require adequate fire hydrants, OFD site access, emergency signage, fire alarms, addressable smoke detectors, and other requirements of the Uniform Fire Code to minimize any potential impacts on Fire Services. The project would provide primary and secondary access for emergency vehicles. No new facilities would be required as a result of the projects.

The Oxnard Police Department (OPD) provides police protection in this area, which operates from the police station located at 251 South C Street. The station is located approximately four miles northeast of the project site. The City is divided into four Police Districts, each of which is further divided into smaller response beats. Each beat is patrolled 24 hours a day, seven days a week in three overlapping 12-hour shifts. The project site is located in Beat 21, which is part of District 2. In addition to its police stations, the OPD operates eight storefront police substations.

With a current population of 206,997 (DOF, 2016) and an estimated population growth of 260 residents resulting from the project, the project would represent 0.33 percent of the population growth projected in the City's General Plan. This would not result in an incremental increase in the police officer to population ratio. No new police facilities would be needed.

During the plan check and permitting process the Development Services Department would assess and determine the project impact fees that are required for this type of development. Development impact fees typically involve, but are not limited to: Planned Traffic Circulation System Facilities Fees (Traffic Impact); Planned Water Facilities Fee; Planned Wastewater Facilities Fee; Planned Drainage Facilities Fee; and Growth Requirement Capital Fee.

The City of Oxnard's estimated 2016 population is 206,997 (DOF, 2016). As identified in the City of Oxnard 2030 General Plan, there is approximately 759 acres of developed parks in existence or planned within the City of Oxnard (2030 General Plan page 1-21). There are about 3.66 acres of park facilities per 1,000 residents, which exceeds the objective of 3.0 acres per 1,000 residents set forth in Policy ICS-23-1 in the 2030 General Plan. If regional parks, beaches, and other accessible open space are all considered, then the parkland available to City residents is higher. The project would accommodate a population increase of approximately 260 residents, which would not substantially alter the park ratio or affect the City's ability to maintain and exceed its objectives for parkland. The City currently has sufficient parkland to serve the population and would continue to do so with development of the project. The incremental increase in population would create an incremental increase in use of the existing parks. However, the existing parkland ratio would stay the same and no significant impacts would occur to existing parks.

Additionally, Lot E of the project includes a private community/recreation area for the proposed residences that would be constructed as part of the project. This area would be a total of 0.19 acres in size and would not impact the overall parkland ratio within the City. The proposed community/recreation area would be maintained by a future Homeowners

Association that would be formed as part of the project. Grading and development of this park is within the area of disturbance and development to be addressed in the EIR. Therefore, impacts to fire and police protection services and facilities, and recreational facilities would be less than significant.

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7.0 ALTERNATIVES

As required by Section 15126(d) of the *State CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed project that could feasibly achieve similar objectives. The discussion focuses on alternatives that may be able to reduce one or more of the adverse impacts associated with the proposed project. Included in this analysis are the CEQA-required "no project" alternative and three additional alternatives. These are listed and summarized below, and subsequently discussed in greater detail within the impact analysis for each alternative:

- *Alternative 1: No Project – No Development*
- *Alternative 2: Alternative Location – Development in RP Area Only*
- *Alternative 3: Alternative Design – Improved Buffer*
- *Alternative 4: Reduced Project*
- *Alternative 5: Alternative Design – All Single Family Detached Residential Condominiums*

This section also identifies the Environmentally Superior Alternative in accordance with CEQA.

Table 7-1 provides a summary comparison of the development characteristics of the proposed project and the alternatives. The acreages noted for the various uses within each alternative are only approximate. A more detailed description of the alternatives is included in the impact analysis for each alternative.

Table 7-1
Summary Description of Alternatives

Characteristic	Alternatives					
	Proposed Project	**Alternative 1: No Project – No Development**	**Alternative 2: Development in RP Area Only**	**Alternative 3: Improved Buffer**	**Alternative 4: Reduced Project**	**Alternative 5: All Single-Family Detached**
Residential Buildout (dwelling units[du])	50-65	0	Approx. 50	32-34	35	56
Residential Area (acres[ac])	6.01	0	6	4	2.8	5.73
Resource Protection Area (ac)	29.58	38.33	30	32	34.3	29.58
Private Community Recreation Area (ac)	0.19	0	0.2	0.1	0.1	0.19
Drainage Basin, Entry Feature, Bio-Swale (ac)	0.31	0	0.3	0.2	0.1	0.14
Private Street (ac)	2.24	0	2	2	1	2.24
Total	**50-65 du/ 38.33 ac**	**0 du/ 38.330 ac**	**50 du/ 38.33 ac**	**32-34 du/ 38.33 ac**	**35 du/ 38.33 ac**	**56 du/ 38.33 ac**

As discussed in Section 2.5, *Project Objectives*, the Avalon Homes proposal is intended to complete development of the Oxnard Dunes neighborhood consistent with the intentions of the City of Oxnard 2030 General Plan. The project objectives are as follows:

> **Objective 1:** Complete this portion of the Oxnard Dunes neighborhood with an attractive residential neighborhood pursuant to the requirements of the City of Oxnard 2030 General Plan; and provide the ability for efficiently providing municipal services.
>
> **Objective 2**: Comply With underlying R-2-C Zoning requirements with respect to unit setbacks, lot coverage, height, and density.
>
> **Objective 3:** Comply with Local Coastal Plan (LCP) policies. The site is within the urban-rural boundary, and the project is within the residential density requirements of the General Plan. The project provides a buffer to Agricultural lands to the east.
>
> **Objective 4:** Provide on-site habitat mitigation for any sensitive areas disturbed within the R-2-C area. It is envisioned that this area could serve as both an access link up to Fifth Street, being enhanced by natural features including the dunes, and natural habitat areas.
>
> **Objective 5:** Ensure that proposed development and land use conserve energy and natural resources;
>
> **Objective 6**: Provide for compatibility with existing residential uses in the area through effective and appropriate urban and architectural design.

Section 4.9, *Land Use and Planning*, provides a detailed discussion of the project as it relates to the specific goals, policies, and objectives contained in the City's 2030 General Plan.

7.1 NO PROJECT – NO DEVELOPMENT

This alternative assumes that the proposed project would not be approved and that the project area would not be developed. Since the area proposed for development is designated as Residential-Existing (REX) in the Coastal Land Use Plan and General Plan, and is zoned for Coastal Low-Density Multi Family use (R-2-C), some form of development consistent with this designation and zoning would be expected in the future.

In order to implement the No Project alternative on a permanent basis, other actions would be necessary. The land within the project area would have to be protected from future development, either through outright purchase or through an open space easement acquired by the City of Oxnard or by another conservation agency or group. With respect to such acquisition for protection purposes, the Coastal Land Use Plan (Oxnard 1982:page III-12) Local Coastal policy No. 7 states:

> "*The City shall also investigate all means of public acquisition of the areas designated for Resource Protection. As funds for this purpose become available, the City shall acquire or shall request other public agencies acquire approximately 131 acres of wetlands in Ormond Beach and approximately 43 acres of dunes as shown on the Land Use Map. Because of a lack of resale data, the market values of these properties are unknown.*"

The northern portions of the Avalon Homes property are designated for Resource Protection, and would, in fact, be preserved as a condition of approval for the residential development proposed in the REX designated area, as suggested by the policy above. Although the REX area proposed for development also contains remnant sand surfaces, it is not part of the area mapped as RP in the Land Use Map, which is Map 18 in the Coastal Land Use Plan (Oxnard 1982:page IV-33).

The Avalon Homes property does not contain any land identified by the Coastal Commission or Department of Fish and Game as part of the Acquisition Priorities for the Coastal Wetlands of California, referenced in Section 30233:c. of the state Coastal Policies included in the Oxnard Coastal Land Use Plan (Oxnard 1982:pageIII-14). More recent efforts by the California Coastal Conservancy and other groups to preserve coastal wetlands in Ventura County have been focused on the Ormond Beach area. For these reasons, it is unlikely that public funds would be used for acquisition or protection of the Avalon Homes property on a permanent basis. Without an alternate funding source, such as a major non-profit organization or the formation of a special district, the implementation of the No Project alternative would not be feasible.

7.1.1 Impact Analysis

If it could be implemented, the No Project – No Development alternative would involve no changes to the physical environment and thus would have no immediate adverse environmental effects.

This alternative would avoid the effects of the project on local aesthetics, traffic, biological resources, water quality and other issues. All of the potential impacts associated with these issues would be mitigated to a level less than significant with the project as proposed, but under the No Project alternative there would be no physical changes whatsoever at the project site.

7.2 ALTERNATIVE 2: ALTERNATE LOCATION DEVELOPMENT IN RP AREA ONLY

This alternative would require amendment of the Coastal Land Use Plan to reconfigure the designations for Resource Protection and Residential uses in the vacant portions of the Oxnard Dunes neighborhood. Figure 7-1 shows one possibility for an area of development within the current RP designation that would approximately the same size as the development area proposed in the Avalon Homes project. Other configurations are possible, but the objective of this alternative would be to locate all development away from the existing homes in the Oxnard Dunes neighborhood, while retaining the same overall number of proposed lots for dwellings and ancillary uses. The RP designated area would also be reconfigured to preserve the coastal dunes area that is adjacent to the backyards of existing homes along Catamaran Street.

In general, this alternative would shift the effects of the project away from the existing residential neighborhood in Oxnard Dunes and into the vacant areas within the northern part of the neighborhood. Although the aesthetic, noise, traffic, and other aspects of the project are not considered significant impacts based on the criteria in this EIR, this alternative would avoid or greatly reduce even those less than significant effects relative to the existing residences. This

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Alternative 2:
Alternative Location - Development in RP Area Only Figure 7-1

alternative could also preserve approximately the same size of dune area within a protective easement, but the quality of the preserved area and its connectivity with areas to the north would not be as high as the configuration within the proposed project. The following paragraphs provide a brief discussion of this alternative related and how it affects each of the major environmental topics discussed in this EIR.

7.2.1 Aesthetics and Urban Design

The proposed location change moves the project to the northern portion of the same parcel, in a RP designated land use area. Although movement would not affect the overall design of the project, it may result in negative impacts on the surrounding dune environment. Harbor Boulevard and West Fifth Street are identified as major entrances or gateways to the City of Oxnard (2030 General Plan page 4-6). Visibility of the development from these gateways may be increased by moving the project to the north. Placing the project in the RP designated zone could reduce visibility from existing residences in the Oxnard Dunes, mainly the backyards of homes along Catamaran Street. Visibility from residences immediately west of Harbor Boulevard and from eastbound drivers along residential streets west of Harbor Boulevard would increase.

Overall, the development of the Avalon Homes project in the RP designated area north of the originally proposed project site would be considered a slight reduction in aesthetics (or slight increase in adverse effects) due to a larger number of people who would see the development in place of the existing dune vegetation. Given the developed nature of the surrounding neighborhoods, however, this change would not be considered a significant impact on aesthetics.

7.2.2 Air Quality

Site disturbance under this alternative would be similar; therefore, construction related air quality impacts would not change. Number of residences, overall trip generation and potential odors would also be similar to the currently proposed project and would not have a significant impact on the surrounding environment.

7.2.3 Biological Resources

Movement of the project to the RP designated zone north of the originally proposed site would encroach on the dune habitat that is relatively less disturbed and more contiguous with the surrounding preserved habitat. The alternative site location includes about 30 acres of undeveloped natural sand dunes and willows. Placing the project in this ESHA area would develop 8.75 acres of that formerly vacant space. Disturbance in this area may lead to a greater potential for exposure of preserved areas to the developed perimeter resulting in a higher potential for indirect effects related to human activities adjacent to preserved areas. Overall, impacts associated with this alternative may be more significant due to the larger area and higher quality habitat in dunes the development would affect, and due to the larger interface between developed and preserved areas. Measure to increase preservation and habitat enhancement, and to restrict or control the extent of indirect impacts in the preserved areas, may be capable of mitigating the increased biological impacts under this alternative.

7.2.4 Climate Change and Greenhouse Gas Emissions

Although this alternative would facilitate development of the Avalon homes project in a different location than originally proposed, overall site disturbance would be the same and development intensity and traffic would be similar to the proposed project. As a result greenhouse gas emissions impacts would have the same general effects as the original project. Implementation of General Plan policies and compliance with AB 32 requirements would reduce most GHG related impacts to a less than significant level.

7.2.5 Cultural and Tribal Cultural Resources

Although this alternative would facilitate development of the Avalon Homes in a different location than originally proposed, overall site disturbance would be the same. As noted in Section 4.4, *Cultural Resources*, there is no evidence that any of the known Chumash places are located within or adjacent to the project site, including the alternative location. The potential for impacts to identified and previously unidentified pre-historical archeological resources would also be similar. In addition, the alternative location does not contain any existing structures. Therefore, impacts to historical buildings, structures, and districts would not occur within this expansion area regardless of the type of development constructed.

7.2.6 Geology and Soils

Although this alternative would facilitate development of the Avalon Homes in a different location than originally proposed, overall site disturbance and the underlying soils and geologic conditions would be similar. As a result, the development would have the same constraints and design requirements as the original project. This includes policy related to ground shaking, liquefaction, soil-related hazards, slope hazards and radon exposure. Implementation of the city's General Plan and compliance with California Building Code (CBC) requirements would reduce most geology related impacts to a less than significant level.

7.2.7 Hazards and Hazardous Materials

Movement of the project from the originally proposed location would place the development to the north in a site that was in or adjacent to oil field operations. This area currently has a RP designation and is closer to the edge of the older oil fields than the original site location. Therefore, the alternate site location is, in theory, exposed to a higher potential for risk. However, the entire area has been restored through the removal of previous oil field features and remediation activities to address contaminated soil and related issues, so the difference between the two locations would not be substantial.

7.2.8 Hydrology and Water Quality

As discussed in Section 4.8, *Hydrology and Water Quality* (and shown in Figure 4.8-1), the alternative project location is outside the 100-year flood plain, but is within the 500-year flood zone. Impacts related to flooding would be about the same for the proposed project and for this alternative development in a different location. Impacts related to increased runoff and increased pollutant loads would also be similar. Additionally, the alternative location would

have the same requirements for storm water control. As with the proposed project, the implementation of storm water runoff policies in the General Plan Conservation/Open Space Element, implementation of General Plan policies, and compliance with local, state, and federal requirements relating to water quality would reduce hydrology and water quality impacts to a less than significant level.

7.2.9 Land Use and Planning

On the originally proposed site, the project would be in compliance with designated land use (REX) and zoning of R-2-C. Should the project be moved to the northern part of the parcel, there would be a higher potential for inconsistency with coastal land use designation and policies intended to preserve RP lands. It would also be likely to have greater inconsistency regarding the 100-foot buffer policy in regards to encroaching on the natural sand dune and willow area. This would require substantial amendments to LCP land use designations, coastal zoning, and measures to improve consistency with policies designed to preserve ESHA and related sensitive resources. Therefore, changing site locations would have a significant impact on land use and planning.

7.2.10 Noise

The potential for noise impacts from existing and future traffic volumes along Harbor Boulevard due to development proposed under this alternative would be slightly higher. However, noise levels would not exceed an Ldn of 65 dBA so significant impacts would not be expected. The potential noise effects from construction would be reduced due to the greater distance between construction activities and existing residences.

7.2.11 Transportation and Circulation

The Alternate Location alternative would see the same overall effects on the surrounding traffic system. Relative to the existing conditions, a small increase in ADT and peak hour traffic would not have a substantial effect on LOS that would require offsite improvements. There would also be an avoidance, or reduction, of future traffic on local streets within Oxnard Dunes neighborhoods (i.e. on Canal Street and Dunes Street). This local project traffic is not expected to be a significant impact, but any reduction in traffic is considered a positive effect from the perspective of current residents.

7.2.12 Utilities and Energy

Under this alternative, the Avalon Homes project would accommodate up to 65 new residential units. The current population of Oxnard is approximately 206,997 with the project adding about 261 more people, which accounts for 0.6 percent of planned growth. As noted in Section 4.12, *Utilities and Service Systems,* this population would demand about 36,667 gallons in the year 2020. Additionally, new residents are projected to generate 0.11 tons of solid waste per day. Although this alternative would facilitate development of the Avalon Homes in a different area than initially proposed, overall site disturbance and associated impervious surfaces would be similar, such as impacts related to increased runoff and the associated need for drainage facilities. This increase in demand on water and wastewater infrastructure would be in compliance with the 2030 General Plan. Therefore, impacts would not change.

7.3 ALTERNATIVE 3: ALTERNATIVE DESIGN – IMPROVED BUFFER

Under this alternative, the alignment of the new private street extension would be shifted as far to the south as possible along the northern part of the development area, which would provide a larger buffer between the new roadway and the preserved willow thicket to the north. No residences would be constructed in this portion of the development area, and the private street would be located just outside of the backyards of the existing homes along Catamaran Street.

As the private street curves towards the south in this alternative, its alignment would be shifted towards the center of the development area to connect with the existing stub out of Canal Street. The northeastern cluster of five condominium dwellings proposed in Lot 17 would also be deleted from this alternative in order to avoid any encroachment into the willow thicket in this area and to provide a larger buffer from the preserved willow thicket. If no other design changes were incorporated into this alternative, it would allow for the construction of from 32-34 dwellings. These would include two-single family units, or four duplexes on the west side of the private street, and 30 condominium dwellings (equivalent to units 16 through 45 in the proposed project). About half of the community lot would be retained under this alternative, and the storm water detention area would be retained near the southern end of Canal Street. The total development footprint under this alternative would be approximately 6.3 acres.

Figure 7-2 shows the development area that would contain the re-aligned private street and reduced number of swellings under this alternative.

From a planning and policy consistency point of view, this alternative would avoid or reduce the encroachment into portions of the willow thicket on the property and would provide an increased buffer distance between development and the preserved vegetation. There may be some minor encroachment necessary to provide a safe alignment from the northerly connection to the existing street system, and the buffer distance would still be less than 100 feet. Under this alternative, the buffer distance would range from a minimum of about 40 feet along the easterly boundary (same as in the proposed project) up to distances ranging from about 60 to 90 feet along the northern and northeastern segments of the development area. This would be an improvement compared to buffers of from 5 to 70 feet in the proposed design, most of which is street width.

This alternative would also place the private street immediately adjacent to most of the existing backyards of the bordering residences along Catamaran Street, with a solid wall separating the street from the adjacent existing yards. This configuration may have the advantage of increased privacy for some of the existing back yards, but would also expose them to slightly higher noise and exhaust levels due to the closer private street.

A detailed evaluation has not been prepared for this alternative, but the public and private improvement costs, which would be very similar to the proposed project, would be distributed over only about half the number of lots. Thus, the feasibility of this alternative would be less certain when compared to that of the project as proposed. A variation of this alternative could include an increased density, perhaps involving three-story multi-family dwellings in a design similar to that of the previously approved Anacapa Townhomes to the south. While that option

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Alternative 3:
Alternative Design - Improved Buffer

Figure 7-2

might improve the feasibility of this alternative in providing an improved buffer, it would require rezoning the property from R-2-C to R-3-C and would pose additional compatibility issues related to the adjacent development.

The following paragraphs provide a discussion of the potential effects of this alternative relative to each of the major environmental topics addressed in this EIR.

7.3.1 Aesthetics and Urban Design

This project alternative would reduce the number of dwelling units by about half the number proposed. Therefore, less development would be visible from some of the existing rear yards along Catamaran Street. Depending on modifications to provide a larger number of dwellings, there could be a larger number of condominium style units in taller buildings. Thus, this alternative would have a slightly reduced effect on aesthetics compared to the proposed project.

7.3.2 Air Quality

Site disturbance under this alternative would be slightly smaller; therefore, construction related air quality impacts would not change substantially. The number of dwelling units would be approximately half of what is proposed by the project, so the overall trip generation and related air emissions would be reduced.

7.3.3 Biological Resources

Expansion of the proposed buffer would be an improvement and this alternative would have less biological impact than the originally proposed project. However, the buffer would still be less than the 100-foot buffer called for in local coastal policy 6.D. ESHA. Overall, impacts to biological resources under the Improved Buffer Alternative would be less adverse than the initial project proposal and the need for habitat creation and/or enhancement would be reduced. The potential for indirect effects related to increased development would be reduced, and would occur more in the area of retained willows along the Edison Canal and less in the willows and dune areas in the northern (RP) portion of this property.

7.3.4 Climate Change and Greenhouse Gas Emissions

A reduction in development would consequentially result in a reduction in construction and operation emissions. Implementation of General Plan policies and compliance with AB 32 requirements would reduce most GHG related impacts to a less than significant level, as with the proposed project.

7.3.5 Cultural Resources and Tribal Cultural Resources

The overall site disturbance would be somewhat less in this alternative compared to the originally proposed development, and the potential for impacts is about the same as the proposed project. As noted in Section 4.4, *Cultural Resources*, there is no evidence that any of the known Chumash places are located within or adjacent to the project site. Impacts to identified and previously unidentified pre-historical archeological resources would also be similar. In

addition, the project site does not contain any existing structures. Therefore, impacts to historical buildings, structures, and districts would not occur within this alternative.

7.3.6 Geology and Soils

Although this alternative would change the design of the originally proposed Avalon Homes project, overall site disturbance would be similar to or less than the proposed project, and the underlying soils and geologic conditions would be similar. As a result, development under this alternative would have the same constraints and design requirements as the original project. This includes policy related to ground shaking, liquefaction, soil-related hazards, slope hazards and radon exposure. Implementation of the City's General Plan and compliance with CBC requirements would reduce most geology related impacts to a less than significant level.

7.3.7 Hazards and Hazardous Materials

The proposed alternative would be located on the same site as the original project, a site which was in the vicinity of previous oil field operations. Therefore, the Improved Buffer Alternative would be at the same level of risk. However, the entire area has been restored through the removal of previous oil field features and remediation activities to address contaminated soil and related issues, so impacts would not be significant.

7.3.8 Hydrology and Water Quality

As discussed in Section 4.8, *Hydrology and Water* Quality, the entire property would be outside the 100-year flood plain, but is within the 500-year flood zone. Impacts related to flooding would be about the same for the initially proposed project with a slight reduction in storm water runoff due to the smaller area of buildings and impermeable surfaces. Impacts related to increase runoff and increased pollutant loads would therefore also be slightly less. Additionally, the alternative design would have the same requirements for storm water control as the original project. As with the proposed project, the addition of storm water runoff policies in the General Plan Conservation/Open Space Element, implementation of General Plan policies, and compliance with local, state, and federal requirements relating to water quality would reduce hydrology and water quality impacts to a less than significant level.

7.3.9 Land Use and Planning

Increasing the buffer zone and changing the design of the originally proposed project would not conflict with the existing land use designation of R-2-C. This alternative would potentially be more consistent with the 100-foot buffer zone policy, enacted to preserve ESHA and related sensitive resources. However, the increased buffer still does not meet the 100-foot policy. Therefore, changing the project design would not have a significant impact on land use and planning. If this alternative were to include a modified design to increase the number of dwelling units through the development of higher density, then additional planning review and a rezoning to R-3-C would be necessary.

7.3.10 Noise

Although this alternative would change the design of the originally proposed Avalon Homes project, overall site disturbance would be generally similar. Reduction in the amount of dwellings would slightly reduce noise impacts but the difference would not be substantial. Construction related noise impacts would be similar to the original development, as would impacts related to average daily vehicle trips. Overall, noise related impacts under this alternative would not be significant.

7.3.11 Transportation and Circulation

Under this alternative, the reduction in amount of dwellings would also reduce traffic volume by approximately half. Relative to current conditions, the ADT and peak hour traffic would increase slightly because of the new residences; however, it would be less than originally anticipated and would not have a substantial effect on LOS that would require offsite improvements. Increased buffer zone and project design would not have significant impacts on transportation and traffic.

7.3.14 Utilities and Energy

The Avalon Homes project as proposed would accommodate from 50 to 65 new residential units. Under this alternative, the number of residences would be reduced to approximately 34 dwellings. This would reduce water demand, the need for storm water infrastructure improvement, and amount of solid waste generation. This alternative would facilitate a smaller footprint for development than initially proposed, but the overall site disturbance and associated impervious surfaces, would be similar. This increase in demand on water and wastewater infrastructure would be in compliance with the 2030 General Plan. Therefore impacts under the Alternate Design Alternative would have the same or slightly less impacts as the original project.

7.4 ALTERNATIVE 4: REDUCED PROJECT

Under this alternative, the private street extension through the project from Canal Street on the south to connect at Dunes Street on the north would not be built. Instead, a cul-de-sac would be installed northward from the southerly stub-out of Canal Street and would extend approximately 610 feet into the property to provide access to the condominium lots as proposed (16 and 17 in the proposed project) and the community lot as proposed (Lot E). Figure 7-3 shows the general footprint of development under this alternative. The total development area under this alternative would be approximately 4 acres (approximately 1 acre of private street and 3 acres of residences and ancillary uses). The northerly portion of the proposed development would be eliminated and the land would be incorporated into the Resource Protection (RP) preserve area. The preserved area under this alternative would be approximately 34.3 acres).

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Alternative 4:
Reduced Project

Figure 7-3

This alternative would include the 35 condominium dwelling units as proposed but would not include any single family or duplex units from the proposed project (i.e. lots 1-15 would be eliminated). This alternative would avoid about 0.58 acre of the encroachment into willow thicket areas along the north, and would provide the maximum possible buffer distance for the northerly willow area separating the existing residential designated land from the resource protection designated land. In this northern willow thicket area the buffer would remain as it is under the current conditions. From most of the rear yards for homes along Catamaran Street, the existing distance to the nearest willows ranges from 120 to 140 feet – so the buffer distance of 100 feet would be achieved in this area. Along the easterly portion of the project under this alternative, there would be a small encroachment into the existing willow thicket (approximately 0.34 acres) but most of the dwellings would be a distance of about 40 feet from the willows. This configuration would be identical to that in the proposed project.

This alternative would have a greater degree of consistency with coastal policies to preserve the sensitive resources (willow thickets) and to provide a buffer of 100 feet between development and the preserved resources. It would also avoid development adjacent to the back yards of about 15 existing residences along Catamaran Street. Since it would only include 35 condominium units, instead of the 50-65 dwellings under the proposed project, the traffic generation and other related effects would be proportionately less.

7.4.1 Aesthetics and Urban Design

The reduced project alternative would prevent encroachment into the northern willow thicket and limit development to a smaller area. Harbor Boulevard and West Fifth Street are identified as major entrances or gateways to the City of Oxnard (2030 General Plan page 4-6). Views from both of these roadways would be better preserved by this alternative. Approximately half of the existing residences on Catamaran Street would still be affected by development across their rear yard walls under this alternative.

While the overall effect of this alternative on views from roadways and most uses in the vicinity would be similar to that of the proposed project, the aesthetic impacts would be slightly less from the viewpoint of some homes along Catamaran Street.

7.4.2 Air Quality

Site disturbance under this alternative would less than that under the proposed project, and the number of residences and related trip generation would also be less. Thus, the potential air quality effects of this alternative would be less than those from the proposed project.

7.4.3 Biological Resources

Under this alternative, development would be reduced and the buffer between existing residences and the adjacent dunes would be maintained. In most cases, this existing buffer distance exceeds the 100 foot maximum listed in local coastal policy 6.D. Retention of this existing buffer distance along the northern edge of the proposed development area would avoid the impacts of the proposed project in this area. ESHA and other sensitive resources would be better preserved because of this buffer and the reduced development in this alternative. Overall,

impacts to biological resources and mitigation measures under the reduced development alternative would be less adverse than the original project.

7.4.6 Climate Change and Greenhouse Gas Emissions

A reduction in development would consequentially result in a reduction in construction and operation emissions. However, the GHG emissions project as proposed would be less than significant, so implementation of this alternative would not change the conclusion. Implementation of General Plan policies and compliance with AB 32 requirements would still be required, and would help to keep GHG related effects to minimum levels.

7.4.5 Cultural Resources and Tribal Cultural Resources

Overall site disturbance under this alternative would be less than that proposed in the project. As noted in Section 4.4, *Cultural Resources*, there is no evidence that any of the known Chumash places are located within or adjacent to the project site, including the alternative location. Therefore, potential impacts to identified and previously unidentified pre-historical archeological resources would not vary greatly from those expected with the proposed project. In addition, because there are no existing structures within the project boundaries, this alternative as well as the project would not result in any impacts to historical buildings, structures, or districts.

7.4.6 Geology and Soils

This alternative would reduce the footprint of development, but the underlying soils and geologic conditions would be similar to those of the proposed project. As a result, the development would have the same constraints and design requirements as the original project. This includes policy related to ground shaking, liquefaction, soil-related hazards, slope hazards and radon exposure. Implementation of the city's General Plan and compliance with CBC requirements would reduce most geology related impacts to a less than significant level.

7.4.7 Hazards and Hazardous Materials

The proposed alternative would be located generally on the same site as the original project, a site which was adjacent to oil field operations. Therefore, the Reduced Development Alternative would be at about the same level of risk. However, the entire area has been restored through the removal of previous oil field features and remediation activities to address contaminated soil and related issues, so impacts would not be significant under either the project as proposed or under this alternative.

7.4.8 Hydrology and Water Quality

As discussed in Section 4.8, *Hydrology and Water* Quality, the entire property is outside the 100-year flood plain, but is within the 500-year flood zone. Impacts related to flooding under this alternative would be about the same as for the initially proposed project. There would be a reduced potential for storm water runoff due to the smaller development footprint under this

alternative. This alternative design would have the same requirements for storm water control as the original project. As with the proposed project, the addition of storm water runoff policies in the General Plan Conservation/Open Space Element, implementation of General Plan policies, and compliance with local, state, and federal requirements relating to water quality would reduce hydrology and water quality impacts to a less than significant level.

7.4.9 Land Use and Planning

Decreasing the amount of residential development and improving the buffer zone throughout the site would be more compatible with current land use designation of R-2-C than the original project. This alternative would have potential better consistency with the 100-foot buffer zone policy, enacted to preserve ESHA and related sensitive resources. Therefore, changing the project design under this alternative may be considered superior to the proposed project, and would not have a significant impact on land use and planning.

7.4.10 Noise

Although this alternative would change the design of the originally proposed Avalon Homes project, overall site disturbance would be generally similar. Reduction in the amount of dwellings would slightly reduce the contributions towards increases in traffic noise, but the effect would not be substantial. Construction related noise impacts would be similar to the original development, as would impacts related to average daily vehicle trips. Overall, noise related impacts under this alternative would not be significant.

7.4.11 Transportation and Circulation

Under this alternative, the proposed through street would be replaced by a cul-de-sac with a substantially smaller development footprint than the project as proposed. The project would be accessible from only one point on Canal Street, resulting in an increased traffic impact at the intersection of Canal and Dunes Street. However, a slight increase in ADT and peak hour traffic would not have a substantial effect on LOS that would require offsite improvements, due to the reduced development. Overall total traffic generation would be lower and the alternative would not have significant impacts on traffic, circulation, and access.

7.4.12 Utilities and Energy

The Avalon Homes project would accommodate up to 65 new residential units. Under this alternative, the number of residences would be reduced to approximately 35 dwellings, without any single family residences or duplexes, eliminating a significant amount of development. Solid waste generation would also be reduced. This would reduce water demand as well as a need for storm water infrastructure improvement. Impacts related to increased runoff and the associated need for drainage facilities would therefore be similar to the originally proposed project. This increase in demand on water and wastewater infrastructure would be in compliance with the 2030 General Plan. Therefore impacts under the Alternate Design Alternative would have the same impacts as the original project.

7.5 ALTERNATIVE 5: ALTERNATIVE DESIGN –ALL SINGLE FAMILY DETACHED RESIDENTIAL CONDOMINIUMS

The applicant prepared and submitted this alternative early in 2019 in response to input from the City Development Review Committee. The major objective of this design is to eliminate the need for variances from the front and rear yard setbacks in the property development standards of the R-2-C zone. In addition, this alternative would provide a residential land use more consistent with the predominant development pattern of the adjacent neighborhood.

This alternative would result in two lots (Lots 1 and 2) that would accommodate 56 detached single-family residences with private backyard space under condominium or joint ownership. Six lots (Parcels A through F) would contain open space in the RP zone, and various common lots for the private street, drainage improvements and parking, and common areas. The two large open space lots (Parcels A and B) are identical to those in the project as proposed. In the remaining common area lots (Parcels C through F) there are very minor differences between the project as originally proposed and as shown in this more recent alternative. These are refinements in details; however, that could be incorporated into either design, and there is no substantial difference between them with respect to environmental effects.

Figure 7-4 shows the general footprint of development under this alternative. The total development area under this alternative would be approximately 8 acres (2.24 acres of private street and 5.73 acres of residences and ancillary uses). The preserved area under this alternative would be approximately 29.58 acres.

7.5.1 Aesthetics and Urban Design

This project alternative would result in a similar or slightly lower number of residential units, when compared to the proposed project. All 56 residences in this alternative; however, would be detached single family dwellings. Therefore, less development would be visible from some of the existing rear yards along Catamaran Street, and the general pattern of the new residences would be similar to this existing neighborhood in contrast to the multi-family units proposed the earlier submittal . Thus, this alternative would have a slightly reduced effect on aesthetics compared to the proposed project.

7.5.2 Air Quality

Site disturbance under this alternative would be slightly smaller; therefore, construction related air quality impacts would not change substantially. The number of dwelling units would be similar to the proposed project, so the overall trip generation and related air emissions would be similar or slightly lower than the proposed project.

Alternative Design - All Single Family Detached Residential Condominiums

Figure 7-4

Source: Jensen Design & Survey, Inc.,Oxnard Shores North, Tentative Tract No. 5888, September 18, 2018.

7.5.3 Biological Resources

Under this alternative, development would be similar as compared to the proposed project. Impacts to special-status plant and wildlife species, riparian and sensitive communities, wetlands, and conflicts with local policies would be potentially significant but mitigable. Incorporation of mitigation measures would be required to reduce impacts to a less than significant level. Additionally, similar to the proposed project, impacts to wildlife movement and conflicts with an adopted Habitat Conservation Plan or similar plan for conservation would be less than significant. Overall, impacts to biological resources and mitigation measures under this alternative would be similar to the proposed project.

7.5.4 Climate Change and Greenhouse Gas Emissions

Under this alternative, there would potentially be 11 less dwelling units. As such, there would be a slight reduction in construction and operational emissions. Implementation of General Plan policies and compliance with AB 32 requirements would reduce most GHG related impacts to a less than significant level, as with the proposed project.

7.5.5 Cultural Resources and Tribal Cultural Resources

The overall site disturbance would be somewhat less in this alternative compared to the originally proposed development, and the potential for impacts is about the same as the proposed project. As noted in Section 4.4, *Cultural Resources*, there is no evidence that any of the known Chumash places are located within or adjacent to the project site. Impacts to identified and previously unidentified pre-historical archeological resources would also be similar. In addition, the project site does not contain any existing structures. Therefore, impacts to historical buildings, structures, and districts would not occur within this alternative.

7.5.6 Geology and Soils

Overall site disturbance would be similar to or less than the proposed project, and the underlying soils and geologic conditions would be similar. As a result, development under this alternative would have the same constraints and design requirements as the original project. This includes policy related to ground shaking, liquefaction, soil-related hazards, slope hazards and radon exposure. Implementation of the City's General Plan and compliance with CBC requirements would reduce most geology related impacts to a less than significant level.

7.5.7 Hazards and Hazardous Materials

This alternative would be located on the same site as the proposed project, a site which was in the vicinity of previous oil field operations. As such, this alternative would be at the same level of risk. However, the entire area has been restored through the removal of previous oil field features and remediation activities to address contaminated soil and related issues, so impacts would not be significant.

7.5.8 Hydrology and Water Quality

As discussed in Section 4.8, *Hydrology and Water* Quality, the entire property would be outside the 100-year flood plain, but is within the 500-year flood zone. Impacts related to flooding would be about the same for the initially proposed project with a slight reduction in storm water runoff due to the smaller area of buildings and impermeable surfaces. Impacts related to increase runoff and increased pollutant loads would therefore also be slightly less. Additionally, the alternative design would have the same requirements for storm water control as the original project. As with the proposed project, the addition of storm water runoff policies in the General Plan Conservation/Open Space Element, implementation of General Plan policies, and compliance with local, state, and federal requirements relating to water quality would reduce hydrology and water quality impacts to a less than significant level.

7.5.9 Land Use and Planning

Altering the design of the originally proposed project would not conflict with the existing land use designation of R-2-C. The key features of this alternative – including all detached single-family residences and meeting the front and rear yard setback requirements in the R-2-C zone – would provide greater consistency with the development standards in the R-2-C zone and a development type more consistent with the adjacent neighborhood. Therefore, changing the project design, as proposed in this alternative, would not have a significant impact on land use and planning.

7.5.10 Noise

Although this alternative would change the design of the originally proposed Avalon Homes project, overall site disturbance would be generally similar. Reduction in the number of dwellings would slightly reduce noise impacts. Construction related noise impacts would be similar to the original development, as would impacts related to average daily vehicle trips. Overall, noise related impacts under this alternative would not be significant.

7.5.11 Transportation and Circulation

Under this alternative, the reduction in number of dwellings would slightly reduce traffic volumes. Relative to current conditions, the ADT and peak hour traffic would increase slightly because of the new residences, however, it would be slightly less than originally anticipated and would not have a substantial effect on LOS that would require offsite improvements. A revised project design would not have significant impacts on transportation and traffic.

7.5.12 Utilities and Energy

As proposed, the Avalon Homes project would accommodate from 50 to 65 new residential units. Under this alternative, the number of residences would total 56 dwellings. Assuming maximum buildout of 65 residential units under the proposed project, this alternative would result in a reduction of 11 dwelling units. This would slightly reduce water and energy demand, and the amount of solid waste generation. The overall site disturbance and associated impervious surfaces would be similar, so the need for and extent of stormwater management

improvements would be approximately the same. The increase in demand on water and wastewater infrastructure would be similar to the project as proposed, and both would be consistent with the 2030 General Plan. Therefore, this alternative would have the same or slightly less impacts as the original project relative to the demand for utilities and energy.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative among the options studied. When the "No Project" alternative is determined to be environmentally superior, CEQA also requires identification of the environmentally superior alternative among the development options (Section 15126.6(e)(2)).

Table 7-2 indicates whether each alternative would be considered better than (+) or worse than (-) the project, based on its relative environmental effects. As shown therein, the No Project – No Development would avoid all of the proposed project impacts. Among the other alternatives, Alternative 4 – Reduced Project would involve the smallest development footprint and number of new residential dwellings. It would also preserve the largest area of disturbed dune scrub and would provide buffer distances between the preserved RP zone areas and development area consistent with the Coastal Land Use Plan. For this reason, it would be considered the environmentally superior alternative.

Table 7-2
Comparison of Environmental Impacts of Alternatives

Issue	Proposed Project	Alternative 1: No Project – No Development	Alternative 2: Alternative Location – Development in RP Area Only	Alternative 3: Alternative Design – Improved Buffer	Alternative 4: Reduced Project	Alternative 5: All Single-Family Detached Residential Condominiums
Aesthetics	=	+	-	+	+	=
Air Quality	=	+	=	+	+	=
Biological Resources	=	+	-	+	+	=
Cultural Resources	=	+	=	=	=	=
Geology and Soils	=	+	=	=	=	=
Greenhouse Gas Emissions/ Climate Change	=	+	=	+	+	+
Hazards and Hazardous Materials	=	+	-/=	=	=	=
Hydrology and Water Quality	=	+	=	=	=	=
Land Use and Planning	=	+	-	-/=	+	+
Noise	=	+	=	=	=	=
Traffic, Circulation, and Access	=	+	+/=	+/=	+/=	+
Utilities and Service Systems	=	+	=	=	=	+
Overall	**n/a**	**+**	**-**	**+**	**+**	**+**

+ Superior to the proposed project
- Inferior to the proposed project
= Similar impact to the proposed project

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